



LT Environmental, Inc.

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March 30, 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 CVX JV BS 017H
Remediation Permit Numbers 2RP-3024, 2RP-3440, 2RP-3985, and 2RP-4914
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) CVX JV BS 017H (Site) in Unit C, Section 7, Township 25 South, Range 31 East, in Eddy County, New Mexico (Figure 1). The purpose of the site assessment, soil sampling, and excavation activities was to address impacts to soil 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 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 May 22, 2015, the backpressure valve on the process vessel failed, causing fluid to release out the relief valve on the free-water knockout. Approximately 69 barrels (bbls) of crude oil and 35 bbls of produced water were released. The release affected the impermeable containment around the process equipment and misted approximately 11,025 square feet of caliche pad and 44,000 square feet of pasture. A vacuum truck recovered 50 bbls of oil and 20 bbls of produced water from within the containment. The process equipment and impacted pasture were power washed. The former operator reported the release to the New Mexico Oil Conservation Division



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(NMOCD) on a Release Notification and Corrective Action Form C-141 (Form C-141) on May 29, 2015 and was assigned Remediation Permit (RP) Number 2RP-3024 (Attachment 1).

On December 5, 2015, the threads of a 45-degree elbow washed out, causing the release of 8 bbls of crude oil and 35 bbls of produced water onto the surface of the caliche well pad. A vacuum truck recovered 5 bbls of crude oil and 25 bbls of produced water, and a backhoe scraped up the saturated soil from the well pad. The former operator reported the release to the NMOCD on a Form C-141 on December 8, 2015 and was assigned RP Number 2RP-3440 (Attachment 1).

On November 10, 2016, a corrosion hole in the steel saltwater disposal (SWD) riser, caused the release of approximately 31 bbls of produced water. The release affected the area around the SWD riser on the north side of the battery containment. A vacuum truck recovered 20 bbls of produced water from the ground surface. The former operator reported the release to the NMOCD on a Form C-141 on November 11, 2016 and was assigned RP Number 2RP-3985 (Attachment 1).

On July 26, 2018, the fuel gas regulators and dump supply lines on the test separator became clogged, causing the flare back pressure valve to fail and fluid to release through the separator pop-off valve. Approximately 75 bbls of produced water and 1 bbl of crude oil were released. Approximately 1 bbl of overspray affected the caliche well pad. The remaining fluid was contained within the impermeable lined containment. A vacuum truck recovered approximately 74 bbls of produced water and 1 bbl of crude oil from within the lined containment. XTO reported the release to the NMOCD on a Form C-141 on August 9, 2018 and was assigned RP Number 2RP-4914 (Attachment 1).

Although three 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 four releases occurred on the same well pad, site assessment and excavation activities were completed to address and close all four 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 320856103502801, located approximately 7,081 feet west of the Site. The water well has a depth to groundwater of 390 feet bgs and a total depth of 482 feet bgs. Ground surface elevation at the water well location is approximately 3,368 feet above mean sea level (AMSL), which is approximately 4 feet lower in elevation than the Site. The closest continuously flowing water or significant watercourse to the Site is seasonal pond located approximately 4,850 feet northwest of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater



than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is located in a low-potential karst area.

CLOSURE CRITERIA

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

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

SITE ASSESSMENT, EXCAVATION, AND DELINEATION SOIL SAMPLING ACTIVITIES

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-3440

During March 2018, LTE personnel inspected the Site to evaluate the release area in the southwest area of the pad, associated with RP Number 2RP-3440. Preliminary soil samples SS3-1 through SS3-5 and SS01 through SS05 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 December 2018 and July 2019, LTE personnel returned to the Site to oversee additional site assessment activities. Potholes were advanced via track hoe at seven locations within and around the release area to confirm the lateral and vertical extent of impacted soil. During December 2018, potholes were advanced to a depth of 4 feet bgs at the SS3-2, SS3-5, SS02, and SS04 preliminary soil sample locations. One delineation soil sample was collected from each pothole at a depth of 4 feet bgs. During July 2019, potholes PH01 through PH03 were advanced to a depth of 4 feet bgs within the release area. Delineation soil samples were collected from



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each pothole PH01 through PH03 at depths of 1 foot, 2 feet, 3 feet, and 4 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. Photographic documentation was conducted during the Site visits. Photographs are included in Attachment 3.

The preliminary and delineation 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 Hall Environmental Analysis Laboratory (Hall) in Albuquerque, New Mexico, or 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-3985

During March and July 2018, LTE personnel inspected the Site to evaluate the release area in the northern area of the pad, associated with RP Number 2RP-3985. Preliminary soil samples SS1-1 through SS1-3, SS01 through SS03, and SS18 through SS20 were collected within and around the release area to assess the lateral extent of impacted soil. The soil sample locations, depicted on Figure 3, 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 July 2018, LTE personnel was at the Site to oversee excavation of impacted soil in the area around preliminary soil samples SS1-1 and SS1-3 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. Excavation of the impacted soil was conducted prior to the Compliance Agreement and prior to the implementation of the August 14, 2018, NMOCD modification to 19.15.29. Following removal of impacted soil, excavation confirmation samples were collected as discrete samples instead of composite samples. The area of impacted soil could be visually discerned; therefore, LTE applied a judgmental sampling protocol, selecting sample locations based on visual observation to represent the floor and sidewalls of the excavation. The sampling protocol complied with Guidance on Choosing a Sampling Design for Environmental Data Collection for Use in Developing a Quality Assurance Project Plan, EPA QA/G-5S, December 2002.



Impacted soil was excavated to a depth of 5.5 feet bgs in the area around preliminary soil sample SS1-1. Soil samples SW1 through SW4 were collected from the sidewalls of the excavation from a depth of 4 feet bgs. Soil sample FS1 was collected from the floor of the excavation from a depth of 5.5 feet bgs.

Impacted soil was excavated to a depth of 1 foot bgs in the area around preliminary soil sample SS1-3. Soil sample FS2 was collected from the floor of the excavation from a depth of 1 foot bgs. Due to the shallow depth of the excavation, the floor sample was representative of the sidewalls and floor of the excavation.

The combined excavation extents measured approximately 450 square feet in area. Approximately 55 cubic yards of impacted soil were removed from the excavations. The impacted soil was transported and properly disposed of at the R360 landfill facility located in Hobbs, New Mexico.

During December 2018 and July 2019, LTE personnel returned to the Site to oversee additional site assessment activities. Potholes were advanced via track hoe at seven locations within and around the release area to confirm the lateral and vertical extent of impacted soil. During December 2018, potholes were advanced to a depth of 4 feet bgs at the SS02, SS18, and SS20 preliminary soil sample locations. One delineation soil sample was collected from each pothole at a depth of 4 feet bgs. During July 2019, potholes PH01 through PH04 were advanced to a depth of 4 feet bgs. Delineation soil samples were collected from each pothole PH01 through PH04 at depths of 1 foot, 2 feet, 3 feet, and 4 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. The excavation extents, excavation soil sample locations and pothole delineation soil sample locations are depicted on Figure 3.

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

RP Numbers 2RP-3024 and 2RP-4914

During March and July 2018, LTE personnel inspected the Site to evaluate the overlapping release areas on the east side of the pad, associated with RP Numbers 2RP-3024 and 2RP-4914. Preliminary soil samples SS2-1 through SS2-5 and SS01 through SS17 were collected within and around the release area to assess the lateral extent of impacted soil. The soil sample locations, depicted on Figure 4, were selected based on information provided on the initial Form C-141s and field observations. To eliminate the effects from weathering and natural degradation of



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

During July 2018, LTE personnel was at the Site to oversee excavation of impacted soil in the area around preliminary soil sample SS2-2 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 1 foot bgs. Following removal of impacted soil, LTE collected excavation soil sample FS01 from the floor of the excavation. Due to the shallow depth of the excavation, the floor sample was representative of the sidewalls and floor of the excavation.

The excavation extent measured approximately 430 square feet in area. Approximately 16 cubic yards of impacted soil were removed from the excavation. The impacted soil was transported and properly disposed of at the R360 landfill facility located in Hobbs, New Mexico. The excavation extent and excavation soil sample locations are depicted on Figure 4.

During July 2019, LTE personnel returned to the Site to oversee additional site assessment activities. Potholes were advanced via track hoe at 14 locations within and around the release area to confirm the lateral and vertical extent of impacted soil. Potholes PH01 through PH14 were advanced to a depth of 4 feet bgs. Delineation soil samples were collected from each pothole at depths of 1 foot, 2 feet, 3 feet, and 4 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. The pothole delineation soil sample locations are depicted on Figure 5.

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

ANALYTICAL RESULTS

RP Numbers 2RP-3440

Laboratory analytical results for preliminary soil samples SS3-1 through SS3-5 and SS01 through SS05 indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Laboratory analytical results for delineation soil samples SS3-2A, SS3-5A, SS02A, SS04A and all delineation soil samples collected from potholes PH01 through PH03, indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Based on the laboratory analytical results, no impacted soil was identified in the historical release



area associated with RP Number 2RP-3440. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Attachment 4.

RP Number 2RP-3985

Laboratory analytical results for preliminary soil samples SS1-1 through SS1-3, SS01 through SS03, and SS18 through SS20 indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Based on visual observations and elevated chloride concentrations, impacted soil was excavated from the area around preliminary soil samples SS1-1 and SS1-3. Laboratory analytical results for excavation soil samples SW1 through SW4, FS1, and FS2 indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Laboratory analytical results for delineation soil samples SS02A, SS18A, SS20A, and all delineation soil samples collected from potholes PH01 through PH04, indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Based on the laboratory analytical results, no further remediation was required in the historical release area associated with RP Number 2RP-3985. Laboratory analytical results are summarized in Table 2 and the complete laboratory analytical reports are included as Attachment 4.

RP Numbers 2RP-3024 and 2RP-4914

Laboratory analytical results for preliminary soil samples SS2-2 through SS2-5 and SS01 through SS17 indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Laboratory analytical results for preliminary soil sample SS2-2 indicated that 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 sample SS2-2. Laboratory analytical results for excavation soil sample FS01 indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Laboratory analytical results for the delineation soil samples, collected from potholes PH01 through PH14, indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Based on the laboratory analytical results, no further remediation was required in the historical release area associated with RP Numbers 2RP-3024 and 2RP-4914. Laboratory analytical results are summarized in Table 3 and the complete laboratory analytical reports are included as Attachment 4.

CLOSURE REQUEST

Impacted soil was excavated from the Site to address impacts to soil resulting from four historical releases of crude oil and produced water at the Site. 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. Delineation soil sampling was completed within and around the release areas on the well pad and pasture to assess for the presence or absence of additional impacted soil. Laboratory

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analytical results for all delineation soil samples indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Based on the excavation and delineation soil sample analytical results, no further remediation was required.

Initial response efforts, natural attenuation, and excavation of impacted soil have mitigated impacts at this Site. XTO requests no further action for RP Numbers 2RP-3024, 2RP-3440, 2RP-3985, and 2RP-4914. 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	Soil Sample Locations (2RP-3440)
Figure 3	Soil Sample Locations (2RP-3985)
Figure 4	Preliminary and Excavation Soil Sample Locations (2RP-3024 and 2RP-4914)
Figure 5	Delineation Soil Sample Locations (2RP-3024 and 2RP-4914)
Table 1	Soil Analytical Results (2RP-3440)
Table 2	Soil Analytical Results (2RP-3985)
Table 3	Soil Analytical Results (2RP-3024 and 2RP-4914)
Attachment 1	Initial/Final NMOCD Form C-141 (2RP-3024, 2RP-3440, 2RP-3985, 2RP-4914)
Attachment 2	Lithologic / Soil Sample Logs

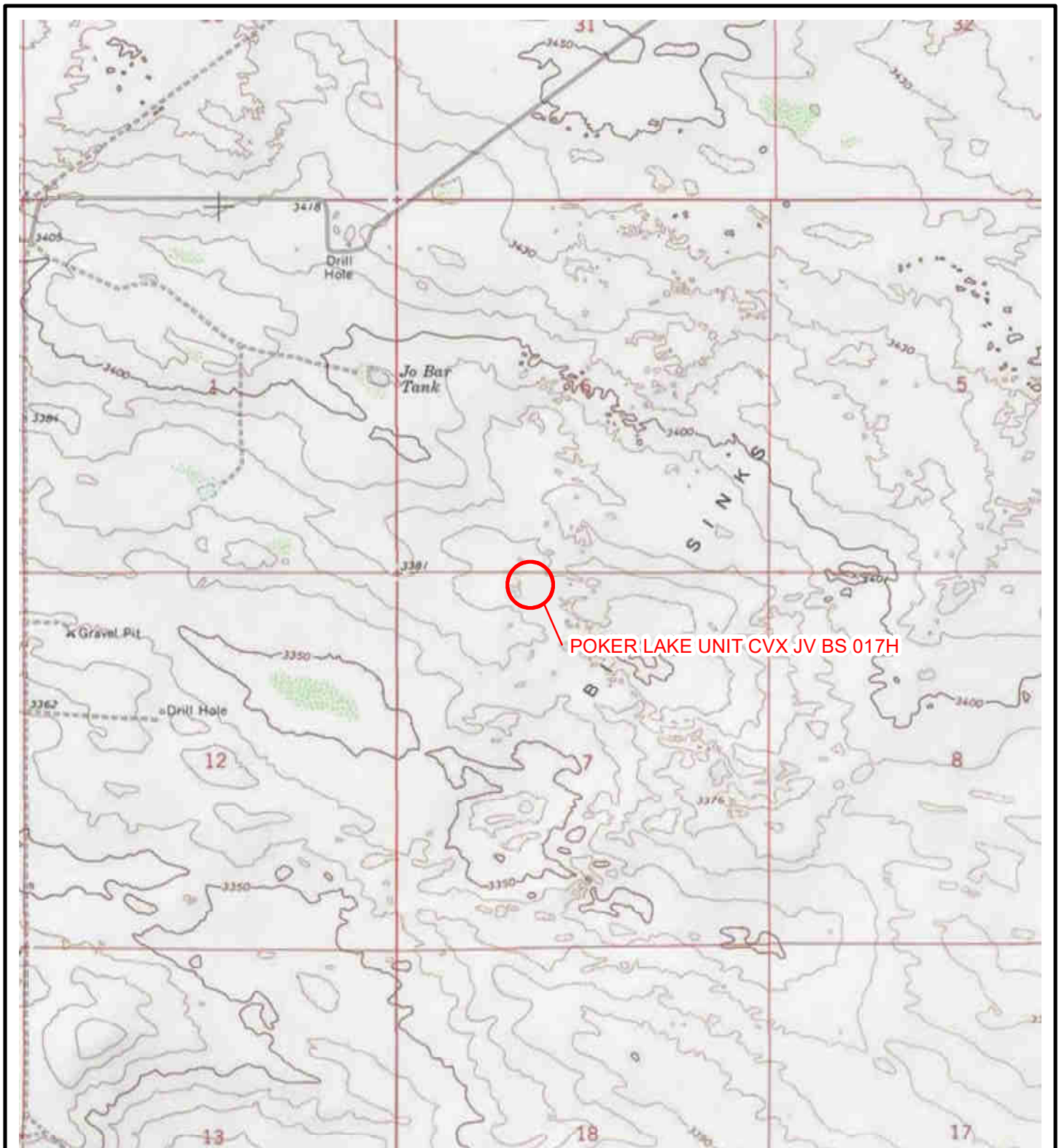


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Attachment 3 Photographic Log
Attachment 4 Laboratory Analytical Reports

FIGURES



**LEGEND**

 SITE LOCATION

IMAGE COURTESY OF ESRI/USGS

0 2,000 4,000
Feet

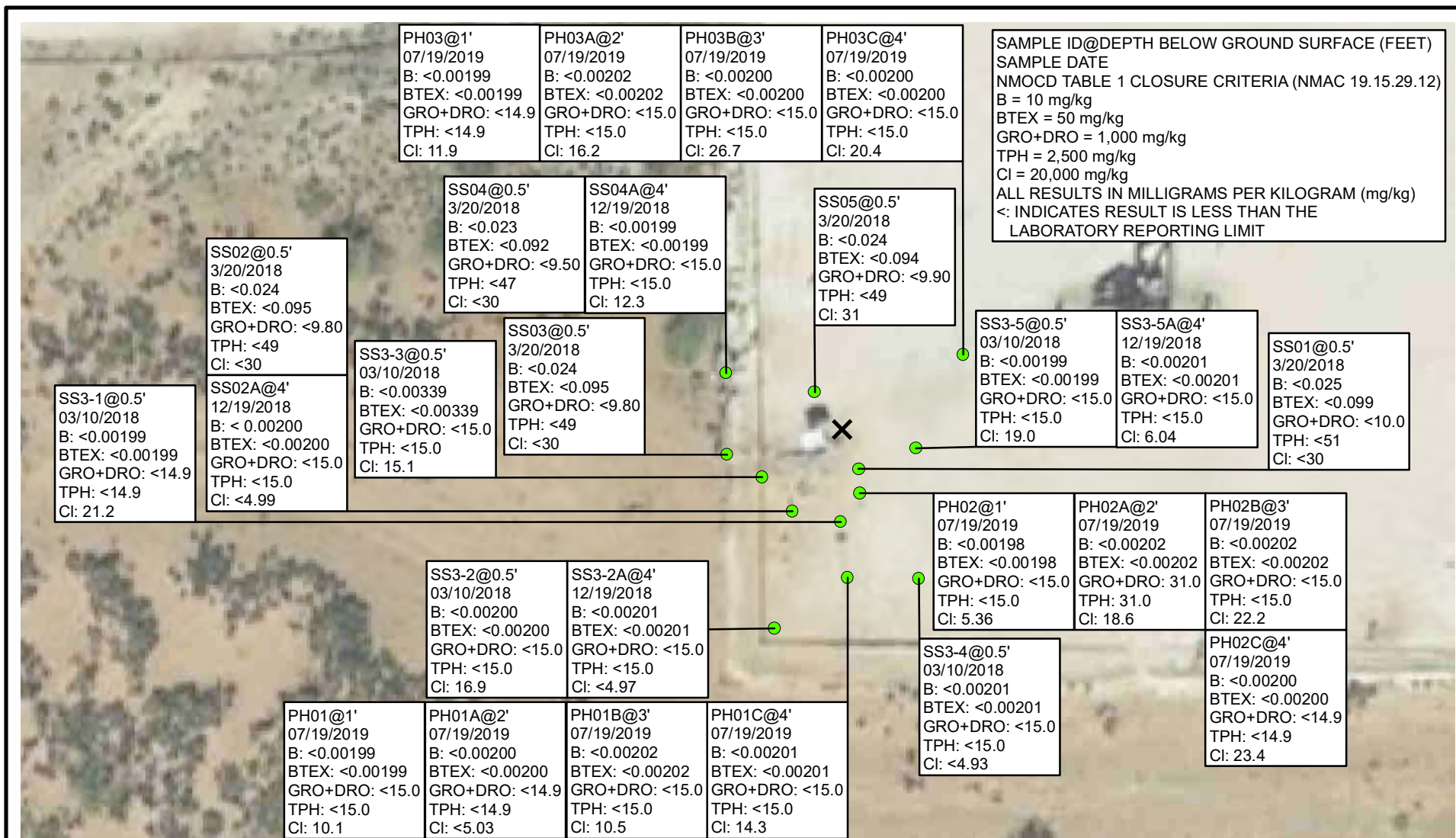


NOTE: REMEDIATION PERMIT
NUMBERS 2RP-3024, 2RP-3440,
& 2RP-3985, 2RP-4914

FIGURE 1
SITE LOCATION MAP
POKER LAKE UNIT CVX JV BS 017H
UNIT C SEC 7 T25S R31E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.



P:\XTO Energy\GIS\MXD\012918091_PLU JV CVX BIG SINKS 017H\012918091_FIG01_SL_2018_ALL.mxd

**LEGEND**

X RELEASE LOCATION ● SOIL SAMPLE IN COMPLIANCE
WITH APPLICABLE CLOSURE CRITERIA

B: BENZENE

BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE,
AND TOTAL XYLENES

GRO: GASOLINE RANGE ORGANICS

DRO: DIESEL RANGE ORGANICS

TPH: TOTAL PETROLEUM HYDROCARBONS

Cl: CHLORIDE

NMAC: NEW MEXICO ADMINISTRATIVE CODE

NMOC D: NEW MEXICO OIL CONSERVATION DIVISION

NOTE: REMEDIATION PERMIT NUMBER 2RP-3440

IMAGE COURTESY OF GOOGLE EARTH 2017

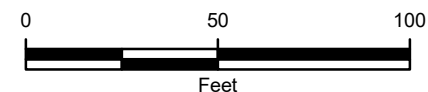


FIGURE 2
SOIL SAMPLE LOCATIONS
POKER LAKE UNIT CVX JV BS 017H
UNIT C SEC 7 T25S R31E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.



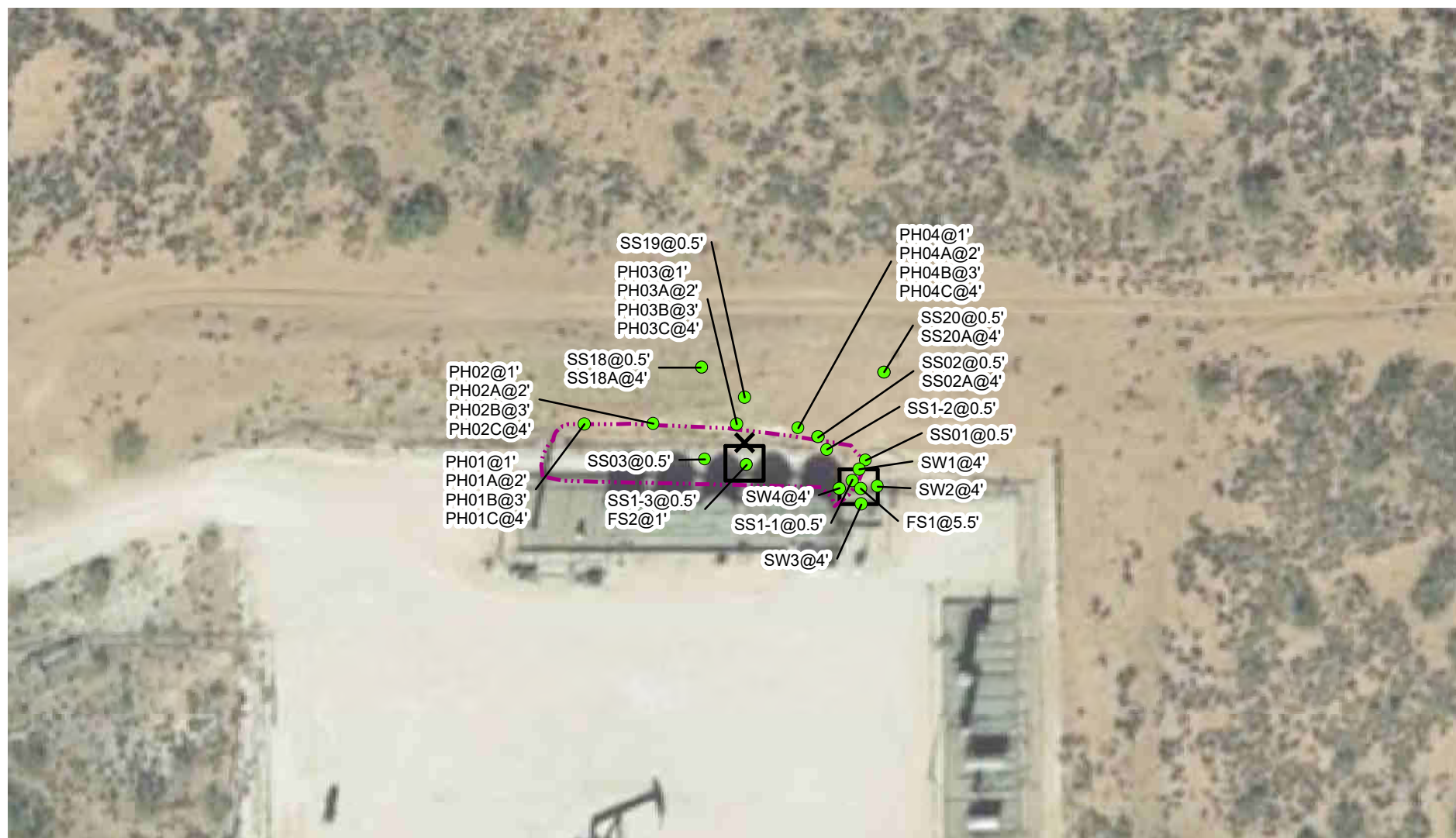


IMAGE COURTESY OF GOOGLE EARTH 2017

LEGEND

- ✕ RELEASE LOCATION
- SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA

▭ EXCAVATION EXTENT

▭ APPROXIMATE RELEASE EXTENT

SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)
NOTE: REMEDIATION PERMIT NUMBER 2RP-3985

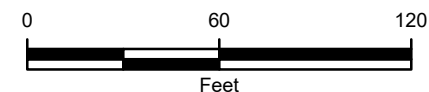
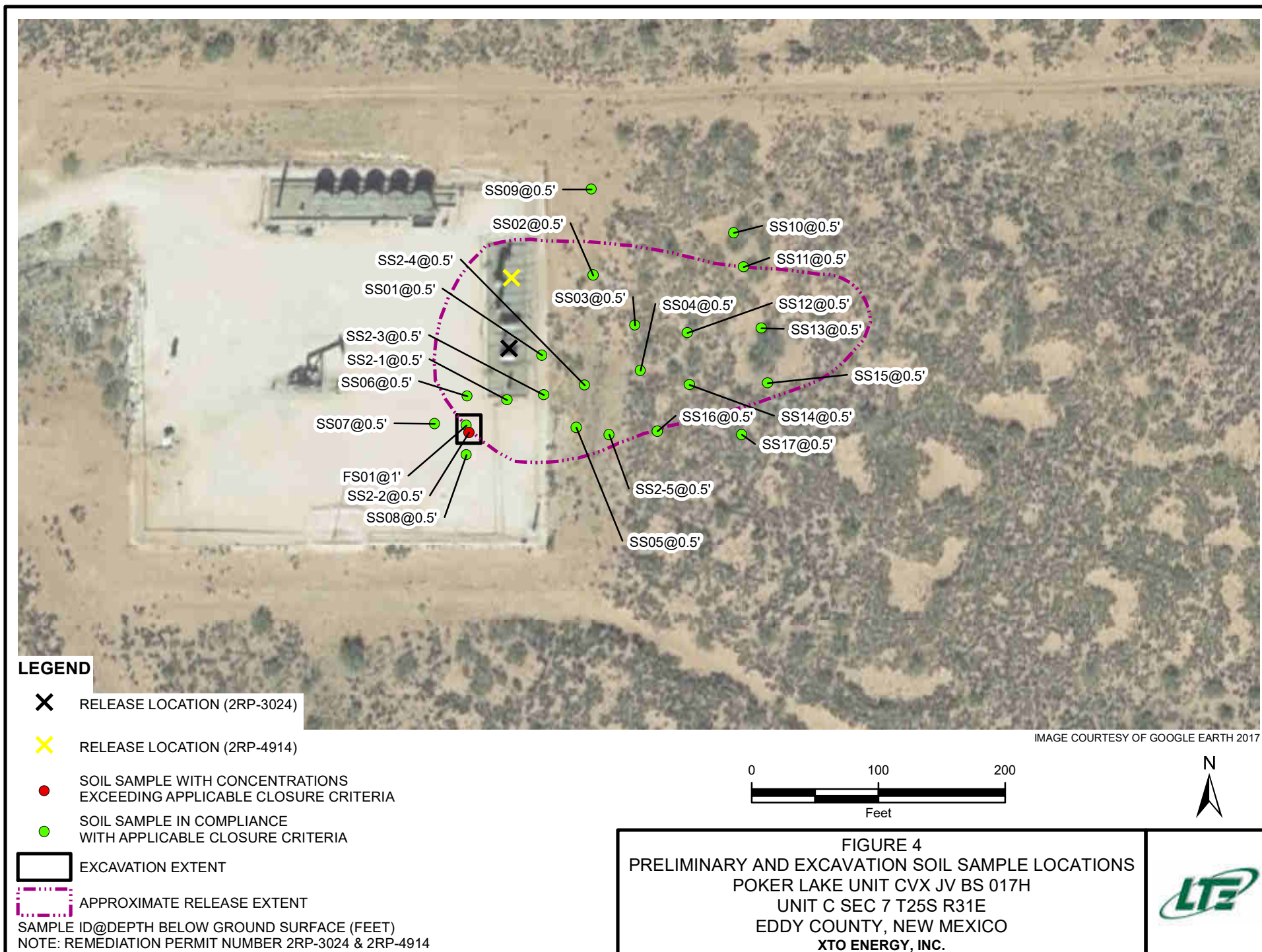
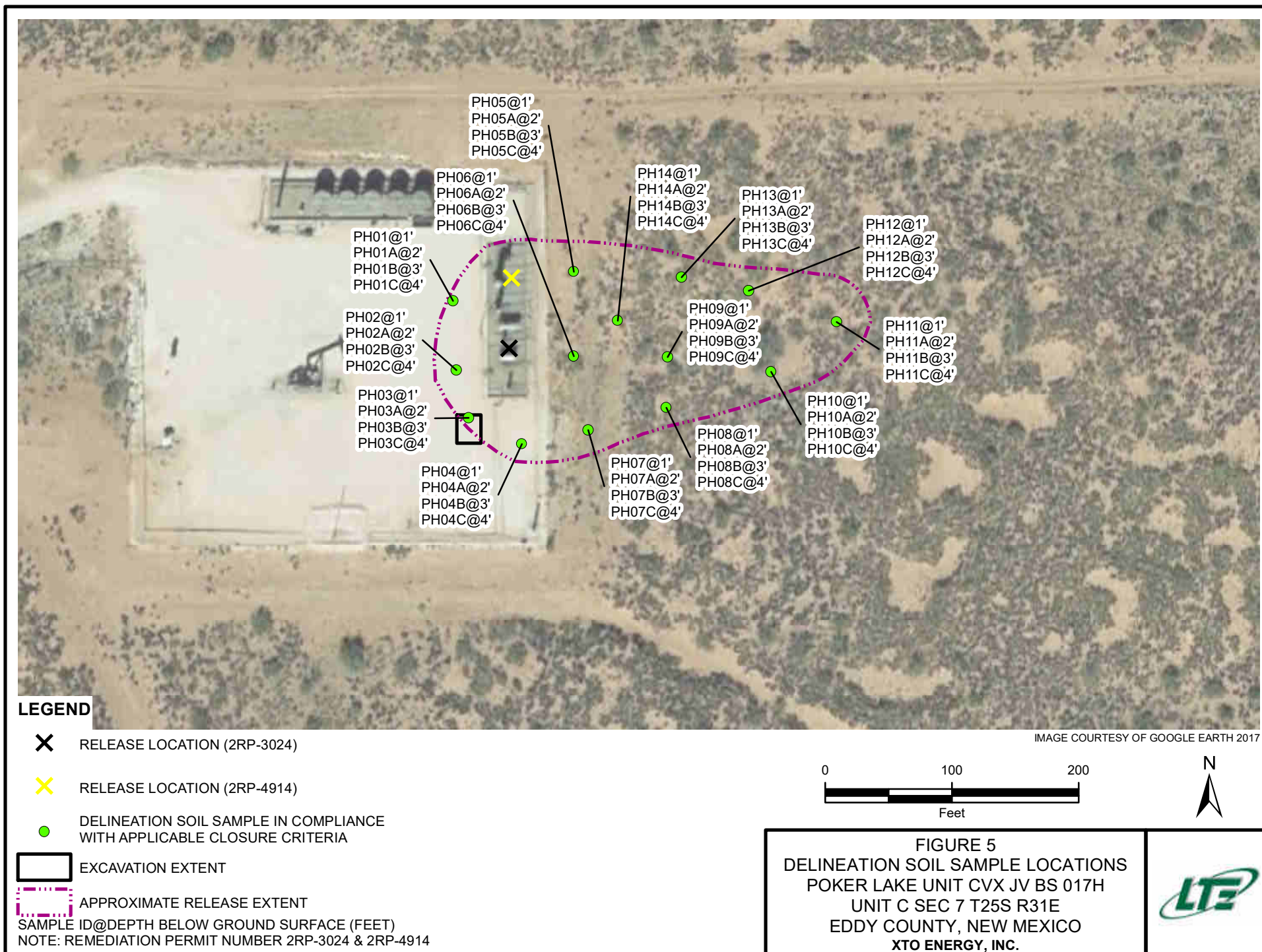


FIGURE 3
SOIL SAMPLE LOCATIONS
POKER LAKE UNIT CVX JV BS 017H
UNIT C SEC 7 T25S R31E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.



P:\XTO Energy\GIS\MXD\012918091_PLU JV CVX BIG SINKS 017H\2RP-3985\012918091_FIG03_SS_LOC_3985.mxd





TABLES



TABLE 1
SOIL ANALYTICAL RESULTS
PLU CVX JV BS 017H
REMEDIATION PERMIT NUMBER 2RP-3440
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	RP number	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
SS3-1	2RP-3440	0.5	03/10/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<14.9	<14.9	<14.9	<14.9	<14.9	21.2
SS3-2	2RP-3440	0.5	03/10/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	16.9
SS3-2A	2RP-3440	4	12/19/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	<4.97
SS3-3	2RP-3440	0.5	03/10/2018	<0.00339	<0.00339	<0.00339	<0.00339	<0.00339	<15.0	<15.0	<15.0	<15.0	<15.0	15.1
SS3-4	2RP-3440	0.5	03/10/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	<4.93
SS3-5	2RP-3440	0.5	03/10/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.0019	<15.0	<15.0	<15.0	<15.0	<15.0	19.0
SS3-5A	2RP-3440	4	12/19/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	6.04
SS01	2RP-3440	0.5	03/20/2018	<0.025	<0.050	<0.050	<0.099	<0.099	<5.00	<10.0	<51.0	<10.0	<51.0	<30.0
SS02	2RP-3440	0.5	03/20/2018	<0.024	<0.047	<0.047	<0.095	<0.095	<4.70	<9.80	<49.0	<9.80	<49.0	<30.0
SS02A	2RP-3440	4	12/19/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<4.99
SS03	2RP-3440	0.5	03/20/2018	<0.024	<0.048	<0.048	<0.095	<0.095	<4.80	<9.80	<49.0	<9.80	<49.0	<30.0
SS04	2RP-3440	0.5	03/20/2018	<0.023	<0.046	<0.046	<0.092	<0.092	<4.60	<9.50	<47.0	<9.50	<47.0	<30.0
SS04A	2RP-3440	4	12/19/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	12.3
SS05	2RP-3440	0.5	03/20/2018	<0.024	<0.047	<0.047	<0.094	<0.094	<4.70	<9.90	<49.0	<9.90	<49.0	31.0
PH01	2RP-3440	1	07/19/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	10.1
PH01A	2RP-3440	2	07/19/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	<5.03
PH01B	2RP-3440	3	07/19/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	10.5
PH01C	2RP-3440	4	07/19/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	14.3
PH02	2RP-3440	1	07/19/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	5.36
PH02A	2RP-3440	2	07/19/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<14.9	31.0	<14.9	31.0	31.0	18.6
PH02B	2RP-3440	3	07/19/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	22.2
PH02C	2RP-3440	4	07/19/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	23.4
PH03	2RP-3440	1	07/19/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<14.9	<14.9	<14.9	<14.9	<14.9	11.9
PH03A	2RP-3440	2	07/19/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	16.2
PH03B	2RP-3440	3	07/19/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	26.7
PH03C	2RP-3440	4	07/19/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	20.4
NMOCDC 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
 NMOCDC - 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

TABLE 2
SOIL ANALYTICAL RESULTS
PLU CVX JV BS 017H
REMEDATION PERMIT NUMBER 2RP-3985
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
SS1-1	0.5	03/10/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	1,970
SS1-2	0.5	03/10/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<4.95
SS1-3	0.5	03/10/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	9,650
SS01	0.5	03/20/2018	<0.023	<0.046	<0.046	<0.092	<0.092	<4.60	<9.70	<49.0	<9.70	<49.0	120
SS02	0.5	03/20/2018	<0.023	<0.046	<0.046	<0.092	<0.092	<4.60	<10.0	<50.0	<10.0	<50.0	<30.0
SS02A	4	12/19/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	8.92
SS03	0.5	03/20/2018	<0.024	<0.047	<0.047	<0.095	<0.095	<4.70	190	240	190	430	<30.0
SS18	0.5	07/03/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	23.0	<15.0	<15.0	23.0	23.0	<4.99
SS18A	4	12/19/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	52.5
SS19	0.5	07/03/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	20.5	<14.9	<14.9	20.5	20.5	<4.95
SS20	0.5	07/03/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	19.3	<15.0	<15.0	19.3	19.3	<4.95
SS20A	4	12/19/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<4.97
FS1	5.5	07/03/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	150
SW1	4	07/03/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	15.7	<15.0	<15.0	<15.0	15.7	173
SW2	4	07/03/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	32.7	54.8	19.0	19.0	107	<4.94
SW3	4	07/03/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	31.0	60.6	18.0	18.0	110	<4.95
SW4	4	07/03/2018	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	17.8	<15.0	<15.0	<15.0	17.8	48.0
FS2	1	07/03/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	16.8	<15.0	<15.0	16.8	16.8	<5.00
PH01	1	07/22/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<5.05
PH01A	2	07/22/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	<5.03
PH01B	3	07/22/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	<4.97
PH01C	4	07/22/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	<5.01
PH02	1	07/22/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	<5.01
PH02A	2	07/22/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<5.04
PH02B	3	07/22/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<5.03
PH02C	4	07/22/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	<5.01
PH03	1	07/22/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	15.1
PH03A	2	07/22/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<4.99
PH03B	3	07/22/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	<5.01
PH03C	4	07/22/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<5.04
NMOCD Table 1 Closure Criteria			10	NE	NE	NE	50	NE	NE	NE	1,000	2,500	20,000

TABLE 2
SOIL ANALYTICAL RESULTS
PLU CVX JV BS 017H
REMEDIATION PERMIT NUMBER 2RP-3985
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
PH04	1	07/22/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<5.05
PH04A	2	07/22/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	5.16
PH04B	3	07/22/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<4.96
PH04C	4	07/22/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	<5.01
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 xylene

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 CVX JV BS 017H
REMEDIATION PERMIT NUMBERS 2RP-3024 and 2RP-4914
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	RP number	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
SS2-1	2RP-3024	0.5	03/10/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	43.4	<15.0	43.4	43.4	1280
SS2-2	2RP-3024	0.5	03/10/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	1180	306	1,180	1,490	73.0
SS2-3	2RP-3024	0.5	03/10/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	17.9	<15.0	17.9	17.9	<5.00
SS2-4	2RP-3024	0.5	03/10/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	<4.98
SS2-5	2RP-3024	0.5	03/10/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	<4.95
SS01	2RP-3024	0.5	03/20/2018	<0.024	<0.049	<0.049	<0.097	<0.097	<4.90	27.0	59.0	27.0	86.0	<30.0
SS02	2RP-3024	0.5	03/20/2018	<0.023	<0.047	<0.047	<0.094	<0.094	<4.70	<10.0	<50	<10.0	<50.0	<30.0
SS03	2RP-3024	0.5	03/20/2018	<0.024	<0.047	<0.047	<0.095	<0.095	<4.70	<9.40	<47.0	<9.40	<47.0	<30.0
SS04	2RP-3024	0.5	03/20/2018	<0.024	<0.048	<0.048	<0.095	<0.095	<4.80	<9.30	<47.0	<9.30	<47.0	<30.0
SS05	2RP-3024	0.5	03/20/2018	<0.023	<0.047	<0.047	<0.094	<0.094	<4.7	<19.0	<47.0	<19.0	<47.0	<30.0
SS06	2RP-3024	0.5	07/03/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	35.2
SS07	2RP-3024	0.5	07/03/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	29.1
SS08	2RP-3024	0.5	07/03/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	32.3
SS09	2RP-3024	0.5	07/03/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	<4.98
SS10	2RP-3024	0.5	07/03/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	<4.90
SS11	2RP-3024	0.5	07/03/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	<4.94
SS12	2RP-3024	0.5	07/03/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<4.97
SS13	2RP-3024	0.5	07/03/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	<4.97
SS14	2RP-3024	0.5	07/03/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	<4.99
SS15	2RP-3024	0.5	07/03/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	<4.96
SS16	2RP-3024	0.5	07/03/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	<4.93
SS17	2RP-3024	0.5	07/03/2018	<0.00201	0.00314	<0.00201	<0.00201	0.00314	<15.0	<15.0	<15.0	<15.0	<15.0	<4.98
FS01	2RP-3024	1	07/03/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	177
NMOCD Table 1 Closure Criteria				10	NE	NE	NE	50	NE	NE	NE	1,000	2,500	20,000

TABLE 3
SOIL ANALYTICAL RESULTS
PLU CVX JV BS 017H
REMEDIATION PERMIT NUMBERS 2RP-3024 and 2RP-4914
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	RP number	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
PH01		1	07/22/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	11.3
PH01A		2	07/22/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	10.2
PH01B		3	07/22/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	15.9
PH01C		4	07/22/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	18.5
PH02		1	07/22/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	24.3
PH02A		2	07/22/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	<5.01
PH02B		3	07/22/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<14.9	<14.9	<14.9	<14.9	<14.9	26.9
PH02C		4	07/22/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	28.0
PH03		1	07/22/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	40.5
PH03A		2	07/22/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	13.3
PH03B		3	07/22/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<14.9	<14.9	<14.9	<14.9	<14.9	53.1
PH03C		4	07/22/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	61.8
PH04		1	07/22/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	<5.02
PH04A		2	07/22/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	5.93
PH04B		3	07/22/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<5.00
PH04C		4	07/22/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	5.34
PH05		1	07/23/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.8	<49.8	<49.8	<49.8	<49.8	11.5
PH05A		2	07/23/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.8	<49.8	<49.8	<49.8	<49.8	<4.96
PH05B		3	07/23/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.7	<49.7	<49.7	<49.7	<49.7	<4.97
PH05C		4	07/23/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.1	<50.1	<50.1	<50.1	<50.1	5.22
PH06		1	07/23/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.8	<49.8	<49.8	<49.8	<49.8	<5.03
PH06A		2	07/23/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	<49.9	<5.04
PH06B		3	07/23/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.7	<49.7	<49.7	<49.7	<49.7	<4.99
PH06C		4	07/23/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.5	<49.5	<49.5	<49.5	<49.5	<4.97
PH07		1	07/23/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	<4.98
PH07A		2	07/23/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.1	<50.1	<50.1	<50.1	<50.1	<4.97
PH07B		3	07/23/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	<4.96
PH07C		4	07/23/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.1	<50.1	<50.1	<50.1	<50.1	<4.96
PH08		1	07/23/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.1	<50.1	<50.1	<50.1	<50.1	<5.05
PH08A		2	07/23/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.8	<49.8	<49.8	<49.8	<49.8	<5.03
PH08B		3	07/23/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.1	<50.1	<50.1	<50.1	<50.1	<4.99
PH08C		4	07/23/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	<4.97
NMOCD Table 1 Closure Criteria				10	NE	NE	NE	50	NE	NE	NE	1,000	2,500	20,000

TABLE 3
SOIL ANALYTICAL RESULTS
PLU CVX JV BS 017H
REMEDIATION PERMIT NUMBERS 2RP-3024 and 2RP-4914
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	RP number	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
PH09		1	07/23/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	<5.02
PH09A		2	07/23/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	<5.02
PH09B		3	07/23/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	<5.02
PH09C		4	07/23/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	<5.05
PH10		1	07/23/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	<4.99
PH10A		2	07/23/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<49.8	<49.8	<49.8	<49.8	<49.8	<4.96
PH10B		3	07/23/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	<4.96
PH10C		4	07/23/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.2	<50.2	<50.2	<50.2	<50.2	<4.97
PH11		1	07/23/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	<4.99
PH11A		2	07/23/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	<5.01
PH11B		3	07/23/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<49.8	<49.8	<49.8	<49.8	<49.8	<5.05
PH11C		4	07/23/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.9	<49.9	<49.9	<49.9	<49.9	<5.03
PH12		1	07/23/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.8	<49.8	<49.8	<49.8	<49.8	<4.98
PH12A		2	07/23/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	<4.97
PH12B		3	07/23/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.0	<50.0	<50.0	<50.0	<50.0	<4.95
PH12C		4	07/23/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.1	<50.1	<50.1	<50.1	<50.1	<4.95
PH13		1	07/23/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	<4.97
PH13A		2	07/23/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	<5.02
PH13B		3	07/23/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	<5.05
PH13C		4	07/23/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.0	<50.0	<50.0	<50.0	<50.0	<4.99
PH14		1	07/23/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.1	<50.1	<50.1	<50.1	<50.1	<5.03
PH14A		2	07/23/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.1	<50.1	<50.1	<50.1	<50.1	5.94
PH14B		3	07/23/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.1	<50.1	<50.1	<50.1	<50.1	7.01
PH14C		4	07/23/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.8	<49.8	<49.8	<49.8	<49.8	<4.97
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 2019

ATTACHMENT 1: INITIAL/FINAL NMOC FORM C-141 (2RP-3024, 2RP-3440, 2RP-3985, 2RP-4914)

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

MAY 29 2015

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

RECEIVED

Release Notification and Corrective Action

NAB1515235015

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: BOPCO, L.P. <i>260737</i>	Contact: Tony Savoie
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 575-887-7329
Facility Name: PLU-JV-CVX-Big Sinks #017H AKA PLU Big Sinks 7-25-31 USA #1H	Facility Type: Exploration and Production

Surface Owner: Federal	Mineral Owner: Federal	API No. 30-015-40447
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LOCATION OF RELEASE

Unit Letter C	Section 7	Township 25S	Range 31E	Feet from the 150	North/South Line North	Feet from the 1980	East/West Line West	County Eddy
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Latitude N 32.152075 Longitude W 103.818965

NATURE OF RELEASE

Type of Release: Crude Oil and produced water	Volume of Release: 69 bbls. crude oil and 35 bbls PW	Volume Recovered: 50 bbls crude oil and 20 bbls PW
Source of Release: Two Phase Separator	Date and Hour of Occurrence: 5/22/15 time unknown	Date and Hour of Discovery: 5/22/15 at approximately 9:00 a.m.
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? NMOCD emergency #104 and Jim Amos "BLM"	
By Whom? Amy Ruth	Date and Hour: 5/22/15 at approximately 4:20 p.m.	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

The backpressure valve failed on the process vessel causing fluid to go out the relief valve on the free water knockout.

Describe Area Affected and Cleanup Action Taken.*

The some of the spill was contained in 0-Perm containment around the process equipment. Due to the pressure of the release approximately 11,025 sq. ft. of caliche pad area and approximately 44,000 sq. ft. of pasture was misted by the release. A vacuum truck recovered 50 bbls of oil and 20 bbls of water from the containment, and picked up 2 bbls of oil off the ground. The equipment and pasture area was power washed. It was estimated that a total of 17 bbls oil and 15 bbls of water saturated into the soil.

The spill areas 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: <i>Tony Savoie</i>	OIL CONSERVATION DIVISION	
Printed Name: Tony Savoie	Approved by Environmental Specialist: <i>[Signature]</i>	
Title: Waste Management and Remediation Specialist	Approval Date: <i>6/1/15</i>	Expiration Date: <i>N/A</i>
E-mail Address: tasavoie@basspet.com	Conditions of Approval: Remediation per O.C.D. Rules & Guidelines Attached ☐	
Date: <i>5/29/15</i> Phone: 432-556-8730	SUBMIT REMEDIATION PROPOSAL NO <i>412/15</i>	

* Attach Additional Sheets If Necessary

LATER THAN: *6/2/15*

2RP-3024

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-3024
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-3024
Contact mailing address: 522 W. Mermod, Suite 704 Carlsbad, NM 88220	

Location of Release Source

Latitude 32.152075 Longitude -103.818965
(NAD 83 in decimal degrees to 5 decimal places)

Site Name PLU-JV-CVX-Big Sinks #017H AKA PLU Big Sinks 7-25-31 USA #1H	Site Type Exploration and Production
Date Release Discovered 5/22/2015	API# (if applicable) 30-015-40447

Unit Letter	Section	Township	Range	County
C	7	25S	31E	Eddy

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

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) 69	Volume Recovered (bbls) 50
☒ Produced Water	Volume Released (bbls) 35	Volume Recovered (bbls) 20
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

The backpressure valve failed on the process vessel causing fluid to go out the relief valve on the free water knockout.

Incident ID	
District RP	2RP-3024
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? Greater than 25 bbls of fluid released.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? By Amy Ruth to NMOCD emergency #104 and Jim Amos (BLM), on May 22, 2015 at 4:20 pm.	

Initial Response

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

☒ The source of the release has been stopped. ☒ The impacted area has been secured to protect human health and the environment. ☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. ☒ All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why: 	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: <u>Kyle Littrell</u>	Title: <u>SH&E Supervisor</u>
Signature: <u></u>	Date: <u>3/30/2020</u>
email: <u>Kyle_Littrell@xtoenergy.com</u>	Telephone: <u>432-221-7331</u>
<u>OCD Only</u> Received by: _____ Date: _____	

Incident ID	
District RP	2RP-3024
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>> 100</u> (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas not on an exploration, development, production, or storage site?	☒ Yes ☐ No

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

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

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

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

State of New Mexico
Oil Conservation Division

Page 4

Incident ID	
District RP	2RP-3024
Facility ID	
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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: 3/30/2020

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

OCD Only

Received by: _____ Date: _____

Incident ID	
District RP	2RP-3024
Facility ID	
Application ID	

Closure

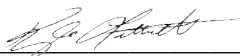
The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled 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: 3/30/2020

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: Jocelyn Harimon Date: 07/01/2022

Printed Name: _____ Title: _____

ARTESIA DISTRICT

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

DEC 08 2015

Form C-141
Revised August 8, 2011

Submitted 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: BOPCO, L.P. **260737** **Contact:** Bradley Blevins

Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220 **Telephone No.** 575-887-7329

Facility Name: PLU CVX JV BS 017H **Facility Type:** Exploration and Production

Surface Owner: Federal **Mineral Owner:** **API No.** 3001540447

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
C	7	25S	31E	150		1980		Eddy

Latitude: 32.151179 Longitude: 103.81947

NATURE OF RELEASE

Type of Release: Produced Water/ Crude Oil	Volume of Release: 35 barrels PW. 8 barrels oil	Volume Recovered: 25 barrels PW and 5 barrels oil
Source of Release: 45 elbow/ threads washed out	Date and Hour of Occurrence: 12-5-15 @ 7:30am	Date and Hour of Discovery: 12-5-15 @ 8:10am
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher, Heather Patterson Jim Amos- BLM	
By Whom? Bradley Blevins via Email	Date and Hour: 12-5-15 @ 11:55am	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

BOPCO EHS was notified of a release that occurred at the PLU CVX JV BS 017H due to a 45 elbow that washed out in the threads of elbow and nipple. A vacuum truck was called to the location and was able to recover 25 barrels of produced water and 5 barrels of oil.

Describe Area Affected and Cleanup Action Taken.*

A vacuum truck was called to the location and was able to recover 25 barrels of produced water and 5 barrels of oil. Once the fluid was recovered by vacuum truck a backhoe was utilized to scrape the heavy saturated material from the well pad.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOC 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 NMOC 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, NMOC 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>Bradley Blevins</u>	OIL CONSERVATION DIVISION	
Printed Name: Bradley Blevins	Approved by Environmental Specialist: <u>[Signature]</u>	
Title: Assistant Remediation Foreman	Approval Date: 12/11/15	Expiration Date: N/A
E-mail Address: bblevins@basspet.com	Conditions of Approval: Remediation per O.C.D. Rules & Guidelines ☐ Attached ☐	
Date: 12-8-15 Phone: 432-214-3704	SUBMIT REMEDIATION PROPOSAL NO	

* Attach Additional Sheets If Necessary

LATER THAN: 11/6/16

2RP-3440

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-3440
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-3440
Contact mailing address: 522 W. Mermod, Suite 704 Carlsbad, NM, 88220	

Location of Release Source

Latitude 32.151179 Longitude -103.81947
(NAD 83 in decimal degrees to 5 decimal places)

Site Name PLUCVX JV BS 017H	Site Type Exploration and Production
Date Release Discovered 12/5/2015	API# (if applicable) 30-015-40447

Unit Letter	Section	Township	Range	County
C	7	25S	31E	Eddy

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

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) 8	Volume Recovered (bbls) 5
☒ Produced Water	Volume Released (bbls) 35	Volume Recovered (bbls) 25
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

A 45 elbow washed out in the threads of elbow and nipple.

Incident ID	
District RP	2RP-3440
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? Greater than 25 bbls of fluid released.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? By Bradley Blevins via email to Mike Bratcher/Heather Patterson (NMOCD) and Jim Amos (BLM) on December 5, 2015, at 11:55	

am.

Initial Response

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

☒ The source of the release has been stopped. ☒ The impacted area has been secured to protect human health and the environment. ☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. ☒ All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why: 	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: <u>Kyle Littrell</u>	Title: <u>SH&E Supervisor</u>
Signature: 	Date: <u>3/30/2020</u>
email: <u>Kyle_Littrell@xtoenergy.com</u>	Telephone: <u>432-221-7331</u>
<u>OCD Only</u>	
Received by: _____	Date: _____

Incident ID	
District RP	2RP-3440
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>> 100</u> (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas not on an exploration, development, production, or storage site?	☐ Yes ☒ No

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

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

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

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

State of New Mexico
Oil Conservation Division

Page 4

Incident ID	
District RP	2RP-3440
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: 3/30/2020

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

OCD Only

Received by: _____ Date: _____

Incident ID	
District RP	2RP-3440
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: 3/30/2020

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: Jocelyn Harimon Date: _____

Printed Name: _____ Title: _____

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

NOV 10 2016

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

Name of Company: BOPCO, L.P. **260737** **Contact:** Bradley Blevins

Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220 **Telephone No.** 575-887-7329

Facility Name: Poker Lake CVX JV BS 017H **Facility Type:** Exploration and Production

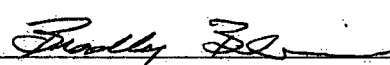
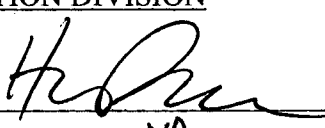
Surface Owner: Federal **Mineral Owner:** **API No.** 3001540447

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
C	7	25S	31E	150		1980		Eddy

Latitude: 32.15249 Longitude: 103.81916

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release: 31 barrels	Volume Recovered: 20 barrels
Source of Release: Steel riser on SWD line	Date and Hour of Occurrence: 11-10-16 @ 9:30am	Date and Hour of Discovery: 11-10-16 @ 10:00am
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Via C-141. Mike Bratcher, Heather Patterson, Jim Amos BLM	
By Whom? Bradley Blevins	Date and Hour: 11-11-16 @ 8:40am	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	
If a Watercourse was Impacted, Describe Fully.*		
Describe Cause of Problem and Remedial Action Taken.* EH&S was notified of a release at the PLU Big Sinks 7-25-31 Battery. Release was caused by a hole that developed in the steel riser of the SWD line on the north side of the battery containment. Vacuum truck was called to the location and recovered 20 barrels of produced water		
Describe Area Affected and Cleanup Action Taken.* Release affected an area on the north side of the battery containment; a vacuum truck was utilized to recover 20 barrels of produced water from the ground surface.		
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: Bradley Blevins	Approved by Environmental Specialist: 	
Title: Assistant Remediation Foreman	Approval Date: 11/14/16	Expiration Date: N/A
E-mail Address: bblevins@basspet.com	Conditions of Approval:	Attached ☒
Date: 11/11/16 Phone: 432-214-3704		

* Attach Additional Sheets If Necessary

2RP-3985

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-3985
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-3985
Contact mailing address: 522 W. Mermod, Suite 704 Carlsbad, NM 88220	

Location of Release Source

Latitude 32.15249 Longitude -103.81916
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Poker Lake CVX JV BS 017H	Site Type Exploration and Production
Date Release Discovered 11/10/2016	API# (if applicable) 30-015-40447

Unit Letter	Section	Township	Range	County
C	7	25S	31E	Eddy

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 31	Volume Recovered (bbls) 20
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

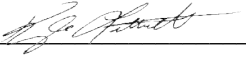
Release was caused by a hole that developed in the steel riser of the SWD line on the north side of the battery containment.

Incident ID	
District RP	2RP-3985
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? Greater than 25 bbls of fluid released.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? By Bradley Blevins to Mike Bratcher/Heather Patterson (NMOCD) and Jim Amos (BLM) on November 11, 2016, at 8:40 am.	

Initial Response

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

☒ The source of the release has been stopped. ☒ The impacted area has been secured to protect human health and the environment. ☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. ☒ All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why: 	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: <u>Kyle Littrell</u>	Title: <u>SH&E Supervisor</u>
Signature: 	Date: <u>3/30/2020</u>
email: <u>Kyle.Littrell@xtoenergy.com</u>	Telephone: <u>432-221-7331</u>
<u>OCD Only</u> Received by: _____ Date: _____	

Incident ID	
District RP	2RP-3985
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>> 100</u> (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas not on an exploration, development, production, or storage site?	☐ Yes ☒ No

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

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

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

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

State of New Mexico
Oil Conservation Division

Page 4

Incident ID	
District RP	2RP-3985
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: 3/30/2020email: Kyle_Littrell@xtoenergy.com Telephone: (432)-221-7331**OCD Only**

Received by: _____ Date: _____

Incident ID	
District RP	2RP-3985
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: 3/30/2020

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: _____

Printed Name: _____ Title: _____

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

Form C-141
Revised April 3, 2017

Submit 1 Copy to 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 BOPCO OGRID: 260737	Contact: Kyle Littrell
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No: 432-221-7331
Facility Name: Big Sinks 7-25-31 Battery (API# for PLU CVX JV BS 017H)	Facility Type: Exploration and Production
Surface Owner: Federal	Mineral Owner: Federal
API No: 30-015-40447	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
C	7	25S	31E	150	North	1980	West	Eddy

Latitude 32.152293 Longitude -1036.819084 NAD83

NATURE OF RELEASE

Type of Release Oil and produced water	Volume of Release 75bbl produced water, 1bbl oil	Volume Recovered 74bbl produced water, 1bbl oil
Source of Release Test separator	Date and Hour of Occurrence 7/26/2018, AM	Date and Hour of Discovery 7/26/2018, 7:00 AM
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher and Maria Pruett (NMOCD), Jim Amos and Shelly Tucker (BLM)	
By Whom? Jake Foust	Date and Hour: 7/27/2018, 7:34 AM	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	
If a Watercourse was Impacted, Describe Fully.* N/A		

Describe Cause of Problem and Remedial Action Taken.*

Fuel gas regulators and dump supply lines on test separator became clogged. This caused flare back pressure valve to fail to open, releasing fluid through pop-off. Blocked lines were cleaned out and separator returned to service.

Describe Area Affected and Cleanup Action Taken.*

Approximately a barrel of overspray impacted the caliche pad. All other fluid was contained within impervious lined containment. Vacuum truck recovered 75bbl of fluid from inside containment. 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: Amy C. Ruth		Approved by Environmental Specialist: Maria Pruett	
Title: Environmental Coordinator		Approval Date: 08/11/18	Expiration Date: 08/14/18
E-mail Address: Amy_Ruth@xtoenergy.com		Conditions of Approval:	Attached ☐
Date: 8/9/2018	Phone: 575-689-3380	Confirm location of spill	2RP-4914

* Attach Additional Sheets If Necessary

A#:pMAP1822339455

Released to Imaging 9/11/2022 4:09:16 PM

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-4914
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-4914
Contact mailing address: 522 W. Mermod, Suite 704 Carlsbad, NM 88220	

Location of Release Source

Latitude 32.152293 Longitude -103.819084
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Big Sinks 7-25-31 Battery (API for PLU CVX JV BS 017H)	Site Type Exploration and Production
Date Release Discovered 7/26/2018	API# (if applicable) 30-015-40447

Unit Letter	Section	Township	Range	County
C	7	25S	31E	Eddy

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

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) 1	Volume Recovered (bbls) 1
☒ Produced Water	Volume Released (bbls) 75	Volume Recovered (bbls) 74
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

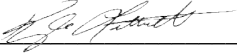
The fuel gas regulators and dump supply lines on the test separator became clogged. This caused the flare back pressure valve to fail to open, releasing fluid through the separator pop-off. Approximately one barrel of overspray impacted the caliche pad. All other fluid was contained within the impervious line containment, and was recovered with a vacuum truck.

Incident ID	
District RP	2RP-4914
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? Greater than 25 bbls of fluid released.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? By Jake Foust to Mike Bratcher/Maria Pruett (NMOCD) and Jim Amos/Shelly Tucker (BLM) on July 27, 2018, at 7:34 am.	

Initial Response

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

☒ The source of the release has been stopped.	
☒ The impacted area has been secured to protect human health and the environment.	
☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.	
☒ All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why: 	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: <u>Kyle Littrell</u>	Title: <u>SH&E Supervisor</u>
Signature: 	Date: <u>3/30/2020</u>
email: <u>Kyle.Littrell@xtoenergy.com</u>	Telephone: <u>432-221-7331</u>
<u>OCD Only</u>	
Received by: _____	Date: _____

Incident ID	
District RP	2RP-4914
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>> 100</u> (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas not on an exploration, development, production, or storage site?	☐ Yes ☒ No

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

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

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

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

State of New Mexico
Oil Conservation Division

Page 4

Incident ID	
District RP	2RP-4914
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: 3/30/2020email: Kyle_Littrell@xtoenergy.com Telephone: (432)-221-7331**OCD Only**

Received by: _____ Date: _____

Incident ID	
District RP	2RP-4914
Facility ID	
Application ID	

Closure

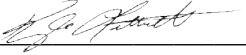
The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled 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: 3/30/2020

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: _____

Printed Name: _____ Title: _____

ATTACHMENT 2: LITHOLOGIC / SOIL SAMPLE LOGS

		LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation		Identifier: SS2-4A		Date: 12/19/2018		
				Project Name: PLU-JV-CVX-Big Sinks #017H		RP Number: 2RP-3024		
LITHOLOGIC / SOIL SAMPLING LOG				Logged By: LL		Method:		
Lat/Long: 32.151999, -103.819387		Field Screening: PID		Hole Diameter: 3 inch		Total Depth: 4 feet		
Comments:								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
	< 160	< 10		SS2-4A	0		SP	SANDY LOAM, no odor, no stain
					1			
					2			
					3			
					4			Total Depth 4 feet bgs
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

		LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation		Identifier: SS10A		Date: 12/19/2018		
				Project Name: PLU-JV-CVX-Big Sinks #017H		RP Number: 2RP-3024		
LITHOLOGIC / SOIL SAMPLING LOG				Logged By: LL		Method:		
Lat/Long: 32.151999, -103.819387		Field Screening: PID		Hole Diameter: 3 inch		Total Depth: 4 feet		
Comments:								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
	< 160	< 10		SS10A	0		SP	SANDY LOAM, no odor, no stain
					1			
					2			
					3			
					4			Total Depth 4 feet bgs
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

		LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation		Identifier: SS10B		Date: 12/19/2018		
				Project Name: PLU-JV-CVX-Big Sinks #017H		RP Number: 2RP-3024		
LITHOLOGIC / SOIL SAMPLING LOG				Logged By: LL		Method:		
Lat/Long: 32.151999, -103.819387		Field Screening: PID		Hole Diameter: 3 inch		Total Depth: 4 feet		
Comments:								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0		SP	SANDY LOAM, no odor, no stain
					1			
					2			
					3			
	< 160	< 10		SS10B	4			CALICHE
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			
								Total Depth 4 feet bgs

		LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation		Identifier: SS14A		Date: 12/19/2018		
				Project Name: PLU-JV-CVX-Big Sinks #017H		RP Number: 2RP-3024		
LITHOLOGIC / SOIL SAMPLING LOG				Logged By: LL		Method:		
Lat/Long: 32.151999, -103.819387		Field Screening: PID		Hole Diameter: 3 inch		Total Depth: 4 feet		
Comments:								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
	< 160	< 10		SS14A	0		SP	SANDY LOAM, no odor, no stain
					1			CALICHE
					2			
					3			
					4			Total Depth 4 feet bgs
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

		LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation		Identifier: SS15A		Date: 12/19/2018		
				Project Name: PLU-JV-CVX-Big Sinks #017H		RP Number: 2RP-3024		
LITHOLOGIC / SOIL SAMPLING LOG				Logged By: LL		Method:		
Lat/Long: 32.151999, -103.819387		Field Screening: PID		Hole Diameter: 3 inch		Total Depth: 4 feet		
Comments:								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
	< 160	< 10		SS15A	0		SP	SANDY LOAM, no odor, no stain
					1			CALICHE
					2			
					3			
					4			Total Depth 4 feet bgs
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

		LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation		Identifier: SS02A		Date: 12/19/2018		
				Project Name: PLU-JV-CVX-Big Sinks #017H		RP Number: 2RP-3440		
LITHOLOGIC / SOIL SAMPLING LOG				Logged By: LL		Method:		
Lat/Long: 32.151999, -103.819387		Field Screening: PID		Hole Diameter: 3 inch		Total Depth: 4 feet		
Comments:								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
	< 160	< 10		SS02A	0		SP	SANDY LOAM, no odor, no stain
					1			CALICHE
					2			
					3			
					4			Total Depth 4 feet bgs
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

		LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation		Identifier: SS3-2A		Date: 12/19/2018		
				Project Name: PLU-JV-CVX-Big Sinks #017H		RP Number: 2RP-3440		
LITHOLOGIC / SOIL SAMPLING LOG				Logged By: LL		Method:		
Lat/Long: 32.151999, -103.819387		Field Screening: PID		Hole Diameter: 3 inch		Total Depth: 4 feet		
Comments:								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0		SP	SANDY LOAM, no odor, no stain
					1			
					2			
					3			
	< 160	< 10		SS3-2A	4			CALICHE
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			
								Total Depth 4 feet bgs

		LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation		Identifier: SS04A		Date: 12/19/2018		
				Project Name: PLU-JV-CVX-Big Sinks #017H		RP Number: 2RP-3440		
LITHOLOGIC / SOIL SAMPLING LOG				Logged By: LL		Method:		
Lat/Long: 32.151999, -103.819387		Field Screening: PID		Hole Diameter: 3 inch		Total Depth: 4 feet		
Comments:								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
	< 160	< 10		SS04A	0		SP	SANDY LOAM, no odor, no stain
					1			CALICHE
					2			
					3			
					4			Total Depth 4 feet bgs
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

		LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation		Identifier: SS02A		Date: 12/19/2018		
				Project Name: PLU-JV-CVX-Big Sinks #017H		RP Number: 2RP-3985		
LITHOLOGIC / SOIL SAMPLING LOG				Logged By: LL		Method:		
Lat/Long: 32.151999, -103.819387		Field Screening: PID		Hole Diameter: 3 inch		Total Depth: 4 feet		
Comments:								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
	< 160	< 10		SS02A	0		SP	SANDY LOAM, no odor, no stain
					1			
					2			
					3			
					4			Total Depth 4 feet bgs
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

		LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation		Identifier: SS18A		Date: 12/19/2018		
				Project Name: PLU-JV-CVX-Big Sinks #017H		RP Number: 2RP-3985		
LITHOLOGIC / SOIL SAMPLING LOG				Logged By: LL		Method:		
Lat/Long: 32.151999, -103.819387		Field Screening: PID		Hole Diameter: 3 inch		Total Depth: 4 feet		
Comments:								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0		SP	SANDY LOAM, no odor, no stain
					1			
					2			CLAY
					3			
	< 160	< 10		SS18A	4			Total Depth 4 feet bgs
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

		LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation		Identifier: SS20A		Date: 12/19/2018		
				Project Name: PLU-JV-CVX-Big Sinks #017H		RP Number: 2RP-3985		
LITHOLOGIC / SOIL SAMPLING LOG				Logged By: LL		Method:		
Lat/Long: 32.151999, -103.819387		Field Screening: PID		Hole Diameter: 3 inch		Total Depth: 4 feet		
Comments:								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
	< 160	< 10		SS20A	0		SP	SANDY LOAM, no odor, no stain
					1			
					2			
					3			
					4			Total Depth 4 feet bgs
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			



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of WSP**

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

BH or PH Name:

PHOI

Date:

7-19-2019

Site Name: PLU CLX JU BS 017H

RP or Incident Number: 2RP-3440

LTE Job Number:

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: SL

52

Method: *Track hoc*

Trackhoe

La/Long:

Field Screening:

Hole Diameter:	
----------------	--

Total Depth:	
--------------	--

66

Comments:

TD 04'

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D	<287	0.0	N	PH01	1	0	SP SM	0-4 Sand, Brown, no odor, no stain, poorly graded, white-tan caliche, trace silt
D	<287	0.0	N	PH01A	2	1		
D	<287	0.0	N	PH01B	3	2		
D	<287	0.0	N	PH01C	4	3		
						4		TD @ 4'
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		



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of WSP

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

BH or PH Name:

PH02

Date:

7-19-2019

Site Name: PLU CLK JV BS 017H

RP or Incident Number: 2RP-3440

LTE Job Number:

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening:

Logged By: SL

Method: Trackhoe

Chloride, PID

Hole Diameter:

Total Depth:

4'

Comments:

TD @ 4'

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		
D	<287	0.0	N	PH02	1	1	SP sm	0-4 Sand w/ caliche, Brown, no odor, no stain, poorly graded, white-tan caliche, trace silt
D	<287	0.0	N	PH02A	2	2		
D	<287	0.0	N	PH02B	3	3		-3 - increase sand, red-Brown.
D	<287	0.0	N	PH02C	4	4		
						5		TD @ 4'
						6		
						7		
						8		
						9		
						10		
						11		
						12		

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 A proud member of WSP		BH or PH Name: <u>PH03</u>		Date: <u>7-19-2019</u>				
		Site Name: <u>PLU Cvx JV SS 017H</u>		RP or Incident Number: <u>2RP-3440</u>				
LTE Job Number:								
LITHOLOGIC / SOIL SAMPLING LOG								
Lat/Long:		Field Screening: Chloride, PID		Logged By: <u>SL</u> Method: <u>Track loc</u>				
Comments: <u>TD @ 4'</u>		Hole Diameter: <u>—</u>		Total Depth: <u>4'</u>				
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D	<287	0.0	N	PH03	1	1	SP-SM	<u>0-4</u> Sand w/ caliche, Brown, no odor, no stain, m-f, poorly graded, white-tan caliche, trace silt -3- Red/Dark Brown Sand
D	<287	0.0	N	PH03A	2	2		
D	<287	0.0	N	PH03B	3	3		
D	<287	0.0	N	PH03C	4	4		
<u>TD @ 4'</u>								
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 A proud member of WSP		BH or PH Name:		Date:				
		PH01		7.22.19				
		Site Name: PLU IV CVY #17H						
		RP or Incident Number: ZRP-3985						
LITE Job Number:								
LITHOLOGIC / SOIL SAMPLING LOG								
Lat/Long:		Field Screening:		Logged By: SL				
		Chloride, PID		Method: Trackbe				
				Hole Diameter: -				
				Total Depth: 4'				
Comments: TD @ 4'								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		
D	<287	0.1	N	PH01	1	1	SP	0-4 Sand, Brown, no odor, no stain, poorly graded, m-f, trace silt
D	<287	1.4	N	PH01A	2	2	SM	
D	<287	0.9	N	PH01B	3	3		
D	<287	0.6	N	PH01C	4	4		
						5		TD @ 4'
						6		
						7		
						8		
						9		
						10		
						11		
						12		

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 A proud member of WSP		BH or PH Name: PH02		Date: 7.22.19				
		Site Name: PLU JV CWA #17H		RP or Incident Number: 2RP-3985				
LITHOLOGIC / SOIL SAMPLING LOG								
Lat/Long:		Field Screening: Chloride, PID		Logged By: SL Method: Trackloc				
Comments:		Hole Diameter: -		Total Depth: 4'				
TD @ 4'								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		
D	<287	1.2	N	PH02	1	1	SP SM	0-4 Sand, Brown, no odor, no stain, poorly graded, m-f, trace silt
D	<287	1.0	N	PH02A	2	2		
D	<287	1.4	N	PH02B	3	3		
D	<287	0.8	N	PH02C	4	4		
						5		TD @ 4'
						6		
						7		
						8		
						9		
						10		
						11		
						12		



A proud member
of WSP

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

BH or PH Name:

PH03

Date:

7.22.19

Site Name:

PLU JV CUX #17H

RP or Incident Number:

ZRP-3985

LTE Job Number:

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening:

Chloride, PID

Logged By:

SL

Method:

Trackloc

Hole Diameter:

-

Total Depth:

4'

Comments:

TD @ 4'

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D	<287	0.5	N	PH03	1	1	SP sm	0-4 SAND, Brown, no odor, no stain, poorly graded, m-f, trace silt
D	<287	0.6	N	PH03A	2	2		
D	<287	0.0	N	PH03B	3	3		
D	<287	0.3	N	PH03C	4	4		
						5		TD @ 4'
						6		
						7		
						8		
						9		
						10		
						11		
						12		

		LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220		BH or PH Name: PH04		Date: 7.22.19		
A proud member of WSP				Site Name: PLU JV CVX #17H				
				RP or Incident Number: LRP-3985				
				LTE Job Number:				
LITHOLOGIC / SOIL SAMPLING LOG								
Lat/Long:		Field Screening: Chloride, PID		Logged By: SL		Method: Trackloc		
				Hole Diameter:		Total Depth: 4'		
Comments: TD @ 4'								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		
D	<287	0.2	N	PH04	1	1	SP SM	0-4 Sand, Brownish odor, no stain, poorly graded, m-f, trace silt
D	<287	1.6	N	PH04A	2	2		
D	<287	1.3	N	PH04B	3	3		
D	<287	1.2	N	PH04C	4	4		
						5		TD @ 4'
						6		
						7		
						8		
						9		
						10		
						11		
						12		

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 A proud member of WSP		BH or PII Name: PH01		Date: 7.22.19				
		Site Name: PLU JV C6X #17H RP or Incident Number: ERP-302V/49/4 LTE Job Number:						
LITHOLOGIC / SOIL SAMPLING LOG								
Lat/Long:		Field Screening: Chloride, PID		Logged By: SL Hole Diameter: — Method: Track hoe Total Depth: 4'				
Comments: TD @ 4'								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
M	C287	1.4	N	PH01	1	1	SP SM	0-4 SAND 4' caliche, light red-dark brown, no odor, no stains, trace caliche, trace silt, m-f, poorly graded
M	C287	3.8	N	PH01A	2	2		
M	C287	0.5	N	PH01B	3	3		
M	C287	6.0	N	PH01C	4	4		
						5		TD @ 4'
						6		
						7		
						8		
						9		
						10		
						11		
						12		

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 A proud member of WSP		BH or PH Name: PH02		Date: 7.22.19				
		Site Name: PLU JV CLK H17H						
		RP or Incident Number: 2RP-3024/4914						
		LTE Job Number:						
LITHOLOGIC / SOIL SAMPLING LOG								
Lat/Long:		Field Screening: Chloride, PID		Hole Diameter: —	Method: Trackbe			
Total Depth:		4'						
Comments: TD @ 4'								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		
M	<487	1.5	N	PH02	1	1	SP sm	0-4 Sand w/ caliche, light red-bark brown, no odor, no stain, tan caliche, trace silt, m-f, poorly graded
M	<287	1.6	N	PH02A	2	2		
M	<287	1.3	N	PH02B	3	3		
M	<287	1.2	N	PH02C	4	4		
						5		TD @ 4'
						6		
						7		
						8		
						9		
						10		
						11		
						12		

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 A proud member of WSP		BH or PH Name: PH03		Date: 7-22-19				
		Site Name: PLU CVA #17H		RP or Incident Number: 2RP-3024/4914				
LTE Job Number:								
LITHOLOGIC / SOIL SAMPLING LOG								
Lat/Long:		Field Screening: Chloride, PID		Logged By: SL Method: Trackhe				
				Hole Diameter: — Total Depth: 4'				
Comments: TD @ 4'								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		
M	<287	1.8	N	PH03	1	1	SP	0-4
M	<287	1.4	N	PH03A	2	2	SM	Sand, w/ caliche, light red, dark brown, no odor, no stain, tan caliche, trace silt, m-f, poorly graded
M	<287	3.0	N	PH03B	3	3		
M	<287	2.4	N	PH03C	4	4		
						5		TD @ 4'
						6		
						7		
						8		
						9		
						10		
						11		
						12		

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 A proud member of WSP		BH or PH Name: PH04		Date: 7.22.19				
		Site Name: PLU #174		RP or Incident Number: 2RP-3024/4914				
LITHOLOGIC / SOIL SAMPLING LOG		LTE Job Number:		Logged By: SL				
Lat/Long:		Field Screening: Chloride, PID		Method: Trackbe				
Comments: TD @ 4'		Hole Diameter: —		Total Depth: 4'				
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
M	287	2.1	N	PH04	1	1	SP sm	0-4 SAND, w/ caliche, Brown, no odor, no staining, m-f, poorly graded, tan caliche, trace silt
M	287	1.4	N	PH04A	2	2		-2- sand colored light red
M	287	1.0	N	PH04B	3	3		
M	287	1.4	N	PH04C	4	4		
						5		TD @ 4'
						6		
						7		
						8		
						9		
						10		
						11		
						12		

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 A proud member of WSP		BH or PH Name:		Date:				
		PH05		7-23-19				
		Site Name: PLU Jv Cvx #17H						
		RP or Incident Number: ZRP-3024/4914						
LITHOLOGIC / SOIL SAMPLING LOG								
Lat/Long:		Field Screening:		Logged By: SL				
		Chloride, PID		Method: Trackhoe				
Comments:		Hole Diameter: —		Total Depth: 4'				
TDO 4'								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
M	<287	0.1	N	PH05	1	1	SP	0-4 Sand, light red-brown, tan caliche, no odor, no stain, poorly graded, m-f, trace silt
M	<287	3.4	N	PH05A	2	2	SM	
M	<287	2.9	N	PH05B	3	3		
M	<287	1.9	N	PH05C	4	4		
TPE 4'								
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 A proud member of WSP		BH or PH Name: PH06		Date: 7.23.19					
		Site Name: PLU SV CUY #17H		RP or Incident Number: ZRP-3024/4914					
LTE Job Number:									
LITHOLOGIC / SOIL SAMPLING LOG									
Lat/Long:		Field Screening: Chloride, PID		Logged By: SL Method: Tracklog					
Comments:		Hole Diameter: -		Total Depth: 4'					
TD @ 4'									
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks	
M	287	3.1	N	PH06	1	1	SP	0-4 SAND w/ catclike, light red, Brown, no odor, no stain, poorly graded, m-f, tan catclike, trace silt	
M	287	2.5	N	PH06A	2	2	SM		
M	287	2.0	N	PH06B	3	3			
M	287	2.2	N	PH06C	4	4			
					TD @ 4'				
					5				
					6				
					7				
					8				
					9				
					10				
					11				
					12				

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 A proud member of WSP		BH or PH Name: PH07		Date: 7.23.19					
		Site Name: PLV CUX JV #17H		RP or Incident Number: 2RP-3024144/4					
LITE Job Number:									
LITHOLOGIC / SOIL SAMPLING LOG									
Lat/Long:		Field Screening: Chloride, PID		Logged By: SL Method: Tracklog					
				Hole Diameter: ✓ Total Depth: 4'					
Comments: TD @ 4'									
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks	
M	2287	1.1	N	PH07	1	1	SP Sm	Sand ⁰⁻⁴ w/ caliche, light red, Brown, no odor, no stain. Tan caliche, poorly graded, m-f, trace silt	
M	2287	2.0	N	PH07B	2	2			
M	2287	2.0	N	PH07C	3	3			
M	2287	2.5	N	PH07D	4	4			
						TD @ 4'			
						5			
						6			
						7			
						8			
						9			
						10			
						11			
						12			

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 A proud member of WSP		BH or PH Name: PH08		Date: 7.23.19				
		Site Name: PLU JV CUX #17H		RP or Incident Number: 2RP-3024/49/4				
LITHOLOGIC / SOIL SAMPLING LOG								
Lat/Long:		Field Screening: Chloride, PID		Logged By: SL Method: Tracklog				
				Hole Diameter: — Total Depth: 4'				
Comments: TD @ 4'								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		
M	2287	0.6	N	PH08B	1	1	SP sm	0-4 Sand. w/ caliche, light red-brown, no odor No stain, poorly graded, m-f, tan caliche, trace silt
M	2297	1.4	N	PH08B A	2	2		
M	2287	0.4	N	PH08B3	3	3		
M	2287	0.1	N	PH08C	4	4		
						5		TD @ 4'
						6		
						7		
						8		
						9		
						10		
						11		
						12		

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 A proud member of WSP		BH or PH Name: PH09		Date: 7.13.2019				
		Site Name: PLU CUX JV BS b17H						
		RP or Incident Number: 2RP-1024						
		LTE Job Number:						
LITHOLOGIC / SOIL SAMPLING LOG								
Lat/Long:		Field Screening: Chloride, PID		Logged By: SL	Method: Track hoe			
				Hole Diameter: 1	Total Depth: 4'			
Comments: TDE 4'								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
M	2287	0.4	N	PH09	1	1	SP sm	0-4 Sand w/ caliche, light red, Brown, m-f, poorly graded, no odor, no stain, iron caliche, trace silt
M	2287	2.1	N	PH09A	2	2		
M	2287	1.8	N	PH09B	3	3		
M	2287	2.1	N	PH09C	4	4		
						5		TDE 4
						6		
						7		
						8		
						9		
						10		
						11		
						12		

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 A proud member of WSP		BH or PH Name: PH10		Date: 7-23-19				
		Site Name: PLU JV CVX #17H						
		RP or Incident Number: 2RP-3024/4914						
		LTE Job Number: -						
LITHOLOGIC / SOIL SAMPLING LOG								
Lat/Long:		Field Screening: Chloride, PID		Hole Diameter:				
				Total Depth: 4'				
Comments: TD @ 4'								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		
M	2287	0.6	N	PH10	1	1	SP 3m	0-1.5 Sand w caliche, light red, brown, no odor, no stain, tan caliche, poorly graded, m-f, tan caliche trace silt
N	2287	6.8	N	PH10A	2	2	SC	1.5-3 Sandy clay, brown, light red, no odor, no stain, m-f, poorly graded, tan caliche, low plasticity, no cohesion
N	2287	3.1	N	PH10B	3	3		
D	2287	2.9	N	PH10C	4	4	CH	3-4 Caliche, tan, brown, no odor, no stain, some clayey sand
								TD @ 4'
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 A proud member of WSP		BH or PH Name: PH11		Date: 7.23.19				
		Site Name: PLU JV CV2 #17H						
		RP or Incident Number: 2RF-302414914						
		LTE Job Number:						
LITHOLOGIC / SOIL SAMPLING LOG								
Lat/Long:		Field Screening: Chloride, PID		Logged By: SL Method: Tracklog				
				Hole Diameter: — Total Depth: 4'				
Comments: TD @ 4'								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
M	2287	3.6	N	PH11	1	1	SC	0-3 Clayey sand, light red-brown, no odor, no stains m-f, poorly graded, no cohesion, low plasticity, trace caliche
M	2287	3.0	N	PH11A	2	2		-2- caliche, tan, increase
M	2287	3.1	N	PH11B	3	3		
D	2287	2.0	N	PH11C	4	4	CEHE	3-4 Caliche. Tan/Brown, no odor, no stain, some clayey sand
								TD @ 4
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 A proud member of WSP		BH or PH Name: PH12		Date: 7.23.19				
		Site Name: PLU JV CUX #17H						
		RP or Incident Number: 2RP-3024/49/4						
		LTE Job Number:						
LITHOLOGIC / SOIL SAMPLING LOG								
Lat/Long:		Field Screening: Chloride, PID		Logged By: SL				
				Method: Trackbe				
				Hole Diameter: —				
				Total Depth: 4'				
Comments: TOE 4'								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		0-4
0	<287	3.6	N	PH12	1	1	SP SM	Sand, w/ caliche, light red-brown, no odor, no stain, m-f, poorly graded, tan caliche, trace silt
0	<287	2.9	N	PH12A	2	2		
0	<287	1.4	N	PH12B	3	3		
0	<287	2.2	N	PH12C	4	4		
						5		TOE 4'
						6		
						7		
						8		
						9		
						10		
						11		
						12		

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 A proud member of WSP		BH or PH Name: PH13		Date: 7.23.19				
		Site Name: PLU JV CVX #17H		RP or Incident Number: 2RP-3024/4914				
LITHOLOGIC / SOIL SAMPLING LOG								
Lat/Long:		Field Screening: Chloride, PID		Logged By: SL				
Comments:		Hole Diameter: /		Method: Trackhoe				
Total Depth: 4'								
TD @ 4'								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D	<287	2.3	N	PH13	1	1	SP SM	0-4' Sand w/ caliche, light red-brown, no odor, no stain, tan caliche, trace silt, m-f, poorly graded
D	<287	3.7	N	PH13A	2	2		
D	<287	3.5	N	PH13B	3	3		
D	<287	3.2	N	PH13C	4	4		
						5		TD @ 4'
						6		
						7		
						8		
						9		
						10		
						11		
						12		

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 A proud member of WSP		BH or PH Name: PH14		Date: 7.23.2019				
		Site Name: PLU CLK JV BS 017H						
		RP or Incident Number: ZRP-50241/VPI4						
		LTE Job Number:						
LITHOLOGIC / SOIL SAMPLING LOG								
Lat/Long:		Field Screening: Chloride, PID		Logged By: SL Method: Trackloc				
				Hole Diameter: - Total Depth: 4'				
Comments: Top @ 4'								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D	287	4.7	N	PH14	1	0	SP SM	0-4 SAND w/ caliche, light red-brown, no odor, no stain, tan caliche, trace silt, m-f, poorly graded
D	287	2.2	N	PH14A	2	1		
D	287	2.2	N	PH14B	3	2		
D	287	1.8	N	PH14C	4	3		
						4		
						5		Top @ 4'
						6		
						7		
						8		
						9		
						10		
						11		
						12		

ATTACHMENT 3: PHOTOGRAPHIC LOG



PHOTOGRAPHIC LOG



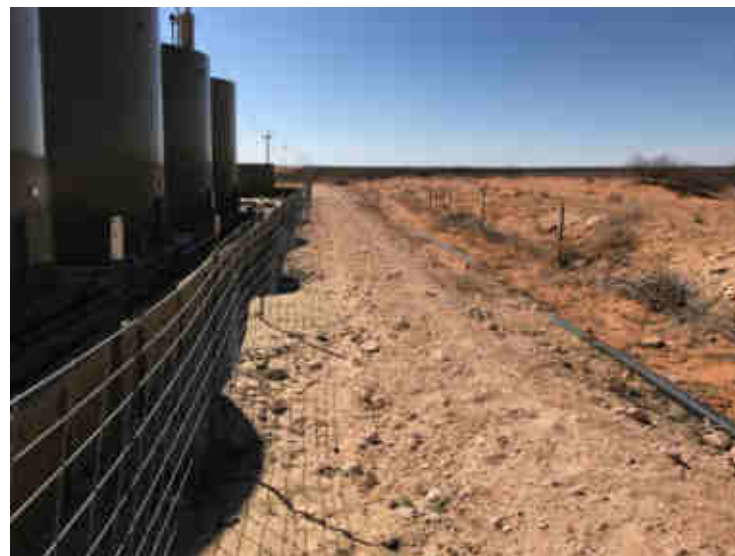
Photograph 1: View of release area (2RP-3440), facing southwest.



Photograph 2: View of release area (2RP-3440), facing northeast.



Photograph 3: View of release area (2RP-3985), facing west.



Photograph 4: View of release area (2RP-3985), facing west.

PLU CVX JV BS 017H
Eddy County, New Mexico
Photographs Taken: March 2018 – July 2019



PHOTOGRAPHIC LOG



Photograph 5: View of release area (2RP-3440 & 2RP-4914), facing north.



Photograph 6: View of release area (2RP-3440 & 2RP-4914), facing west.



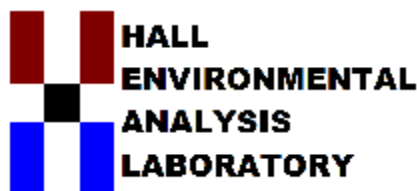
Photograph 7: View of release area (2RP-3440 & 2RP-4914), facing south.



Photograph 8: View of open excavation (2RP-3985).

ATTACHMENT 4: LABORATORY ANALYTICAL REPORTS





Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

April 04, 2018

Adrian Baker
XTO Midland
6401 Holiday Hill Rd #200
Midland, TX 79707
TEL: (432) 894-5641
FAX

RE: 2RP 3440 Delaware Soil Sampling

OrderNo.: 1803E23

Dear Adrian Baker:

Hall Environmental Analysis Laboratory received 5 sample(s) on 3/27/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 1803E23

Date Reported: 4/4/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: XTO Midland

Client Sample ID: SS01

Project: 2RP 3440 Delaware Soil Sampling

Collection Date: 3/20/2018 2:20:00 PM

Lab ID: 1803E23-001

Matrix: SOIL

Received Date: 3/27/2018 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	4/3/2018 12:09:25 PM
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	4/3/2018 12:09:25 PM
Surr: DNOP	80.0	70-130		%Rec	1	4/3/2018 12:09:25 PM
EPA METHOD 300.0: ANIONS						Analyst: MRA
Chloride	ND	30		mg/Kg	20	4/3/2018 6:39:39 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: AG
Benzene	ND	0.025		mg/Kg	1	3/30/2018 2:15:16 AM
Toluene	ND	0.050		mg/Kg	1	3/30/2018 2:15:16 AM
Ethylbenzene	ND	0.050		mg/Kg	1	3/30/2018 2:15:16 AM
Xylenes, Total	ND	0.099		mg/Kg	1	3/30/2018 2:15:16 AM
Surr: 4-Bromofluorobenzene	111	70-130		%Rec	1	3/30/2018 2:15:16 AM
Surr: Toluene-d8	85.0	70-130		%Rec	1	3/30/2018 2:15:16 AM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: AG
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/29/2018 3:31:12 AM
Surr: BFB	114	70-130		%Rec	1	3/29/2018 3:31:12 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Page 1 of 10

Analytical Report

Lab Order 1803E23

Date Reported: 4/4/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: XTO Midland

Client Sample ID: SS02

Project: 2RP 3440 Delaware Soil Sampling

Collection Date: 3/20/2018 2:22:00 PM

Lab ID: 1803E23-002

Matrix: SOIL

Received Date: 3/27/2018 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: TOM
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	4/2/2018 2:10:02 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/2/2018 2:10:02 PM
Surr: DNOP	107	70-130		%Rec	1	4/2/2018 2:10:02 PM
EPA METHOD 300.0: ANIONS						Analyst: MRA
Chloride	ND	30		mg/Kg	20	4/3/2018 6:52:03 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: AG
Benzene	ND	0.024		mg/Kg	1	3/30/2018 2:38:27 AM
Toluene	ND	0.047		mg/Kg	1	3/30/2018 2:38:27 AM
Ethylbenzene	ND	0.047		mg/Kg	1	3/30/2018 2:38:27 AM
Xylenes, Total	ND	0.095		mg/Kg	1	3/30/2018 2:38:27 AM
Surr: 4-Bromofluorobenzene	116	70-130		%Rec	1	3/30/2018 2:38:27 AM
Surr: Toluene-d8	85.4	70-130		%Rec	1	3/30/2018 2:38:27 AM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: AG
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	3/29/2018 3:54:17 AM
Surr: BFB	118	70-130		%Rec	1	3/29/2018 3:54:17 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

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Analytical Report

Lab Order 1803E23

Date Reported: 4/4/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: XTO Midland

Client Sample ID: SS03

Project: 2RP 3440 Delaware Soil Sampling

Collection Date: 3/20/2018 2:24:00 PM

Lab ID: 1803E23-003

Matrix: SOIL

Received Date: 3/27/2018 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: TOM
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	4/2/2018 2:32:11 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/2/2018 2:32:11 PM
Surr: DNOP	114	70-130		%Rec	1	4/2/2018 2:32:11 PM
EPA METHOD 300.0: ANIONS						Analyst: MRA
Chloride	ND	30		mg/Kg	20	4/3/2018 7:04:28 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: AG
Benzene	ND	0.024		mg/Kg	1	3/30/2018 3:01:36 AM
Toluene	ND	0.048		mg/Kg	1	3/30/2018 3:01:36 AM
Ethylbenzene	ND	0.048		mg/Kg	1	3/30/2018 3:01:36 AM
Xylenes, Total	ND	0.095		mg/Kg	1	3/30/2018 3:01:36 AM
Surr: 4-Bromofluorobenzene	114	70-130		%Rec	1	3/30/2018 3:01:36 AM
Surr: Toluene-d8	94.6	70-130		%Rec	1	3/30/2018 3:01:36 AM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: AG
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/29/2018 4:17:22 AM
Surr: BFB	118	70-130		%Rec	1	3/29/2018 4:17:22 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

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Analytical Report

Lab Order 1803E23

Date Reported: 4/4/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: XTO Midland

Client Sample ID: SS04

Project: 2RP 3440 Delaware Soil Sampling

Collection Date: 3/20/2018 2:26:00 PM

Lab ID: 1803E23-004

Matrix: SOIL

Received Date: 3/27/2018 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: TOM
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	4/2/2018 2:54:12 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/2/2018 2:54:12 PM
Surr: DNOP	103	70-130		%Rec	1	4/2/2018 2:54:12 PM
EPA METHOD 300.0: ANIONS						Analyst: MRA
Chloride	ND	30		mg/Kg	20	4/3/2018 7:16:52 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: AG
Benzene	ND	0.023		mg/Kg	1	3/30/2018 3:24:41 AM
Toluene	ND	0.046		mg/Kg	1	3/30/2018 3:24:41 AM
Ethylbenzene	ND	0.046		mg/Kg	1	3/30/2018 3:24:41 AM
Xylenes, Total	ND	0.092		mg/Kg	1	3/30/2018 3:24:41 AM
Surr: 4-Bromofluorobenzene	111	70-130		%Rec	1	3/30/2018 3:24:41 AM
Surr: Toluene-d8	89.1	70-130		%Rec	1	3/30/2018 3:24:41 AM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: AG
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	3/29/2018 4:40:23 AM
Surr: BFB	112	70-130		%Rec	1	3/29/2018 4:40:23 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

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Analytical Report

Lab Order 1803E23

Date Reported: 4/4/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: XTO Midland

Client Sample ID: SS05

Project: 2RP 3440 Delaware Soil Sampling

Collection Date: 3/20/2018 2:28:00 PM

Lab ID: 1803E23-005

Matrix: SOIL

Received Date: 3/27/2018 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: TOM
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	4/3/2018 12:31:36 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/3/2018 12:31:36 PM
Surr: DNOP	81.6	70-130		%Rec	1	4/3/2018 12:31:36 PM
EPA METHOD 300.0: ANIONS						Analyst: CJS
Chloride	31	30		mg/Kg	20	4/3/2018 12:27:23 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: AG
Benzene	ND	0.024		mg/Kg	1	3/30/2018 3:47:51 AM
Toluene	ND	0.047		mg/Kg	1	3/30/2018 3:47:51 AM
Ethylbenzene	ND	0.047		mg/Kg	1	3/30/2018 3:47:51 AM
Xylenes, Total	ND	0.094		mg/Kg	1	3/30/2018 3:47:51 AM
Surr: 4-Bromofluorobenzene	134	70-130	S	%Rec	1	3/30/2018 3:47:51 AM
Surr: Toluene-d8	86.8	70-130		%Rec	1	3/30/2018 3:47:51 AM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: AG
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	3/29/2018 5:03:27 AM
Surr: BFB	113	70-130		%Rec	1	3/29/2018 5:03:27 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

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QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1803E23

04-Apr-18

Client: XTO Midland**Project:** 2RP 3440 Delaware Soil Sampling

Sample ID	MB-37385		SampType: mblk		TestCode: EPA Method 300.0: Anions					
Client ID:	PBS		Batch ID: 37385		RunNo: 50271					
Prep Date:	4/2/2018		Analysis Date: 4/3/2018		SeqNo: 1628346		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-37385		SampType: lcs		TestCode: EPA Method 300.0: Anions					
Client ID:	LCSS		Batch ID: 37385		RunNo: 50271					
Prep Date:	4/2/2018		Analysis Date: 4/3/2018		SeqNo: 1628347		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	91.8	90	110			

Sample ID	MB-37403		SampType:	mblk		TestCode:	EPA Method 300.0: Anions				
Client ID:	PBS		Batch ID:	37403		RunNo:	50279				
Prep Date:	4/3/2018		Analysis Date:	4/3/2018		SeqNo:	1629258		Units:	mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Chloride	ND	1.5									

Sample ID	LCS-37403		SampType: lcs		TestCode: EPA Method 300.0: Anions					
Client ID:	LCSS		Batch ID: 37403		RunNo: 50279					
Prep Date:	4/3/2018		Analysis Date: 4/3/2018		SeqNo: 1629259		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.3	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1803E23

04-Apr-18

Client: XTO Midland

Project: 2RP 3440 Delaware Soil Sampling

Sample ID	MB-37285	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	37285	RunNo:	50180					
Prep Date:	3/28/2018	Analysis Date:	3/29/2018	SeqNo:	1625304	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.5		10.00		85.1	70	130			

Sample ID	LCS-37285	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	37285	RunNo:	50180					
Prep Date:	3/28/2018	Analysis Date:	3/29/2018	SeqNo:	1625305	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	92.2	70	130			
Surr: DNOP	4.4		5.000		87.8	70	130			

Sample ID	LCS-37326	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	37326	RunNo:	50229					
Prep Date:	3/29/2018	Analysis Date:	4/2/2018	SeqNo:	1627194	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.3		5.000		86.8	70	130			

Sample ID	MB-37326	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	37326	RunNo:	50229					
Prep Date:	3/29/2018	Analysis Date:	4/2/2018	SeqNo:	1627195	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.3		10.00		92.9	70	130			

Sample ID	LCS-37370	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	37370	RunNo:	50268					
Prep Date:	4/2/2018	Analysis Date:	4/3/2018	SeqNo:	1628675	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.00	0	94.1	70	130			
Surr: DNOP	3.8		5.000		75.7	70	130			

Sample ID	MB-37370	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	37370	RunNo:	50268					
Prep Date:	4/2/2018	Analysis Date:	4/3/2018	SeqNo:	1628676	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1803E23
04-Apr-18

Client: XTO Midland
Project: 2RP 3440 Delaware Soil Sampling

Sample ID	MB-37370	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	37370	RunNo:	50268					
Prep Date:	4/2/2018	Analysis Date:	4/3/2018	SeqNo:	1628676	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.7		10.00		87.0	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	Page 8 of 10
D Sample Diluted Due to Matrix	E Value above quantitation range	
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	
ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
PQL Practical Quantitative Limit	RL Reporting Detection Limit	
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1803E23

04-Apr-18

Client: XTO Midland**Project:** 2RP 3440 Delaware Soil Sampling

Sample ID	lcs-37273		SampType: LCS4		TestCode: EPA Method 8260B: Volatiles Short List					
Client ID:	BatchQC		Batch ID: 37273		RunNo: 50140					
Prep Date:	3/27/2018		Analysis Date: 3/28/2018		SeqNo: 1624719		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.025	1.000	0	90.8	80	120			
Toluene	0.94	0.050	1.000	0	93.9	80	120			
Ethylbenzene	0.99	0.050	1.000	0	98.5	80	120			
Xylenes, Total	3.0	0.10	3.000	0	99.4	80	120			
Surr: 4-Bromofluorobenzene	0.48		0.5000		95.8	70	130			
Surr: Toluene-d8	0.47		0.5000		94.3	70	130			

Sample ID	mb-37273		SampType: MBLK		TestCode: EPA Method 8260B: Volatiles Short List					
Client ID:	PBS		Batch ID: 37273		RunNo: 50140					
Prep Date:	3/27/2018		Analysis Date: 3/28/2018		SeqNo: 1624720		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.55		0.5000		111	70	130			
Surr: Toluene-d8	0.44		0.5000		88.6	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL Practical Quantitative Limit	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

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QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1803E23

04-Apr-18

Client: XTO Midland**Project:** 2RP 3440 Delaware Soil Sampling

Sample ID	lcs-37273		SampType: LCS		TestCode: EPA Method 8015D Mod: Gasoline Range					
Client ID:	LCSS		Batch ID: 37273		RunNo: 50140					
Prep Date:	3/27/2018		Analysis Date: 3/28/2018		SeqNo: 1624698		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	29	5.0	25.00	0	117	70	130			
Surr: BFB	490		500.0		97.8	70	130			

Sample ID	mb-37273		SampType: MBLK		TestCode: EPA Method 8015D Mod: Gasoline Range					
Client ID:	PBS		Batch ID: 37273		RunNo: 50140					
Prep Date:	3/27/2018		Analysis Date: 3/28/2018		SeqNo: 1624699		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	550		500.0		109	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL Practical Quantitative Limit	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: XTO MIDLAND

Work Order Number: 1803E23

RcptNo: 1

Received By: Mandy Woods

3/27/2018 9:30:00 AM

Completed By: Michelle Garcia

3/27/2018 12:08:26 PM

Reviewed By:

Cabeled By: [Signature]

03/27/18

[Signature]

Michelle Garcia

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐ # of preserved bottles checked for pH: _____
(<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐ Adjusted? _____
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐ Checked by: _____

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:

Date:

By Whom:

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

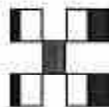
Regarding:

Client Instructions:

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.3	Good	Yes			



**HALL ENVIRONMENTAL
ANALYSIS LABORATORY**

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel: 505-345-3975 Fax: 505-345-4107

Analysis Request

Client: XTO Energy, Delaware division		☒ Standard ☐ Rush Project Name 2RP - 3440 Delaware Soil Sampling				
Mailing Address: 3300 N. A. Street Suite 103 Midland, Texas 79705		Project #:				
Phone #: 433-704-5178		2RP - 3440				
email or Fax#: abaker@tlenv.com		Project Manager:				
QA/QC Package:						
☐ Standard ☐ Level 4 (Full Validation) ☐ NELAP ☐ Other		Adrian Baker				
☐ EDD (Type) _____		Sampler: Josh Adams On Ice: ☒ Yes ☐ No Sample Temperature: 4.3°				
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
3/20/2018	1420	SOIL	SS01	(1) 4oz.	cool	1803E23
3/20/2018	1422	SOIL	SS02	(1) 4oz.	cool	001
3/20/2018	1424	SOIL	SS03	(1) 4oz.	cool	002
3/20/2018	1426	SOIL	SS04	(1) 4oz.	cool	003
3/20/2018	1428	SOIL	SS05	(1) 4oz.	cool	004
					cool	005
3/23/2018	Time: 0730	Relinquished by: [Signature]	Received by: [Signature] Date: 3/23/18 Time: 0730			
Date: 3/23/18	Time: 1900	Relinquished by: [Signature]	Received by: [Signature] Date: 3/27/18 Time: 1930			

If necessary, services submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Analytical Report 579299

for
LT Environmental, Inc.

Project Manager: Adrian Baker
PLU JV CVX Big Sinks 17H

21-MAR-18

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-18-24), 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 (T104704400-18-14)
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)



21-MAR-18

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

Reference: XENCO Report No(s): **579299**
PLU JV CVX Big Sinks 17H
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) 579299. 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. 579299 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 579299

LT Environmental, Inc., Arvada, CO

PLU JV CVX Big Sinks 17H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS3-1	S	03-10-18 12:10	6 In	579299-001
SS3-2	S	03-10-18 12:15	6 In	579299-002
SS3-3	S	03-10-18 12:20	6 In	579299-003
SS3-4	S	03-10-18 12:25	6 In	579299-004
SS3-5	S	03-10-18 12:30	6 In	579299-005



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU JV CVX Big Sinks 17H

Project ID:
Work Order Number(s): 579299

Report Date: 21-MAR-18
Date Received: 03/15/2018

Sample receipt non conformance and comments:

None

Sample receipt non conformance and comments per sample:

None

Analytical non conformance and comments:

Batch: LBA-3044105 BTEX by EPA 8021B

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

Batch: LBA-3044343 BTEX by EPA 8021B

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



Certificate of Analysis Summary 579299

LT Environmental, Inc., Arvada, CO

Project Name: PLU JV CVX Big Sinks 17H



Project Id:

Contact: Adrian Baker

Project Location: NM

Date Received in Lab: Thu Mar-15-18 08:26 am

Report Date: 21-MAR-18

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	579299-001	579299-002	579299-003	579299-004	579299-005	
	Field Id:	SS3-1	SS3-2	SS3-3	SS3-4	SS3-5	
	Depth:	6- In	6- In	6- In	6- In	6- In	
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	
	Sampled:	Mar-10-18 12:10	Mar-10-18 12:15	Mar-10-18 12:20	Mar-10-18 12:25	Mar-10-18 12:30	
BTEX by EPA 8021B	Extracted:	Mar-16-18 16:30	Mar-16-18 16:30	Mar-19-18 09:00	Mar-16-18 16:30	Mar-16-18 16:30	
	Analyzed:	Mar-17-18 15:19	Mar-17-18 15:39	Mar-19-18 13:47	Mar-17-18 16:30	Mar-17-18 16:49	
	Units/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	<0.00339 0.00339	<0.00201 0.00201	<0.00199 0.00199	
Toluene		<0.00199 0.00199	<0.00200 0.00200	<0.00339 0.00339	<0.00201 0.00201	<0.00199 0.00199	
Ethylbenzene		<0.00199 0.00199	<0.00200 0.00200	<0.00339 0.00339	<0.00201 0.00201	<0.00199 0.00199	
m,p-Xylenes		<0.00398 0.00398	<0.00399 0.00399	<0.00678 0.00678	<0.00402 0.00402	<0.00398 0.00398	
o-Xylene		<0.00199 0.00199	<0.00200 0.00200	<0.00339 0.00339	<0.00201 0.00201	<0.00199 0.00199	
Total Xylenes		<0.00199 0.00199	<0.00200 0.00200	<0.00339 0.00339	<0.00201 0.00201	<0.00199 0.00199	
Total BTEX		<0.00199 0.00199	<0.00200 0.00200	<0.00339 0.00339	<0.00201 0.00201	<0.00199 0.00199	
Inorganic Anions by EPA 300	Extracted:	Mar-19-18 18:00	Mar-19-18 18:00	Mar-19-18 18:00	Mar-19-18 18:00	Mar-19-18 18:00	
	Analyzed:	Mar-19-18 20:13	Mar-19-18 20:18	Mar-19-18 20:23	Mar-19-18 20:28	Mar-19-18 20:34	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		21.2 4.92	16.9 4.95	15.1 4.98	<4.93 4.93	19.0 4.93	
TPH by SW8015 Mod	Extracted:	Mar-18-18 10:00	Mar-18-18 10:00	Mar-18-18 10:00	Mar-18-18 10:00	Mar-18-18 10:00	
	Analyzed:	Mar-19-18 00:40	Mar-19-18 00:59	Mar-19-18 01:19	Mar-19-18 01:38	Mar-19-18 01:59	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Gasoline Range Hydrocarbons (GRO)		<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	
Diesel Range Organics (DRO)		<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	
Oil Range Hydrocarbons (ORO)		<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	
Total TPH		<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	

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 579299



LT Environmental, Inc., Arvada, CO

PLU JV CVX Big Sinks 17H

Sample Id: **SS3-1**
Lab Sample Id: 579299-001

Matrix: Soil
Date Collected: 03.10.18 12.10

Date Received: 03.15.18 08.26
Sample Depth: 6 In

Analytical Method: Inorganic Anions by EPA 300

Tech: LRI

Analyst: LRI

Seq Number: 3044184

Date Prep: 03.19.18 18.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	21.2	4.92	mg/kg	03.19.18 20.13		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3044129

Date Prep: 03.18.18 10.00

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	03.19.18 00.40	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	03.19.18 00.40	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	03.19.18 00.40	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	03.19.18 00.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	03.19.18 00.40	
o-Terphenyl	84-15-1	99	%	70-135	03.19.18 00.40	



Certificate of Analytical Results 579299



LT Environmental, Inc., Arvada, CO

PLU JV CVX Big Sinks 17H

Sample Id: SS3-1
Lab Sample Id: 579299-001

Matrix: Soil
Date Collected: 03.10.18 12.10

Date Received: 03.15.18 08.26
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Tech: ALJ

Analyst: ALJ

Seq Number: 3044105

Date Prep: 03.16.18 16.30

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	03.17.18 15.19	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.17.18 15.19	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.17.18 15.19	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.17.18 15.19	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.17.18 15.19	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.17.18 15.19	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.17.18 15.19	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	103	%	70-130	03.17.18 15.19		
1,4-Difluorobenzene	540-36-3	93	%	70-130	03.17.18 15.19		



Certificate of Analytical Results 579299



LT Environmental, Inc., Arvada, CO

PLU JV CVX Big Sinks 17H

Sample Id: SS3-2
Lab Sample Id: 579299-002

Matrix: Soil
Date Collected: 03.10.18 12.15

Date Received: 03.15.18 08.26
Sample Depth: 6 In

Analytical Method: Inorganic Anions by EPA 300

Tech: LRI

Analyst: LRI

Seq Number: 3044184

Date Prep: 03.19.18 18.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	16.9	4.95	mg/kg	03.19.18 20.18		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3044129

Date Prep: 03.18.18 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	03.19.18 00.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.19.18 00.59	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	03.19.18 00.59	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.19.18 00.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	03.19.18 00.59	
o-Terphenyl	84-15-1	96	%	70-135	03.19.18 00.59	



Certificate of Analytical Results 579299



LT Environmental, Inc., Arvada, CO

PLU JV CVX Big Sinks 17H

Sample Id: SS3-2
Lab Sample Id: 579299-002

Matrix: Soil
Date Collected: 03.10.18 12.15

Date Received: 03.15.18 08.26
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Tech: ALJ

Analyst: ALJ

Seq Number: 3044105

Date Prep: 03.16.18 16.30

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	03.17.18 15.39	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.17.18 15.39	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.17.18 15.39	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	03.17.18 15.39	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.17.18 15.39	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.17.18 15.39	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.17.18 15.39	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	94	%	70-130	03.17.18 15.39		
1,4-Difluorobenzene	540-36-3	90	%	70-130	03.17.18 15.39		



Certificate of Analytical Results 579299



LT Environmental, Inc., Arvada, CO

PLU JV CVX Big Sinks 17H

Sample Id: SS3-3
Lab Sample Id: 579299-003

Matrix: Soil
Date Collected: 03.10.18 12.20

Date Received: 03.15.18 08.26
Sample Depth: 6 In

Analytical Method: Inorganic Anions by EPA 300

Tech: LRI

Analyst: LRI

Seq Number: 3044184

Date Prep: 03.19.18 18.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	15.1	4.98	mg/kg	03.19.18 20.23		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3044129

Date Prep: 03.18.18 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	03.19.18 01.19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.19.18 01.19	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	03.19.18 01.19	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.19.18 01.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	03.19.18 01.19	
o-Terphenyl	84-15-1	94	%	70-135	03.19.18 01.19	



Certificate of Analytical Results 579299



LT Environmental, Inc., Arvada, CO

PLU JV CVX Big Sinks 17H

Sample Id: SS3-3
Lab Sample Id: 579299-003

Matrix: Soil
Date Collected: 03.10.18 12.20

Date Received: 03.15.18 08.26
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 03.19.18 09.00

Basis: Wet Weight

Seq Number: 3044343

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00339	0.00339	mg/kg	03.19.18 13.47	U	1
Toluene	108-88-3	<0.00339	0.00339	mg/kg	03.19.18 13.47	U	1
Ethylbenzene	100-41-4	<0.00339	0.00339	mg/kg	03.19.18 13.47	U	1
m,p-Xylenes	179601-23-1	<0.00678	0.00678	mg/kg	03.19.18 13.47	U	1
o-Xylene	95-47-6	<0.00339	0.00339	mg/kg	03.19.18 13.47	U	1
Total Xylenes	1330-20-7	<0.00339	0.00339	mg/kg	03.19.18 13.47	U	1
Total BTEX		<0.00339	0.00339	mg/kg	03.19.18 13.47	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	85	%	70-130	03.19.18 13.47		
4-Bromofluorobenzene	460-00-4	110	%	70-130	03.19.18 13.47		



Certificate of Analytical Results 579299



LT Environmental, Inc., Arvada, CO

PLU JV CVX Big Sinks 17H

Sample Id: **SS3-4**
Lab Sample Id: 579299-004

Matrix: Soil
Date Collected: 03.10.18 12.25

Date Received: 03.15.18 08.26
Sample Depth: 6 In

Analytical Method: Inorganic Anions by EPA 300

Tech: LRI

Analyst: LRI

Seq Number: 3044184

Date Prep: 03.19.18 18.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.93	4.93	mg/kg	03.19.18 20.28	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3044129

Date Prep: 03.18.18 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	03.19.18 01.38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.19.18 01.38	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	03.19.18 01.38	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.19.18 01.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	03.19.18 01.38	
o-Terphenyl	84-15-1	98	%	70-135	03.19.18 01.38	



Certificate of Analytical Results 579299



LT Environmental, Inc., Arvada, CO

PLU JV CVX Big Sinks 17H

Sample Id: SS3-4
Lab Sample Id: 579299-004

Matrix: Soil
Date Collected: 03.10.18 12.25

Date Received: 03.15.18 08.26
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 03.16.18 16.30

Basis: Wet Weight

Seq Number: 3044105

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.17.18 16.30	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.17.18 16.30	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.17.18 16.30	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.17.18 16.30	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.17.18 16.30	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	03.17.18 16.30	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.17.18 16.30	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	94	%	70-130	03.17.18 16.30		
1,4-Difluorobenzene	540-36-3	86	%	70-130	03.17.18 16.30		



Certificate of Analytical Results 579299



LT Environmental, Inc., Arvada, CO

PLU JV CVX Big Sinks 17H

Sample Id: SS3-5
Lab Sample Id: 579299-005

Matrix: Soil
Date Collected: 03.10.18 12.30

Date Received: 03.15.18 08.26
Sample Depth: 6 In

Analytical Method: Inorganic Anions by EPA 300

Tech: LRI

Analyst: LRI

Seq Number: 3044184

Date Prep: 03.19.18 18.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	19.0	4.93	mg/kg	03.19.18 20.34		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3044129

Date Prep: 03.18.18 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	03.19.18 01.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.19.18 01.59	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	03.19.18 01.59	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.19.18 01.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	03.19.18 01.59	
o-Terphenyl	84-15-1	102	%	70-135	03.19.18 01.59	



Certificate of Analytical Results 579299



LT Environmental, Inc., Arvada, CO

PLU JV CVX Big Sinks 17H

Sample Id: SS3-5
Lab Sample Id: 579299-005

Matrix: Soil
Date Collected: 03.10.18 12.30

Date Received: 03.15.18 08.26
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 03.16.18 16.30

Basis: Wet Weight

Seq Number: 3044105

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.17.18 16.49	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.17.18 16.49	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.17.18 16.49	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.17.18 16.49	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.17.18 16.49	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.17.18 16.49	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.17.18 16.49	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	107	%	70-130	03.17.18 16.49		
1,4-Difluorobenzene	540-36-3	92	%	70-130	03.17.18 16.49		



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 JV CVX Big Sinks 17H

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3044184

MB Sample Id: 7641087-1-BLK

Matrix: Solid

LCS Sample Id: 7641087-1-BKS

Prep Method: E300P

Date Prep: 03.19.18

LCSD Sample Id: 7641087-1-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	230	92	228	91	90-110	1	20	mg/kg	03.19.18 18:11	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3044184

Parent Sample Id: 579301-010

Matrix: Soil

MS Sample Id: 579301-010 S

Prep Method: E300P

Date Prep: 03.19.18

MSD Sample Id: 579301-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	320	249	539	88	532	85	90-110	1	20	mg/kg	03.19.18 19:41	X

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3044184

Parent Sample Id: 579565-001

Matrix: Soil

MS Sample Id: 579565-001 S

Prep Method: E300P

Date Prep: 03.19.18

MSD Sample Id: 579565-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	152	248	389	96	396	98	90-110	2	20	mg/kg	03.19.18 18:27	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3044129

MB Sample Id: 7641059-1-BLK

Matrix: Solid

LCS Sample Id: 7641059-1-BKS

Prep Method: TX1005P

Date Prep: 03.18.18

LCSD Sample Id: 7641059-1-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	1060	106	1020	102	70-135	4	35	mg/kg	03.18.18 21:40	
Diesel Range Organics (DRO)	<15.0	1000	901	90	880	88	70-135	2	35	mg/kg	03.18.18 21:40	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	94		97		94		70-135	%	03.18.18 21:40
o-Terphenyl	100		98		92		70-135	%	03.18.18 21:40

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

$[D] = 100 * (C-A) / B$
 $RPD = 200 * | (C-E) / (C+E) |$
 $[D] = 100 * (C) / [B]$

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 JV CVX Big Sinks 17H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3044129

Parent Sample Id: 579298-001

Matrix: Soil

MS Sample Id: 579298-001 S

Prep Method: TX1005P

Date Prep: 03.18.18

MSD Sample Id: 579298-001 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	1070	107	985	99	70-135	8	35	mg/kg	03.18.18 22:41	
Diesel Range Organics (DRO)	1180	999	1880	70	1890	71	70-135	1	35	mg/kg	03.18.18 22:41	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	110		99		70-135	%	03.18.18 22:41
o-Terphenyl	92		82		70-135	%	03.18.18 22:41

Analytical Method: BTEX by EPA 8021B

Seq Number: 3044105

MB Sample Id: 7641022-1-BLK

Matrix: Solid

LCS Sample Id: 7641022-1-BKS

Prep Method: SW5030B

Date Prep: 03.16.18

LCSD Sample Id: 7641022-1-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	0.0936	93	0.0878	87	70-130	6	35	mg/kg	03.17.18 10:32	
Toluene	<0.00202	0.101	0.0992	98	0.0934	92	70-130	6	35	mg/kg	03.17.18 10:32	
Ethylbenzene	<0.00202	0.101	0.111	110	0.106	105	70-130	5	35	mg/kg	03.17.18 10:32	
m,p-Xylenes	<0.00404	0.202	0.219	108	0.209	103	70-130	5	35	mg/kg	03.17.18 10:32	
o-Xylene	<0.00202	0.101	0.110	109	0.107	106	70-130	3	35	mg/kg	03.17.18 10:32	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		94		94		70-130	%	03.17.18 10:32
4-Bromofluorobenzene	97		110		107		70-130	%	03.17.18 10:32

Analytical Method: BTEX by EPA 8021B

Seq Number: 3044343

MB Sample Id: 7641212-1-BLK

Matrix: Solid

LCS Sample Id: 7641212-1-BKS

Prep Method: SW5030B

Date Prep: 03.19.18

LCSD Sample Id: 7641212-1-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	0.100	100	0.100	100	70-130	0	35	mg/kg	03.19.18 08:17	
Toluene	<0.00199	0.0996	0.107	107	0.109	109	70-130	2	35	mg/kg	03.19.18 08:17	
Ethylbenzene	<0.00199	0.0996	0.124	124	0.127	127	70-130	2	35	mg/kg	03.19.18 08:17	
m,p-Xylenes	<0.00398	0.199	0.245	123	0.250	125	70-130	2	35	mg/kg	03.19.18 08:17	
o-Xylene	<0.00199	0.0996	0.119	119	0.122	122	70-130	2	35	mg/kg	03.19.18 08:17	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	81		86		92		70-130	%	03.19.18 08:17
4-Bromofluorobenzene	101		116		119		70-130	%	03.19.18 08:17

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * | (C - E) / (C + E) |$
 $[D] = 100 * (C) / [B]$

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 JV CVX Big Sinks 17H

Analytical Method: BTEX by EPA 8021B

Seq Number: 3044105

Parent Sample Id: 579298-004

Matrix: Soil

MS Sample Id: 579298-004 S

Prep Method: SW5030B

Date Prep: 03.16.18

MSD Sample Id: 579298-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0874	87	0.0851	84	70-130	3	35	mg/kg	03.17.18 11:11	
Toluene	<0.00200	0.100	0.0860	86	0.0829	82	70-130	4	35	mg/kg	03.17.18 11:11	
Ethylbenzene	<0.00200	0.100	0.0912	91	0.0824	82	70-130	10	35	mg/kg	03.17.18 11:11	
m,p-Xylenes	<0.00401	0.200	0.175	88	0.158	78	70-130	10	35	mg/kg	03.17.18 11:11	
o-Xylene	<0.00200	0.100	0.0896	90	0.0819	81	70-130	9	35	mg/kg	03.17.18 11:11	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	95		96		70-130	%	03.17.18 11:11
4-Bromofluorobenzene	110		111		70-130	%	03.17.18 11:11

Analytical Method: BTEX by EPA 8021B

Seq Number: 3044343

Parent Sample Id: 579301-001

Matrix: Soil

MS Sample Id: 579301-001 S

Prep Method: SW5030B

Date Prep: 03.19.18

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0637	64	70-130	mg/kg	03.19.18 12:10	X
Toluene	<0.00200	0.100	0.0586	59	70-130	mg/kg	03.19.18 12:10	X
Ethylbenzene	<0.00200	0.100	0.0560	56	70-130	mg/kg	03.19.18 12:10	X
m,p-Xylenes	<0.00401	0.200	0.107	54	70-130	mg/kg	03.19.18 12:10	X
o-Xylene	<0.00200	0.100	0.0529	53	70-130	mg/kg	03.19.18 12:10	X

Surrogate	MS %Rec	MS Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	85		70-130	%	03.19.18 12:10
4-Bromofluorobenzene	118		70-130	%	03.19.18 12:10

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$

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



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Service Center - Baton Rouge

Service Center - Amarillo, TX (806) 275-4514
Service Center - Hobbs, NM (575) 392-5520

CHAIN OF CUSTODY

Page 1 of 1

November 2010

[illegible]



Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 03/15/2018 08:26:00 AM

Work Order #: 579299

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)?	4.6
#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:

Connie Hernandez

Date: 03/15/2018

Checklist reviewed by:

Jessica Kramer

Date: 03/15/2018

Analytical Report 609694

for
LT Environmental, Inc.

Project Manager: Adrian Baker

PLU CVXJV BS 17H

2RP-3440

02-JAN-19

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):

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

Xenco-Dallas (EPA Lab Code: TX01468):

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

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

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

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

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

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

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

Xenco-Atlanta (LELAP Lab ID #04176)

Xenco-Tampa: Florida (E87429)

Xenco-Lakeland: Florida (E84098)



02-JAN-19

Project Manager: **Adrian Baker**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **609694**

PLU CVXJV BS 17H

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) 609694. 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. 609694 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.

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Sample Cross Reference 609694

LT Environmental, Inc., Arvada, CO

PLU CVXJV BS 17H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS3-5A	S	12-19-18 14:50	4 ft	609694-001
SS3-2A	S	12-19-18 14:55	4 ft	609694-002
SS02A	S	12-19-18 15:00	4 ft	609694-003
SS04A	S	12-19-18 15:15	4 ft	609694-004



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU CVXJV BS 17H

Project ID: 2RP-3440
Work Order Number(s): 609694

Report Date: 02-JAN-19
Date Received: 12/22/2018

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3074458 BTEX by EPA 8021B

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



Certificate of Analysis Summary 609694

LT Environmental, Inc., Arvada, CO

Project Name: PLU CVXJV BS 17H



Project Id: 2RP-3440
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Sat Dec-22-18 01:10 pm
Report Date: 02-JAN-19
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	609694-001	609694-002	609694-003	609694-004		
	<i>Field Id:</i>	SS3-5A	SS3-2A	SS02A	SS04A		
	<i>Depth:</i>	4- ft	4- ft	4- ft	4- ft		
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	Dec-19-18 14:50	Dec-19-18 14:55	Dec-19-18 15:00	Dec-19-18 15:15		
BTEX by EPA 8021B	<i>Extracted:</i>	Dec-28-18 08:30	Dec-28-18 08:30	Dec-28-18 08:30	Dec-28-18 08:30		
	<i>Analyzed:</i>	Dec-29-18 02:05	Dec-29-18 02:24	Dec-29-18 03:38	Dec-29-18 03:57		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Benzene		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201		
Toluene		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201		
Ethylbenzene		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201		
m,p-Xylenes		<0.00398 0.00398	<0.00400 0.00400	<0.00400 0.00400	<0.00402 0.00402		
o-Xylene		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201		
Total Xylenes		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201		
Total BTEX		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201		
Inorganic Anions by EPA 300	<i>Extracted:</i>	Dec-28-18 17:30	Dec-28-18 17:30	Dec-28-18 17:30	Dec-28-18 17:30		
	<i>Analyzed:</i>	Dec-29-18 00:37	Dec-29-18 00:56	Dec-29-18 01:02	Dec-29-18 01:24		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		12.3 4.98	<4.99 4.99	8.92 4.99	6.04 4.97		
TPH by SW8015 Mod	<i>Extracted:</i>	Dec-27-18 07:00	Dec-27-18 07:00	Dec-27-18 07:00	Dec-27-18 07:00		
	<i>Analyzed:</i>	Dec-28-18 03:36	Dec-28-18 03:56	Dec-28-18 04:17	Dec-28-18 04:37		
	<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		

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

Jessica Kramer
Project Assistant



Certificate of Analytical Results 609694



LT Environmental, Inc., Arvada, CO

PLU CVXJV BS 17H

Sample Id: SS3-5A
Lab Sample Id: 609694-001

Matrix: Soil
Date Collected: 12.19.18 14.50

Date Received: 12.22.18 13.10
Sample Depth: 4 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: OJS

Analyst: OJS

Seq Number: 3074474

Date Prep: 12.28.18 17.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	12.3	4.98	mg/kg	12.29.18 00.37		1

Analytical Method: TPH by SW8015 Mod

Tech: ALJ

Analyst: ALJ

Seq Number: 3074281

Date Prep: 12.27.18 07.00

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	12.28.18 03.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	12.28.18 03.36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.28.18 03.36	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	12.28.18 03.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	12.28.18 03.36	
o-Terphenyl	84-15-1	92	%	70-135	12.28.18 03.36	



Certificate of Analytical Results 609694



LT Environmental, Inc., Arvada, CO

PLU CVXJV BS 17H

Sample Id: **SS3-5A**
Lab Sample Id: 609694-001

Matrix: Soil
Date Collected: 12.19.18 14.50

Date Received: 12.22.18 13.10
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 12.28.18 08.30

Basis: Wet Weight

Seq Number: 3074458

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.29.18 02.05	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.29.18 02.05	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	12.29.18 02.05	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	12.29.18 02.05	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	12.29.18 02.05	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	12.29.18 02.05	U	1
Total BTEX		<0.00199	0.00199	mg/kg	12.29.18 02.05	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	94	%	70-130	12.29.18 02.05		
1,4-Difluorobenzene	540-36-3	109	%	70-130	12.29.18 02.05		



Certificate of Analytical Results 609694



LT Environmental, Inc., Arvada, CO

PLU CVXJV BS 17H

Sample Id: SS3-2A
Lab Sample Id: 609694-002

Matrix: Soil
Date Collected: 12.19.18 14.55

Date Received: 12.22.18 13.10
Sample Depth: 4 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: OJS

Analyst: OJS

Seq Number: 3074474

Date Prep: 12.28.18 17.30

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	12.29.18 00.56	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ALJ

Analyst: ALJ

Seq Number: 3074281

Date Prep: 12.27.18 07.00

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	12.28.18 03.56	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	12.28.18 03.56	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.28.18 03.56	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	12.28.18 03.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	12.28.18 03.56	
o-Terphenyl	84-15-1	97	%	70-135	12.28.18 03.56	



Certificate of Analytical Results 609694



LT Environmental, Inc., Arvada, CO

PLU CVXJV BS 17H

Sample Id: **SS3-2A**
Lab Sample Id: 609694-002

Matrix: Soil
Date Collected: 12.19.18 14.55

Date Received: 12.22.18 13.10
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 12.28.18 08.30

Basis: Wet Weight

Seq Number: 3074458

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.29.18 02.24	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.29.18 02.24	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.29.18 02.24	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.29.18 02.24	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.29.18 02.24	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.29.18 02.24	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.29.18 02.24	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	94	%	70-130	12.29.18 02.24		
1,4-Difluorobenzene	540-36-3	110	%	70-130	12.29.18 02.24		



Certificate of Analytical Results 609694



LT Environmental, Inc., Arvada, CO

PLU CVXJV BS 17H

Sample Id: **SS02A**
Lab Sample Id: 609694-003

Matrix: Soil
Date Collected: 12.19.18 15.00

Date Received: 12.22.18 13.10
Sample Depth: 4 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: OJS

Analyst: OJS

Seq Number: 3074474

Date Prep: 12.28.18 17.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.92	4.99	mg/kg	12.29.18 01.02		1

Analytical Method: TPH by SW8015 Mod

Tech: ALJ

Analyst: ALJ

Seq Number: 3074281

Date Prep: 12.27.18 07.00

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	12.28.18 04.17	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	12.28.18 04.17	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.28.18 04.17	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	12.28.18 04.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	12.28.18 04.17	
o-Terphenyl	84-15-1	91	%	70-135	12.28.18 04.17	



Certificate of Analytical Results 609694



LT Environmental, Inc., Arvada, CO

PLU CVXJV BS 17H

Sample Id: **SS02A**
Lab Sample Id: 609694-003

Matrix: Soil
Date Collected: 12.19.18 15.00

Date Received: 12.22.18 13.10
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 12.28.18 08.30

Basis: Wet Weight

Seq Number: 3074458

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.29.18 03.38	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.29.18 03.38	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.29.18 03.38	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.29.18 03.38	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.29.18 03.38	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.29.18 03.38	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.29.18 03.38	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	89	%	70-130	12.29.18 03.38		
1,4-Difluorobenzene	540-36-3	108	%	70-130	12.29.18 03.38		



Certificate of Analytical Results 609694



LT Environmental, Inc., Arvada, CO

PLU CVXJV BS 17H

Sample Id: **SS04A**
Lab Sample Id: 609694-004

Matrix: Soil
Date Collected: 12.19.18 15.15

Date Received: 12.22.18 13.10
Sample Depth: 4 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: OJS

Analyst: OJS

Seq Number: 3074474

Date Prep: 12.28.18 17.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6.04	4.97	mg/kg	12.29.18 01.24		1

Analytical Method: TPH by SW8015 Mod

Tech: ALJ

Analyst: ALJ

Seq Number: 3074281

Date Prep: 12.27.18 07.00

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	12.28.18 04.37	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	12.28.18 04.37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.28.18 04.37	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	12.28.18 04.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	12.28.18 04.37	
o-Terphenyl	84-15-1	93	%	70-135	12.28.18 04.37	



Certificate of Analytical Results 609694



LT Environmental, Inc., Arvada, CO

PLU CVXJV BS 17H

Sample Id: **SS04A**
Lab Sample Id: 609694-004

Matrix: Soil
Date Collected: 12.19.18 15.15

Date Received: 12.22.18 13.10
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 12.28.18 08.30

Basis: Wet Weight

Seq Number: 3074458

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	12.29.18 03.57	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	12.29.18 03.57	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	12.29.18 03.57	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	12.29.18 03.57	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	12.29.18 03.57	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	12.29.18 03.57	U	1
Total BTEX		<0.00201	0.00201	mg/kg	12.29.18 03.57	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	109	%	70-130	12.29.18 03.57		
4-Bromofluorobenzene	460-00-4	95	%	70-130	12.29.18 03.57		



Flagging Criteria



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

****** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



LT Environmental, Inc.

PLU CVXJV BS 17H

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3074474

MB Sample Id: 7668966-1-BLK

Matrix: Solid

LCS Sample Id: 7668966-1-BKS

Prep Method: E300P

Date Prep: 12.28.18

LCSD Sample Id: 7668966-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	256	102	254	102	90-110	1	20	mg/kg	12.28.18 22:56	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3074474

Parent Sample Id: 609691-011

Matrix: Soil

MS Sample Id: 609691-011 S

Prep Method: E300P

Date Prep: 12.28.18

MSD Sample Id: 609691-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	3.76	251	275	108	283	111	90-110	3	20	mg/kg	12.28.18 23:14	X

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3074474

Parent Sample Id: 609694-001

Matrix: Soil

MS Sample Id: 609694-001 S

Prep Method: E300P

Date Prep: 12.28.18

MSD Sample Id: 609694-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	12.3	249	280	108	283	109	90-110	1	20	mg/kg	12.29.18 00:44	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3074281

MB Sample Id: 7668887-1-BLK

Matrix: Solid

LCS Sample Id: 7668887-1-BKS

Prep Method: TX1005P

Date Prep: 12.27.18

LCSD Sample Id: 7668887-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	999	872	87	863	86	70-135	1	20	mg/kg	12.27.18 20:33	
Diesel Range Organics (DRO)	<8.12	999	966	97	959	96	70-135	1	20	mg/kg	12.27.18 20:33	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	106		128		127		70-135	%	12.27.18 20:33
o-Terphenyl	111		113		104		70-135	%	12.27.18 20:33

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

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

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

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



LT Environmental, Inc.

PLU CVXJV BS 17H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3074281

Parent Sample Id: 609728-001

Matrix: Soil

MS Sample Id: 609728-001 S

Prep Method: TX1005P

Date Prep: 12.27.18

MSD Sample Id: 609728-001 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)	10.4	998	776	77	926	92	70-135	18	20	mg/kg	12.27.18 21:37	
Diesel Range Organics (DRO)	<8.11	998	851	85	1030	103	70-135	19	20	mg/kg	12.27.18 21:37	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	115		126		70-135	%	12.27.18 21:37
o-Terphenyl	111		115		70-135	%	12.27.18 21:37

Analytical Method: BTEX by EPA 8021B

Seq Number: 3074458

MB Sample Id: 7668998-1-BLK

Matrix: Solid

LCS Sample Id: 7668998-1-BKS

Prep Method: SW5030B

Date Prep: 12.28.18

LCSD Sample Id: 7668998-1-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	0.105	105	0.108	108	70-130	3	35	mg/kg	12.28.18 21:40	
Toluene	<0.000454	0.0996	0.0921	92	0.0940	94	70-130	2	35	mg/kg	12.28.18 21:40	
Ethylbenzene	<0.000563	0.0996	0.0975	98	0.0995	100	70-130	2	35	mg/kg	12.28.18 21:40	
m,p-Xylenes	<0.00101	0.199	0.176	88	0.180	90	70-130	2	35	mg/kg	12.28.18 21:40	
o-Xylene	<0.000343	0.0996	0.0864	87	0.0880	88	70-130	2	35	mg/kg	12.28.18 21:40	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		106		106		70-130	%	12.28.18 21:40
4-Bromofluorobenzene	78		85		86		70-130	%	12.28.18 21:40

Analytical Method: BTEX by EPA 8021B

Seq Number: 3074458

Parent Sample Id: 609627-001

Matrix: Soil

MS Sample Id: 609627-001 S

Prep Method: SW5030B

Date Prep: 12.28.18

MSD Sample Id: 609627-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000387	0.101	0.0981	97	0.0986	99	70-130	1	35	mg/kg	12.28.18 22:18	
Toluene	<0.000458	0.101	0.0817	81	0.0749	75	70-130	9	35	mg/kg	12.28.18 22:18	
Ethylbenzene	<0.000568	0.101	0.0814	81	0.0648	65	70-130	23	35	mg/kg	12.28.18 22:18	X
m,p-Xylenes	<0.00102	0.201	0.146	73	0.116	58	70-130	23	35	mg/kg	12.28.18 22:18	X
o-Xylene	<0.000346	0.101	0.0709	70	0.0574	57	70-130	21	35	mg/kg	12.28.18 22:18	X

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		107		70-130	%	12.28.18 22:18
4-Bromofluorobenzene	86		87		70-130	%	12.28.18 22:18

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

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

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:

10091094

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)	
Company Name:	LT Environmental, Inc., Permian office	Company Name:	LT Energy
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	
Phone:	432.704.5178	Email:	adrian@ltenergy.com

Work Order Comments									
Program: UST/PST ☐ RP ☐ Brownfields ☐ C ☐ Superfund ☐									
State of Project:									
Reporting Level: I ☐ Level II ☐ Level III ☐ ST/UST ☐ RP ☐ Level IV ☐									
Deliverables: EDD ☐ ADAPT ☐ Other:									

Project Name:	PLU CUKSTV BS 12H	Turn Around	ANALYSIS REQUEST	Work Order Notes
Project Number:	2RP-3440	Routine ☒		
P.O. Number:		Rush:		
Sampler's Name:	Lynda Lambrecht	Due Date: 12/31/24		
SAMPLE RECEIPT				
Temperature (°C):	0.3/0.2	Temp Blank: Yes ☐ No ☒	Wet Ice: Yes ☒ No ☐	
Received intact:	(Yes) No	Thermometer		106
Cooler Custody Seals:	Yes ☒ No ☐	Correction Factor:		-0.1
Sample Custody Seals:	Yes ☒ No ☐	Total Containers:		
Number of Containers				
EPA 8015)				
EPA 8021)				
e (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 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 / 7

1631 / 245.1 / 7470 / 7471 : Hg

notice: signature of this document and re-instatement of samples constitutes a valid purchase order from client company to Xeno, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xeno 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 Xeno. A minimum charge of \$75.00 will be applied to each project with a charge of \$5 for each sample submitted to Xeno, 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
		12/19/18 17:00			12/20/18 12:00
		12/20/18 15:30			12/20/18 13:00

Revised Date 051418 Rev. 2018.1



Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 12/22/2018 01:10:00 PM

Work Order #: 609694

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist

Comments

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

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Brianna Teel

Date: 12/26/2018

Checklist reviewed by:

Jessica Kramer

Date: 12/26/2018

Analytical Report 631753

for
LT Environmental, Inc.

Project Manager: Dan Moir
PLU JV CVX Big Sinks #017H
2RP-3440
05-AUG-19

Collected By: Client



1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)



05-AUG-19

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **631753**

PLU JV CVX Big Sinks #017H

Project Address: Delaware Basin

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) 631753. 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. 631753 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'. The signature is written in a cursive, flowing style.

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 631753****LT Environmental, Inc., Arvada, CO**

PLU JV CVX Big Sinks #017H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH01	S	07-19-19 10:00	1 ft	631753-001
PH01A	S	07-19-19 10:35	2 ft	631753-002
PH01B	S	07-19-19 10:50	3 ft	631753-003
PH01C	S	07-19-19 11:05	4 ft	631753-004
PH02	S	07-19-19 11:20	1 ft	631753-005
PH02A	S	07-19-19 11:30	2 ft	631753-006
PH02B	S	07-19-19 11:40	3 ft	631753-007
PH02C	S	07-19-19 11:50	4 ft	631753-008
PH03	S	07-19-19 14:10	1 ft	631753-009
PH03A	S	07-19-19 14:25	2 ft	631753-010
PH03B	S	07-19-19 14:35	3 ft	631753-011
PH03C	S	07-19-19 14:50	4 ft	631753-012

**CASE NARRATIVE****Client Name: LT Environmental, Inc.****Project Name: PLU JV CVX Big Sinks #017H**Project ID: 2RP-3440
Work Order Number(s): 631753Report Date: 05-AUG-19
Date Received: 07/23/2019

Sample receipt non conformances and comments:None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3096414 Chloride by EPA 300

Lab Sample ID 631753-012 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: 631753-003, -004, -005, -006, -007, -008, -009, -010, -011, -012.

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

Batch: LBA-3096823 BTEX by EPA 8021B

Surrogate 4-Bromofluorobenzene recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 631753-006.

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

Batch: LBA-3097288 TPH by SW8015 Mod

Surrogate o-Terphenyl recovered below QC limits. Matrix interferences is suspected.

Samples affected are: 631753-001, 631753-006, 631753-005.

Certificate of Analysis Summary 631753



LT Environmental, Inc., Arvada, CO

Project Name: PLU JV CVX Big Sinks #017H

Project Id: 2RP-3440

Contact: Dan Moir

Project Location: Delaware Basin

Date Received in Lab: Tue Jul-23-19 08:05 am

Report Date: 05-AUG-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	631753-001	631753-002	631753-003	631753-004	631753-005	631753-006
	<i>Field Id:</i>	PH01	PH01A	PH01B	PH01C	PH02	PH02A
	<i>Depth:</i>	1- ft	2- ft	3- ft	4- ft	1- ft	2- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jul-19-19 10:00	Jul-19-19 10:35	Jul-19-19 10:50	Jul-19-19 11:05	Jul-19-19 11:20	Jul-19-19 11:30
BTEX by EPA 8021B SUB: T104704400-18-16	<i>Extracted:</i>	Jul-26-19 10:45	Jul-26-19 10:45	Jul-26-19 10:45	Jul-26-19 10:45	Jul-26-19 10:45	Jul-26-19 10:45
	<i>Analyzed:</i>	Jul-27-19 06:23	Jul-27-19 06:43	Jul-27-19 07:03	Jul-27-19 07:23	Jul-27-19 07:43	Jul-27-19 08:04
	<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	<0.00202 0.00202	<0.00201 0.00201	<0.00198 0.00198	<0.00202 0.00202
Toluene		<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202	<0.00201 0.00201	<0.00198 0.00198	<0.00202 0.00202
Ethylbenzene		<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202	<0.00201 0.00201	<0.00198 0.00198	<0.00202 0.00202
m,p-Xylenes		<0.00398 0.00398	<0.00400 0.00400	<0.00404 0.00404	<0.00402 0.00402	<0.00396 0.00396	<0.00404 0.00404
o-Xylene		<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202	<0.00201 0.00201	<0.00198 0.00198	<0.00202 0.00202
Total Xylenes		<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202	<0.00201 0.00201	<0.00198 0.00198	<0.00202 0.00202
Total BTEX		<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202	<0.00201 0.00201	<0.00198 0.00198	<0.00202 0.00202
Chloride by EPA 300 SUB: T104704400-18-16	<i>Extracted:</i>	Jul-24-19 15:25	Jul-24-19 15:25	Jul-24-19 15:00	Jul-24-19 15:00	Jul-24-19 15:00	Jul-24-19 15:00
	<i>Analyzed:</i>	Jul-24-19 16:26	Jul-24-19 16:42	Jul-24-19 23:41	Jul-25-19 00:10	Jul-25-19 00:19	Jul-25-19 00:29
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		10.1 5.01	<5.03 5.03	10.5 4.98	14.3 5.00	5.36 4.96	18.6 5.03
TPH by SW8015 Mod SUB: T104704400-18-16	<i>Extracted:</i>	Jul-26-19 08:00	Jul-26-19 08:00	Jul-26-19 08:00	Jul-26-19 08:00	Jul-26-19 08:00	Jul-26-19 08:00
	<i>Analyzed:</i>	Aug-01-19 15:16	Aug-01-19 15:39	Aug-01-19 16:24	Aug-01-19 16:48	Aug-01-19 17:11	Aug-01-19 18:01
	<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	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9
Diesel Range Organics (DRO)		<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	31.0 14.9
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9
Total TPH		<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	31.0 14.9
Total GRO-DRO		<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	31.0 14.9

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.
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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 Analysis Summary 631753



LT Environmental, Inc., Arvada, CO

Project Name: PLU JV CVX Big Sinks #017H

Project Id: 2RP-3440

Contact: Dan Moir

Project Location: Delaware Basin

Date Received in Lab: Tue Jul-23-19 08:05 am

Report Date: 05-AUG-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	631753-007	631753-008	631753-009	631753-010	631753-011	631753-012
	<i>Field Id:</i>	PH02B	PH02C	PH03	PH03A	PH03B	PH03C
	<i>Depth:</i>	3- ft	4- ft	1- ft	2- ft	3- ft	4- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jul-19-19 11:40	Jul-19-19 11:50	Jul-19-19 14:10	Jul-19-19 14:25	Jul-19-19 14:35	Jul-19-19 14:50
BTEX by EPA 8021B SUB: T104704400-18-16	<i>Extracted:</i>	Jul-26-19 10:45	Jul-26-19 10:45	Jul-26-19 10:45	Jul-26-19 10:45	Jul-26-19 10:45	Jul-26-19 10:45
	<i>Analyzed:</i>	Jul-27-19 08:24	Jul-27-19 08:44	Jul-27-19 09:04	Jul-27-19 09:24	Jul-27-19 10:43	Jul-27-19 11:03
	<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	<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200
Toluene		<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200
Ethylbenzene		<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200
m,p-Xylenes		<0.00403 0.00403	<0.00400 0.00400	<0.00398 0.00398	<0.00403 0.00403	<0.00399 0.00399	<0.00400 0.00400
o-Xylene		<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200
Total Xylenes		<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200
Total BTEX		<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200
Chloride by EPA 300 SUB: T104704400-18-16	<i>Extracted:</i>	Jul-24-19 15:00	Jul-24-19 15:00	Jul-24-19 15:00	Jul-24-19 15:00	Jul-24-19 15:00	Jul-24-19 15:00
	<i>Analyzed:</i>	Jul-25-19 00:38	Jul-25-19 01:07	Jul-25-19 01:17	Jul-25-19 01:26	Jul-25-19 01:36	Jul-25-19 01:55
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		22.2 5.01	23.4 5.00	11.9 4.97	16.2 5.04	26.7 5.05	20.4 5.01
TPH by SW8015 Mod SUB: T104704400-18-16	<i>Extracted:</i>	Jul-26-19 08:00	Jul-26-19 08:00	Jul-26-19 08:00	Jul-26-19 08:00	Jul-26-19 08:00	Jul-26-19 17:00
	<i>Analyzed:</i>	Aug-01-19 18:24	Aug-01-19 18:46	Aug-01-19 19:09	Aug-01-19 19:32	Aug-01-19 19:55	Aug-04-19 03:15
	<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	<14.9 14.9	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0
Diesel Range Organics (DRO)		<15.0 15.0	<14.9 14.9	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<14.9 14.9	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total TPH		<15.0 15.0	<14.9 14.9	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total GRO-DRO		<15.0 15.0	<14.9 14.9	<14.9 14.9	<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

Jessica Kramer
Project Assistant



Certificate of Analytical Results 631753

LT Environmental, Inc., Arvada, CO

PLU JV CVX Big Sinks #017H

Sample Id: **PH01**
Lab Sample Id: 631753-001

Matrix: Soil
Date Collected: 07.19.19 10.00

Date Received: 07.23.19 08.05
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096407

Date Prep: 07.24.19 15.25

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	10.1	5.01	mg/kg	07.24.19 16.26		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097288

Date Prep: 07.26.19 08.00

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	08.01.19 15.16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.01.19 15.16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.01.19 15.16	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.01.19 15.16	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.01.19 15.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	08.01.19 15.16	
o-Terphenyl	84-15-1	67	%	70-135	08.01.19 15.16	**



Certificate of Analytical Results 631753

LT Environmental, Inc., Arvada, CO

PLU JV CVX Big Sinks #017H

Sample Id: **PH01**
Lab Sample Id: 631753-001

Matrix: Soil
Date Collected: 07.19.19 10.00

Date Received: 07.23.19 08.05
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096823

Date Prep: 07.26.19 10.45

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	<0.00199	0.00199	mg/kg	07.27.19 06.23	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.27.19 06.23	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.27.19 06.23	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.27.19 06.23	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.27.19 06.23	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.27.19 06.23	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.27.19 06.23	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	99	%	70-130	07.27.19 06.23		
4-Bromofluorobenzene	460-00-4	109	%	70-130	07.27.19 06.23		



Certificate of Analytical Results 631753

LT Environmental, Inc., Arvada, CO

PLU JV CVX Big Sinks #017H

Sample Id: **PH01A**
Lab Sample Id: 631753-002

Matrix: Soil
Date Collected: 07.19.19 10.35

Date Received: 07.23.19 08.05
Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096407

Date Prep: 07.24.19 15.25

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	<5.03	5.03	mg/kg	07.24.19 16.42	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097288

Date Prep: 07.26.19 08.00

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	<14.9	14.9	mg/kg	08.01.19 15.39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	08.01.19 15.39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	08.01.19 15.39	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	08.01.19 15.39	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	08.01.19 15.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	08.01.19 15.39	
o-Terphenyl	84-15-1	73	%	70-135	08.01.19 15.39	



Certificate of Analytical Results 631753

LT Environmental, Inc., Arvada, CO

PLU JV CVX Big Sinks #017H

Sample Id: **PH01A**
Lab Sample Id: 631753-002

Matrix: Soil
Date Collected: 07.19.19 10.35

Date Received: 07.23.19 08.05
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096823

Date Prep: 07.26.19 10.45

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	07.27.19 06.43	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.27.19 06.43	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.27.19 06.43	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	07.27.19 06.43	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.27.19 06.43	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.27.19 06.43	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.27.19 06.43	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	103	%	70-130	07.27.19 06.43		
4-Bromofluorobenzene	460-00-4	111	%	70-130	07.27.19 06.43		



Certificate of Analytical Results 631753

LT Environmental, Inc., Arvada, CO

PLU JV CVX Big Sinks #017H

Sample Id: **PH01B**
Lab Sample Id: 631753-003

Matrix: Soil
Date Collected: 07.19.19 10.50

Date Received: 07.23.19 08.05
Sample Depth: 3 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096414

Date Prep: 07.24.19 15.00

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	10.5	4.98	mg/kg	07.24.19 23.41		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097288

Date Prep: 07.26.19 08.00

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	08.01.19 16.24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.01.19 16.24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.01.19 16.24	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.01.19 16.24	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.01.19 16.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	08.01.19 16.24	
o-Terphenyl	84-15-1	83	%	70-135	08.01.19 16.24	



Certificate of Analytical Results 631753

LT Environmental, Inc., Arvada, CO

PLU JV CVX Big Sinks #017H

Sample Id: **PH01B**
Lab Sample Id: 631753-003

Matrix: Soil
Date Collected: 07.19.19 10.50

Date Received: 07.23.19 08.05
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096823

Date Prep: 07.26.19 10.45

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	<0.00202	0.00202	mg/kg	07.27.19 07.03	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.27.19 07.03	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.27.19 07.03	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	07.27.19 07.03	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.27.19 07.03	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.27.19 07.03	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.27.19 07.03	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	103	%	70-130	07.27.19 07.03		
4-Bromofluorobenzene	460-00-4	115	%	70-130	07.27.19 07.03		



Certificate of Analytical Results 631753

LT Environmental, Inc., Arvada, CO

PLU JV CVX Big Sinks #017H

Sample Id: **PH01C**
Lab Sample Id: 631753-004

Matrix: Soil
Date Collected: 07.19.19 11.05

Date Received: 07.23.19 08.05
Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096414

Date Prep: 07.24.19 15.00

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	14.3	5.00	mg/kg	07.25.19 00.10		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097288

Date Prep: 07.26.19 08.00

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	08.01.19 16.48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.01.19 16.48	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.01.19 16.48	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.01.19 16.48	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.01.19 16.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	08.01.19 16.48	
o-Terphenyl	84-15-1	79	%	70-135	08.01.19 16.48	



Certificate of Analytical Results 631753

LT Environmental, Inc., Arvada, CO

PLU JV CVX Big Sinks #017H

Sample Id: **PH01C**
Lab Sample Id: 631753-004

Matrix: Soil
Date Collected: 07.19.19 11.05

Date Received: 07.23.19 08.05
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096823

Date Prep: 07.26.19 10.45

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	<0.00201	0.00201	mg/kg	07.27.19 07.23	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.27.19 07.23	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.27.19 07.23	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.27.19 07.23	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.27.19 07.23	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.27.19 07.23	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.27.19 07.23	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	112	%	70-130	07.27.19 07.23		
1,4-Difluorobenzene	540-36-3	102	%	70-130	07.27.19 07.23		



Certificate of Analytical Results 631753

LT Environmental, Inc., Arvada, CO

PLU JV CVX Big Sinks #017H

Sample Id: **PH02**
Lab Sample Id: 631753-005

Matrix: Soil
Date Collected: 07.19.19 11.20

Date Received: 07.23.19 08.05
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096414

Date Prep: 07.24.19 15.00

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	5.36	4.96	mg/kg	07.25.19 00.19		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097288

Date Prep: 07.26.19 08.00

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	08.01.19 17.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.01.19 17.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.01.19 17.11	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.01.19 17.11	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.01.19 17.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	08.01.19 17.11	
o-Terphenyl	84-15-1	68	%	70-135	08.01.19 17.11	**



Certificate of Analytical Results 631753

LT Environmental, Inc., Arvada, CO

PLU JV CVX Big Sinks #017H

Sample Id: **PH02**
Lab Sample Id: 631753-005

Matrix: Soil
Date Collected: 07.19.19 11.20

Date Received: 07.23.19 08.05
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096823

Date Prep: 07.26.19 10.45

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	<0.00198	0.00198	mg/kg	07.27.19 07.43	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.27.19 07.43	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.27.19 07.43	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	07.27.19 07.43	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.27.19 07.43	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	07.27.19 07.43	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.27.19 07.43	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	108	%	70-130	07.27.19 07.43		
1,4-Difluorobenzene	540-36-3	103	%	70-130	07.27.19 07.43		



Certificate of Analytical Results 631753

LT Environmental, Inc., Arvada, CO

PLU JV CVX Big Sinks #017H

Sample Id: **PH02A**
Lab Sample Id: 631753-006

Matrix: Soil
Date Collected: 07.19.19 11.30

Date Received: 07.23.19 08.05
Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096414

Date Prep: 07.24.19 15.00

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	18.6	5.03	mg/kg	07.25.19 00.29		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097288

Date Prep: 07.26.19 08.00

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	<14.9	14.9	mg/kg	08.01.19 18.01	U	1
Diesel Range Organics (DRO)	C10C28DRO	31.0	14.9	mg/kg	08.01.19 18.01		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	08.01.19 18.01	U	1
Total TPH	PHC635	31.0	14.9	mg/kg	08.01.19 18.01		1
Total GRO-DRO	PHC628	31.0	14.9	mg/kg	08.01.19 18.01		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	80	%	70-135	08.01.19 18.01	
o-Terphenyl	84-15-1	63	%	70-135	08.01.19 18.01	**



Certificate of Analytical Results 631753

LT Environmental, Inc., Arvada, CO

PLU JV CVX Big Sinks #017H

Sample Id: **PH02A**
Lab Sample Id: 631753-006

Matrix: Soil
Date Collected: 07.19.19 11.30

Date Received: 07.23.19 08.05
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096823

Date Prep: 07.26.19 10.45

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	<0.00202	0.00202	mg/kg	07.27.19 08.04	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.27.19 08.04	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.27.19 08.04	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	07.27.19 08.04	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.27.19 08.04	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.27.19 08.04	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.27.19 08.04	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	108	%	70-130	07.27.19 08.04		
4-Bromofluorobenzene	460-00-4	65	%	70-130	07.27.19 08.04	**	



Certificate of Analytical Results 631753

LT Environmental, Inc., Arvada, CO

PLU JV CVX Big Sinks #017H

Sample Id: **PH02B**
Lab Sample Id: 631753-007

Matrix: Soil
Date Collected: 07.19.19 11.40

Date Received: 07.23.19 08.05
Sample Depth: 3 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096414

Date Prep: 07.24.19 15.00

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	22.2	5.01	mg/kg	07.25.19 00.38		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097288

Date Prep: 07.26.19 08.00

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	08.01.19 18.24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.01.19 18.24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.01.19 18.24	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.01.19 18.24	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.01.19 18.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	08.01.19 18.24	
o-Terphenyl	84-15-1	75	%	70-135	08.01.19 18.24	



Certificate of Analytical Results 631753

LT Environmental, Inc., Arvada, CO

PLU JV CVX Big Sinks #017H

Sample Id: **PH02B**
Lab Sample Id: 631753-007

Matrix: Soil
Date Collected: 07.19.19 11.40

Date Received: 07.23.19 08.05
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096823

Date Prep: 07.26.19 10.45

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	<0.00202	0.00202	mg/kg	07.27.19 08.24	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.27.19 08.24	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.27.19 08.24	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	07.27.19 08.24	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.27.19 08.24	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.27.19 08.24	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.27.19 08.24	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	102	%	70-130	07.27.19 08.24		
4-Bromofluorobenzene	460-00-4	107	%	70-130	07.27.19 08.24		



Certificate of Analytical Results 631753

LT Environmental, Inc., Arvada, CO

PLU JV CVX Big Sinks #017H

Sample Id: **PH02C**
Lab Sample Id: 631753-008

Matrix: Soil
Date Collected: 07.19.19 11.50

Date Received: 07.23.19 08.05
Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096414

Date Prep: 07.24.19 15.00

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	23.4	5.00	mg/kg	07.25.19 01.07		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097288

Date Prep: 07.26.19 08.00

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	<14.9	14.9	mg/kg	08.01.19 18.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	08.01.19 18.46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	08.01.19 18.46	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	08.01.19 18.46	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	08.01.19 18.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	08.01.19 18.46	
o-Terphenyl	84-15-1	75	%	70-135	08.01.19 18.46	



Certificate of Analytical Results 631753

LT Environmental, Inc., Arvada, CO

PLU JV CVX Big Sinks #017H

Sample Id: **PH02C**
Lab Sample Id: 631753-008

Matrix: Soil
Date Collected: 07.19.19 11.50

Date Received: 07.23.19 08.05
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096823

Date Prep: 07.26.19 10.45

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	07.27.19 08.44	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.27.19 08.44	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.27.19 08.44	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	07.27.19 08.44	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.27.19 08.44	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.27.19 08.44	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.27.19 08.44	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	111	%	70-130	07.27.19 08.44		
1,4-Difluorobenzene	540-36-3	104	%	70-130	07.27.19 08.44		



Certificate of Analytical Results 631753

LT Environmental, Inc., Arvada, CO

PLU JV CVX Big Sinks #017H

Sample Id: **PH03**
Lab Sample Id: 631753-009

Matrix: Soil
Date Collected: 07.19.19 14.10

Date Received: 07.23.19 08.05
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096414

Date Prep: 07.24.19 15.00

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	11.9	4.97	mg/kg	07.25.19 01.17		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097288

Date Prep: 07.26.19 08.00

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	<14.9	14.9	mg/kg	08.01.19 19.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	08.01.19 19.09	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	08.01.19 19.09	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	08.01.19 19.09	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	08.01.19 19.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	08.01.19 19.09	
o-Terphenyl	84-15-1	75	%	70-135	08.01.19 19.09	



Certificate of Analytical Results 631753

LT Environmental, Inc., Arvada, CO

PLU JV CVX Big Sinks #017H

Sample Id: **PH03**
Lab Sample Id: 631753-009

Matrix: Soil
Date Collected: 07.19.19 14.10

Date Received: 07.23.19 08.05
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096823

Date Prep: 07.26.19 10.45

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	<0.00199	0.00199	mg/kg	07.27.19 09.04	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.27.19 09.04	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.27.19 09.04	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.27.19 09.04	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.27.19 09.04	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.27.19 09.04	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.27.19 09.04	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	112	%	70-130	07.27.19 09.04		
1,4-Difluorobenzene	540-36-3	105	%	70-130	07.27.19 09.04		



Certificate of Analytical Results 631753

LT Environmental, Inc., Arvada, CO

PLU JV CVX Big Sinks #017H

Sample Id: **PH03A**
Lab Sample Id: 631753-010

Matrix: Soil
Date Collected: 07.19.19 14.25

Date Received: 07.23.19 08.05
Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096414

Date Prep: 07.24.19 15.00

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	16.2	5.04	mg/kg	07.25.19 01.26		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097288

Date Prep: 07.26.19 08.00

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	08.01.19 19.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.01.19 19.32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.01.19 19.32	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.01.19 19.32	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.01.19 19.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	08.01.19 19.32	
o-Terphenyl	84-15-1	73	%	70-135	08.01.19 19.32	



Certificate of Analytical Results 631753

LT Environmental, Inc., Arvada, CO

PLU JV CVX Big Sinks #017H

Sample Id: **PH03A**
Lab Sample Id: 631753-010

Matrix: Soil
Date Collected: 07.19.19 14.25

Date Received: 07.23.19 08.05
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096823

Date Prep: 07.26.19 10.45

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	<0.00202	0.00202	mg/kg	07.27.19 09.24	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.27.19 09.24	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.27.19 09.24	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	07.27.19 09.24	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.27.19 09.24	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.27.19 09.24	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.27.19 09.24	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	108	%	70-130	07.27.19 09.24		
1,4-Difluorobenzene	540-36-3	103	%	70-130	07.27.19 09.24		



Certificate of Analytical Results 631753

LT Environmental, Inc., Arvada, CO

PLU JV CVX Big Sinks #017H

Sample Id: **PH03B**
Lab Sample Id: 631753-011

Matrix: Soil
Date Collected: 07.19.19 14.35

Date Received: 07.23.19 08.05
Sample Depth: 3 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096414

Date Prep: 07.24.19 15.00

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	26.7	5.05	mg/kg	07.25.19 01.36		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097288

Date Prep: 07.26.19 08.00

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	08.01.19 19.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.01.19 19.55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.01.19 19.55	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.01.19 19.55	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.01.19 19.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	08.01.19 19.55	
o-Terphenyl	84-15-1	70	%	70-135	08.01.19 19.55	



Certificate of Analytical Results 631753

LT Environmental, Inc., Arvada, CO

PLU JV CVX Big Sinks #017H

Sample Id: **PH03B**
Lab Sample Id: 631753-011

Matrix: Soil
Date Collected: 07.19.19 14.35

Date Received: 07.23.19 08.05
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096823

Date Prep: 07.26.19 10.45

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	07.27.19 10.43	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.27.19 10.43	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.27.19 10.43	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.27.19 10.43	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.27.19 10.43	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.27.19 10.43	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.27.19 10.43	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	101	%	70-130	07.27.19 10.43		
4-Bromofluorobenzene	460-00-4	99	%	70-130	07.27.19 10.43		



Certificate of Analytical Results 631753

LT Environmental, Inc., Arvada, CO

PLU JV CVX Big Sinks #017H

Sample Id: **PH03C**
Lab Sample Id: 631753-012

Matrix: Soil
Date Collected: 07.19.19 14.50

Date Received: 07.23.19 08.05
Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096414

Date Prep: 07.24.19 15.00

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	20.4	5.01	mg/kg	07.25.19 01.55		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097393

Date Prep: 07.26.19 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	08.04.19 03.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.04.19 03.15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.04.19 03.15	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.04.19 03.15	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.04.19 03.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	08.04.19 03.15	
o-Terphenyl	84-15-1	75	%	70-135	08.04.19 03.15	



Certificate of Analytical Results 631753

LT Environmental, Inc., Arvada, CO

PLU JV CVX Big Sinks #017H

Sample Id: **PH03C**
Lab Sample Id: 631753-012

Matrix: Soil
Date Collected: 07.19.19 14.50

Date Received: 07.23.19 08.05
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096823

Date Prep: 07.26.19 10.45

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	07.27.19 11.03	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.27.19 11.03	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.27.19 11.03	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	07.27.19 11.03	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.27.19 11.03	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.27.19 11.03	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.27.19 11.03	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	115	%	70-130	07.27.19 11.03		
1,4-Difluorobenzene	540-36-3	107	%	70-130	07.27.19 11.03		



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 JV CVX Big Sinks #017H

Analytical Method: Chloride by EPA 300

Seq Number: 3096414

MB Sample Id: 7682735-1-BLK

Matrix: Solid

LCS Sample Id: 7682735-1-BKS

Prep Method: E300P

Date Prep: 07.24.19

LCSD Sample Id: 7682735-1-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	267	107	267	107	90-110	0	20	mg/kg	07.24.19 23:22	

Analytical Method: Chloride by EPA 300

Seq Number: 3096407

MB Sample Id: 7682713-1-BLK

Matrix: Solid

LCS Sample Id: 7682713-1-BKS

Prep Method: E300P

Date Prep: 07.24.19

LCSD Sample Id: 7682713-1-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	263	105	259	104	90-110	2	20	mg/kg	07.24.19 16:15	

Analytical Method: Chloride by EPA 300

Seq Number: 3096414

Parent Sample Id: 631753-003

Matrix: Soil

MS Sample Id: 631753-003 S

Prep Method: E300P

Date Prep: 07.24.19

MSD Sample Id: 631753-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	10.5	249	285	110	285	110	90-110	0	20	mg/kg	07.24.19 23:51	

Analytical Method: Chloride by EPA 300

Seq Number: 3096414

Parent Sample Id: 631753-012

Matrix: Soil

MS Sample Id: 631753-012 S

Prep Method: E300P

Date Prep: 07.24.19

MSD Sample Id: 631753-012 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	20.4	251	303	113	302	112	90-110	0	20	mg/kg	07.25.19 02:05	X

Analytical Method: Chloride by EPA 300

Seq Number: 3096407

Parent Sample Id: 631753-001

Matrix: Soil

MS Sample Id: 631753-001 S

Prep Method: E300P

Date Prep: 07.24.19

MSD Sample Id: 631753-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	10.1	251	272	104	267	102	90-110	2	20	mg/kg	07.24.19 16:31	

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



LT Environmental, Inc.
PLU JV CVX Big Sinks #017H

Analytical Method: Chloride by EPA 300

Seq Number: 3096407

Parent Sample Id: 631852-005

Matrix: Soil

MS Sample Id: 631852-005 S

Prep Method: E300P

Date Prep: 07.24.19

MSD Sample Id: 631852-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1370	252	1570	79	1570	79	90-110	0	20	mg/kg	07.24.19 17:45	X

Analytical Method: TPH by SW8015 Mod

Seq Number: 3097288

MB Sample Id: 7683043-1-BLK

Matrix: Solid

LCS Sample Id: 7683043-1-BKS

Prep Method: TX1005P

Date Prep: 07.26.19

LCSD Sample Id: 7683043-1-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	1100	110	1090	109	70-135	1	20	mg/kg	08.01.19 10:40	
Diesel Range Organics (DRO)	<8.13	1000	1180	118	1200	120	70-135	2	20	mg/kg	08.01.19 10:40	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	106		100		99		70-135	%	08.01.19 10:40
o-Terphenyl	103		108		116		70-135	%	08.01.19 10:40

Analytical Method: TPH by SW8015 Mod

Seq Number: 3097393

MB Sample Id: 7683062-1-BLK

Matrix: Solid

LCS Sample Id: 7683062-1-BKS

Prep Method: TX1005P

Date Prep: 07.26.19

LCSD Sample Id: 7683062-1-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	1100	110	1100	110	70-135	0	20	mg/kg	08.03.19 20:46	
Diesel Range Organics (DRO)	<8.13	1000	1150	115	1180	118	70-135	3	20	mg/kg	08.03.19 20:46	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	94		100		99		70-135	%	08.03.19 20:46
o-Terphenyl	79		103		96		70-135	%	08.03.19 20:46

Analytical Method: TPH by SW8015 Mod

Seq Number: 3097288

Parent Sample Id: 631667-007

Matrix: Soil

MS Sample Id: 631667-007 S

Prep Method: TX1005P

Date Prep: 07.26.19

MSD Sample Id: 631667-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<7.97	996	1120	112	1110	111	70-135	1	20	mg/kg	08.01.19 11:49	
Diesel Range Organics (DRO)	10.2	996	1160	115	1090	108	70-135	6	20	mg/kg	08.01.19 11:49	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	87		85		70-135	%	08.01.19 11:49
o-Terphenyl	102		93		70-135	%	08.01.19 11:49

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 JV CVX Big Sinks #017H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3097393

Parent Sample Id: 631892-008

Matrix: Soil

MS Sample Id: 631892-008 S

Prep Method: TX1005P

Date Prep: 07.26.19

MSD Sample Id: 631892-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	13.4	997	1050	104	1060	105	70-135	1	20	mg/kg	08.03.19 21:55	
Diesel Range Organics (DRO)	8.66	997	1150	114	1170	117	70-135	2	20	mg/kg	08.03.19 21:55	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	93		92		70-135	%	08.03.19 21:55
o-Terphenyl	98		92		70-135	%	08.03.19 21:55

Analytical Method: BTEX by EPA 8021B

Seq Number: 3096823

MB Sample Id: 7682920-1-BLK

Matrix: Solid

LCS Sample Id: 7682920-1-BKS

Prep Method: SW5030B

Date Prep: 07.26.19

LCSD Sample Id: 7682920-1-BSO

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	0.101	101	0.104	104	70-130	3	35	mg/kg	07.27.19 04:23	
Toluene	<0.00200	0.100	0.0979	98	0.101	101	70-130	3	35	mg/kg	07.27.19 04:23	
Ethylbenzene	<0.00200	0.100	0.112	112	0.116	116	70-130	4	35	mg/kg	07.27.19 04:23	
m,p-Xylenes	<0.00400	0.200	0.229	115	0.237	119	70-130	3	35	mg/kg	07.27.19 04:23	
o-Xylene	<0.00200	0.100	0.110	110	0.114	114	70-130	4	35	mg/kg	07.27.19 04:23	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		100		96		70-130	%	07.27.19 04:23
4-Bromofluorobenzene	99		109		112		70-130	%	07.27.19 04:23

Analytical Method: BTEX by EPA 8021B

Seq Number: 3096823

Parent Sample Id: 631753-001

Matrix: Soil

MS Sample Id: 631753-001 S

Prep Method: SW5030B

Date Prep: 07.26.19

MSD Sample Id: 631753-001 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	0.100	0.0869	87	0.0884	89	70-130	2	35	mg/kg	07.27.19 05:03	
Toluene	<0.00201	0.100	0.0774	77	0.0755	76	70-130	2	35	mg/kg	07.27.19 05:03	
Ethylbenzene	<0.00201	0.100	0.0879	88	0.0899	90	70-130	2	35	mg/kg	07.27.19 05:03	
m,p-Xylenes	<0.00402	0.201	0.174	87	0.178	89	70-130	2	35	mg/kg	07.27.19 05:03	
o-Xylene	<0.00201	0.100	0.0915	92	0.0957	96	70-130	4	35	mg/kg	07.27.19 05:03	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		102		70-130	%	07.27.19 05:03
4-Bromofluorobenzene	120		121		70-130	%	07.27.19 05:03

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: 6231753

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 600-3334
 Midland, TX (432) 794-5440 El Paso, TX (915) 955-3443 Lubbock, TX (806) 794-1298 Carrollton, MN (432) 704-5440
 Phoenix, AZ (480) 355-0500 Atlanta, GA (770) 440-8800 Tampa, FL (813) 620-2000 West Palm Beach, FL (561) 694-6701

www.xenco.com

Page 1 of 2

Project Manager:	Don Davis	Bill to: (if different)	Kyle L. Hall
Company Name:	CT Environmental, Inc.	Company Name:	XTO
Address:	3300 North A Street	Address:	3104 E. Green Street
City, State ZIP:	Midland TX 79705	City, State ZIP:	Carrollton MN 55820
Phone:	432.326.3849	Email:	slh@xencu.com

Project Name:	PLU JV CUX Bgs Sinks #0174	Turn Around	
Project Number:	26P-3440	Routine	☒
Project Location:		Rush:	
Sampler's Name:	Spencer Lo	Due Date:	
PO #:		Quote #:	

SAMPLE RECEIPT	Temperature (°C):	5.0	Temp Blank:	Yes ☒ No ☐	Wet Ice:	Yes ☒ No ☐
	Received Intact:	Yes ☒ No ☐	Thermometer ID:	TNM 007		
	Cooler Custody Seals:	Yes ☒ No ☐	Correction Factor:	-0.2		
	Sample Custody Seals:	Yes ☒ No ☐	Total Containers:	12		

ANALYSIS REQUEST		PRESERVATIVE CODES	
Page	Date	Match: Mo	
1	7/23/19	None: NO	
		HNO3: HN	
		H2SO4: H2	
		HCl: HL	
		NaOH: NA	
		Zn Acetate+ NaOH: ZN	
		TAT: TAT	
		Sample Comments:	

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Analysis Request	Preservative Codes
PH01		S	7.19.19	1000	1'	1	TPH (EPA 801)	
PH01A				1035	2'	1	BTX (EPA 801)	
PH01B				1050	3'	1	Chloride (EPA 300)	
PH01C				1105	4'	1		
PH02A				1120	1'	1		
PH02B				1130	2'	1		
PH02C				1140	3'	1		
PH02D				1150	4'	1		
PH03				1410	1'	1		
PH03A				1425	2'	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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>Don Davis</i>	<i>Spencer Lo</i>	7/23/19 08:05			



Chain of Custody

Work Order No: 631753

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 609-3334

Mulford, TX (432) 704-5440 EL Paso, TX (915) 585-3440 Lubbock, TX (806) 794-1296 Cimarron, NM (432) 704-5440

Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000 West Palm Beach, FL (561) 680-0701

Page 6 of 6

Project Manager:	Don Moir	Bill to: (if different)	Kyle Liffell
Company Name:	LT Services/med'l, Inc.	Company Name:	RTD
Address:	8300 North 4 Street Midland TX 79705	Address:	7104 E. Green Street Culbuck NM 88220
City, State ZIP:		City, State ZIP:	
Phone:	432.236.3844	Email:	3/06/14enr.com

Work Order Comments
Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐ State of Project: Reporting Level I ☐ Level II ☐ Level III ☐ PST/UST ☐ TRPP ☐ Level IV ☐ Deliverables: EDD ☐ ADAPT ☐ Other:

SAMPLE RECEIPT						ANALYSIS REQUEST								Preservative Codes									
Project Name:		PUC JV CUX Big Smks #017H		Turn Around		Project Code										MnOH; Me							
Project Number:		ZRP - 3440		Routine		☒										None; NO							
Project Location				Rush:												HNQ3; HN							
Sampler's Name:		Spencer Lo		Due Date:												H2SO4; H2							
PO #:				Quote #:												HCL; HL							
Temperature (°C):		Temp Blank:		Yes		No		Wet Ice:		Yes		No										MnOH; N/A	
Received intact:		Yes		No				Thermometer ID														Zn Acetate * MnOH; Zn	
Cooler Custody Seals:		Yes		No		N/A		Correction Factor:														TAT starts the day received by the lab. If received by 4:00pm.	
Sample Custody Seals:		Yes		No		N/A		Total Containers:															

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number	TPH	BTL	LLH	Sample Comments
	PH030	S	7.6.15	1435	2'	1	X	X		
	PH03C	S	7.17.17	1450	4'	1	X	X		

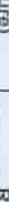
Total 200.7 / 6010 200.8 / 6020;

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 Sg 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

1631 / 245.1 / 7470 / 7471 : Hg

purchase, signature of this acknowledgment and mismanagement of samples constitutes a valid purchase order from Xincro company to Xincro, its affiliates and subcontractors. It assigns awarded terms and conditions of service. Xincro 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 Xincro. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xincro, but not analyzed. Those terms will be entered unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		7/23/19 08:05			



Inter-Office Shipment

Page 1 of 2

IOS Number **44788**

Date/Time: 07/23/19 11:49

Created by: Elizabeth McClellan

Please send report to: Jessica Kramer

Lab# From: **Carlsbad**

Delivery Priority: Fedex

Address: 1089 N Canal Street

Lab# To: **Midland**

Air Bill No.: 814694170339

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
631753-001	S	PH01	07/19/19 10:00	SW8015MOD_NM	TPH by SW8015 Mod	07/29/19	08/02/19	JKR	GRO-DRO PHCC10C28 PF	
631753-001	S	PH01	07/19/19 10:00	E300_CL	Chloride by EPA 300	07/29/19	01/15/20	JKR	CL	
631753-001	S	PH01	07/19/19 10:00	SW8021B	BTEX by EPA 8021B	07/29/19	08/02/19	JKR	BR4FBZ BZ BZME EBZ X	
631753-002	S	PH01A	07/19/19 10:35	SW8021B	BTEX by EPA 8021B	07/29/19	08/02/19	JKR	BR4FBZ BZ BZME EBZ X	
631753-002	S	PH01A	07/19/19 10:35	E300_CL	Chloride by EPA 300	07/29/19	01/15/20	JKR	CL	
631753-002	S	PH01A	07/19/19 10:35	SW8015MOD_NM	TPH by SW8015 Mod	07/29/19	08/02/19	JKR	GRO-DRO PHCC10C28 PF	
631753-003	S	PH01B	07/19/19 10:50	SW8021B	BTEX by EPA 8021B	07/29/19	08/02/19	JKR	BR4FBZ BZ BZME EBZ X	
631753-003	S	PH01B	07/19/19 10:50	SW8015MOD_NM	TPH by SW8015 Mod	07/29/19	08/02/19	JKR	GRO-DRO PHCC10C28 PF	
631753-003	S	PH01B	07/19/19 10:50	E300_CL	Chloride by EPA 300	07/29/19	01/15/20	JKR	CL	
631753-004	S	PH01C	07/19/19 11:05	E300_CL	Chloride by EPA 300	07/29/19	01/15/20	JKR	CL	
631753-004	S	PH01C	07/19/19 11:05	SW8015MOD_NM	TPH by SW8015 Mod	07/29/19	08/02/19	JKR	GRO-DRO PHCC10C28 PF	
631753-004	S	PH01C	07/19/19 11:05	SW8021B	BTEX by EPA 8021B	07/29/19	08/02/19	JKR	BR4FBZ BZ BZME EBZ X	
631753-005	S	PH02	07/19/19 11:20	SW8021B	BTEX by EPA 8021B	07/29/19	08/02/19	JKR	BR4FBZ BZ BZME EBZ X	
631753-005	S	PH02	07/19/19 11:20	E300_CL	Chloride by EPA 300	07/29/19	01/15/20	JKR	CL	
631753-005	S	PH02	07/19/19 11:20	SW8015MOD_NM	TPH by SW8015 Mod	07/29/19	08/02/19	JKR	GRO-DRO PHCC10C28 PF	
631753-006	S	PH02A	07/19/19 11:30	SW8021B	BTEX by EPA 8021B	07/29/19	08/02/19	JKR	BR4FBZ BZ BZME EBZ X	
631753-006	S	PH02A	07/19/19 11:30	SW8015MOD_NM	TPH by SW8015 Mod	07/29/19	08/02/19	JKR	GRO-DRO PHCC10C28 PF	
631753-006	S	PH02A	07/19/19 11:30	E300_CL	Chloride by EPA 300	07/29/19	01/15/20	JKR	CL	
631753-007	S	PH02B	07/19/19 11:40	E300_CL	Chloride by EPA 300	07/29/19	01/15/20	JKR	CL	
631753-007	S	PH02B	07/19/19 11:40	SW8015MOD_NM	TPH by SW8015 Mod	07/29/19	08/02/19	JKR	GRO-DRO PHCC10C28 PF	
631753-007	S	PH02B	07/19/19 11:40	SW8021B	BTEX by EPA 8021B	07/29/19	08/02/19	JKR	BR4FBZ BZ BZME EBZ X	
631753-008	S	PH02C	07/19/19 11:50	SW8021B	BTEX by EPA 8021B	07/29/19	08/02/19	JKR	BR4FBZ BZ BZME EBZ X	
631753-008	S	PH02C	07/19/19 11:50	E300_CL	Chloride by EPA 300	07/29/19	01/15/20	JKR	CL	
631753-008	S	PH02C	07/19/19 11:50	SW8015MOD_NM	TPH by SW8015 Mod	07/29/19	08/02/19	JKR	GRO-DRO PHCC10C28 PF	
631753-009	S	PH03	07/19/19 14:10	SW8015MOD_NM	TPH by SW8015 Mod	07/29/19	08/02/19	JKR	GRO-DRO PHCC10C28 PF	



Inter-Office Shipment

Page 2 of 2

IOS Number **44788**

Date/Time: 07/23/19 11:49

Created by: Elizabeth McClellan

Please send report to: Jessica Kramer

Lab# From: **Carlsbad**

Delivery Priority: Fedex

Address: 1089 N Canal Street

Lab# To: **Midland**

Air Bill No.: 814694170339

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
631753-009	S	PH03	07/19/19 14:10	SW8021B	BTEX by EPA 8021B	07/29/19	08/02/19	JKR	BR4FBZ BZ BZME EBZ X	
631753-009	S	PH03	07/19/19 14:10	E300_CL	Chloride by EPA 300	07/29/19	01/15/20	JKR	CL	
631753-010	S	PH03A	07/19/19 14:25	E300_CL	Chloride by EPA 300	07/29/19	01/15/20	JKR	CL	
631753-010	S	PH03A	07/19/19 14:25	SW8015MOD_NM	TPH by SW8015 Mod	07/29/19	08/02/19	JKR	GRO-DRO PHCC10C28 PF	
631753-010	S	PH03A	07/19/19 14:25	SW8021B	BTEX by EPA 8021B	07/29/19	08/02/19	JKR	BR4FBZ BZ BZME EBZ X	
631753-011	S	PH03B	07/19/19 14:35	SW8021B	BTEX by EPA 8021B	07/29/19	08/02/19	JKR	BR4FBZ BZ BZME EBZ X	
631753-011	S	PH03B	07/19/19 14:35	E300_CL	Chloride by EPA 300	07/29/19	01/15/20	JKR	CL	
631753-011	S	PH03B	07/19/19 14:35	SW8015MOD_NM	TPH by SW8015 Mod	07/29/19	08/02/19	JKR	GRO-DRO PHCC10C28 PF	
631753-012	S	PH03C	07/19/19 14:50	SW8015MOD_NM	TPH by SW8015 Mod	07/29/19	08/02/19	JKR	GRO-DRO PHCC10C28 PF	
631753-012	S	PH03C	07/19/19 14:50	E300_CL	Chloride by EPA 300	07/29/19	01/15/20	JKR	CL	
631753-012	S	PH03C	07/19/19 14:50	SW8021B	BTEX by EPA 8021B	07/29/19	08/02/19	JKR	BR4FBZ BZ BZME EBZ X	

Inter Office Shipment or Sample Comments:

Relinquished By:

Elizabeth McClellan

Received By:

Katie Lowe

Date Relinquished: 07/23/2019

Date Received: 07/24/2019 11:45

Cooler Temperature: 2.9



XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 44788

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sent By: Elizabeth McClellan

Date Sent: 07/23/2019 11:49 AM

Received By: Katie Lowe

Date Received: 07/24/2019 11:45 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	2.9
#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:

Katie Lowe

Date: 07/24/2019



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 07/23/2019 08:05:00 AM

Work Order #: 631753

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)?	5
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	No
#5 Custody Seals intact on sample bottles?	No
#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)?	Yes
#18 Water VOC samples have zero headspace?	N/A

Subbed to Xenco Midland.

* 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: 07/23/2019

Checklist reviewed by:

Jessica Kramer

Date: 07/25/2019

Analytical Report 579297

for
LT Environmental, Inc.

Project Manager: Adrian Baker
PLU CVX Big Sinks 17H

20-MAR-18

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-18-24), 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 (T104704400-18-14)
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)



20-MAR-18

Project Manager: **Adrian Baker**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **579297**

PLU CVX Big Sinks 17H

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) 579297. 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. 579297 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 579297

LT Environmental, Inc., Arvada, CO

PLU CVX Big Sinks 17H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS1-1	S	03-10-18 11:05	6 In	579297-001
SS1-2	S	03-10-18 11:10	6 In	579297-002
SS1-3	S	03-10-18 11:20	6 In	579297-003



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU CVX Big Sinks 17H

Project ID:

Work Order Number(s): 579297

Report Date: 20-MAR-18

Date Received: 03/15/2018

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3044104 BTEX by EPA 8021B

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



Certificate of Analysis Summary 579297

LT Environmental, Inc., Arvada, CO

Project Name: PLU CVX Big Sinks 17H



Project Id:

Contact: Adrian Baker

Project Location: NM

Date Received in Lab: Thu Mar-15-18 08:26 am

Report Date: 20-MAR-18

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	579297-001	579297-002	579297-003			
	Field Id:	SS1-1	SS1-2	SS1-3			
	Depth:	6- In	6- In	6- In			
	Matrix:	SOIL	SOIL	SOIL			
	Sampled:	Mar-10-18 11:05	Mar-10-18 11:10	Mar-10-18 11:20			
BTEX by EPA 8021B	Extracted:	Mar-16-18 14:30	Mar-16-18 14:30	Mar-16-18 14:30			
	Analyzed:	Mar-17-18 05:46	Mar-17-18 06:05	Mar-17-18 08:56			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
Benzene		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201			
Toluene		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201			
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201			
m,p-Xylenes		<0.00399 0.00399	<0.00401 0.00401	<0.00402 0.00402			
o-Xylene		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201			
Total Xylenes		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201			
Total BTEX		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201			
Inorganic Anions by EPA 300	Extracted:	Mar-16-18 17:30	Mar-16-18 17:30	Mar-16-18 17:30			
	Analyzed:	Mar-16-18 23:59	Mar-16-18 23:06	Mar-17-18 00:04			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
Chloride		1970 24.6	<4.95 4.95	9650 99.6			
TPH by SW8015 Mod	Extracted:	Mar-16-18 17:00	Mar-16-18 17:00	Mar-16-18 17:00			
	Analyzed:	Mar-17-18 10:29	Mar-17-18 10:55	Mar-17-18 11:21			
	Units/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			
Diesel Range Organics (DRO)		<14.9 14.9	<15.0 15.0	<15.0 15.0			
Oil Range Hydrocarbons (ORO)		<14.9 14.9	<15.0 15.0	<15.0 15.0			
Total TPH		<14.9 14.9	<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

Jessica Kramer
Project Assistant



Certificate of Analytical Results 579297



LT Environmental, Inc., Arvada, CO

PLU CVX Big Sinks 17H

Sample Id: **SS1-1**
 Lab Sample Id: 579297-001

Matrix: Soil
 Date Collected: 03.10.18 11.05

Date Received: 03.15.18 08.26
 Sample Depth: 6 In

Analytical Method: Inorganic Anions by EPA 300

Tech: OJS

Analyst: OJS

Seq Number: 3044148

Date Prep: 03.16.18 17.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1970	24.6	mg/kg	03.16.18 23.59		5

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3044123

Date Prep: 03.16.18 17.00

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	03.17.18 10.29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	03.17.18 10.29	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	03.17.18 10.29	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	03.17.18 10.29	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	95	%	70-135	03.17.18 10.29		
o-Terphenyl	84-15-1	97	%	70-135	03.17.18 10.29		



Certificate of Analytical Results 579297



LT Environmental, Inc., Arvada, CO

PLU CVX Big Sinks 17H

Sample Id: SS1-1
Lab Sample Id: 579297-001

Matrix: Soil
Date Collected: 03.10.18 11.05

Date Received: 03.15.18 08.26
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 03.16.18 14.30

Basis: Wet Weight

Seq Number: 3044104

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.17.18 05.46	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.17.18 05.46	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.17.18 05.46	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	03.17.18 05.46	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.17.18 05.46	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.17.18 05.46	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.17.18 05.46	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	125	%	70-130	03.17.18 05.46		
1,4-Difluorobenzene	540-36-3	85	%	70-130	03.17.18 05.46		



Certificate of Analytical Results 579297



LT Environmental, Inc., Arvada, CO

PLU CVX Big Sinks 17H

Sample Id: SS1-2
Lab Sample Id: 579297-002

Matrix: Soil
Date Collected: 03.10.18 11.10

Date Received: 03.15.18 08.26
Sample Depth: 6 In

Analytical Method: Inorganic Anions by EPA 300

Tech: OJS

Analyst: OJS

Seq Number: 3044148

Date Prep: 03.16.18 17.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	03.16.18 23.06	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3044123

Date Prep: 03.16.18 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	03.17.18 10.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.17.18 10.55	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	03.17.18 10.55	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.17.18 10.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	03.17.18 10.55	
o-Terphenyl	84-15-1	101	%	70-135	03.17.18 10.55	



Certificate of Analytical Results 579297



LT Environmental, Inc., Arvada, CO

PLU CVX Big Sinks 17H

Sample Id: SS1-2
Lab Sample Id: 579297-002

Matrix: Soil
Date Collected: 03.10.18 11.10

Date Received: 03.15.18 08.26
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 03.16.18 14.30

Basis: Wet Weight

Seq Number: 3044104

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.17.18 06.05	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.17.18 06.05	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.17.18 06.05	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	03.17.18 06.05	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.17.18 06.05	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.17.18 06.05	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.17.18 06.05	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	122	%	70-130	03.17.18 06.05		
1,4-Difluorobenzene	540-36-3	78	%	70-130	03.17.18 06.05		



Certificate of Analytical Results 579297



LT Environmental, Inc., Arvada, CO

PLU CVX Big Sinks 17H

Sample Id: **SS1-3**
Lab Sample Id: 579297-003

Matrix: Soil
Date Collected: 03.10.18 11.20

Date Received: 03.15.18 08.26
Sample Depth: 6 In

Analytical Method: Inorganic Anions by EPA 300

Tech: OJS

Analyst: OJS

Seq Number: 3044148

Date Prep: 03.16.18 17.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	9650	99.6	mg/kg	03.17.18 00.04		20

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3044123

Date Prep: 03.16.18 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	03.17.18 11.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.17.18 11.21	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	03.17.18 11.21	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.17.18 11.21	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	102	%	70-135	03.17.18 11.21		
o-Terphenyl	84-15-1	103	%	70-135	03.17.18 11.21		



Certificate of Analytical Results 579297



LT Environmental, Inc., Arvada, CO

PLU CVX Big Sinks 17H

Sample Id: **SS1-3**
 Lab Sample Id: 579297-003

Matrix: Soil
 Date Collected: 03.10.18 11.20

Date Received: 03.15.18 08.26
 Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 03.16.18 14.30

Basis: Wet Weight

Seq Number: 3044104

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.17.18 08.56	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.17.18 08.56	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.17.18 08.56	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.17.18 08.56	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.17.18 08.56	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	03.17.18 08.56	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.17.18 08.56	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	108	%	70-130	03.17.18 08.56		
1,4-Difluorobenzene	540-36-3	92	%	70-130	03.17.18 08.56		



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 **SQL** 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 Big Sinks 17H

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3044148

MB Sample Id: 7641017-1-BLK

Matrix: Solid

LCS Sample Id: 7641017-1-BKS

Prep Method: E300P

Date Prep: 03.16.18

LCSD Sample Id: 7641017-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	255	102	258	103	90-110	1	20	mg/kg	03.16.18 22:55	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3044148

Parent Sample Id: 579297-002

Matrix: Soil

MS Sample Id: 579297-002 S

Prep Method: E300P

Date Prep: 03.16.18

MSD Sample Id: 579297-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.95	248	240	97	243	98	90-110	1	20	mg/kg	03.16.18 23:11	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3044148

Parent Sample Id: 579298-003

Matrix: Soil

MS Sample Id: 579298-003 S

Prep Method: E300P

Date Prep: 03.16.18

MSD Sample Id: 579298-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	259	104	257	103	90-110	1	20	mg/kg	03.17.18 00:25	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3044123

MB Sample Id: 7641055-1-BLK

Matrix: Solid

LCS Sample Id: 7641055-1-BKS

Prep Method: TX1005P

Date Prep: 03.16.18

LCSD Sample Id: 7641055-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	1060	106	971	97	70-135	9	35	mg/kg	03.17.18 00:30	
Diesel Range Organics (DRO)	<15.0	1000	1090	109	1010	101	70-135	8	35	mg/kg	03.17.18 00:30	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	99		121		109		70-135	%	03.17.18 00:30
o-Terphenyl	100		114		108		70-135	%	03.17.18 00:30

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

$[D] = 100 * (C-A) / B$
 $RPD = 200 * |(C-E) / (C+E)|$
 $[D] = 100 * (C) / [B]$

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 Big Sinks 17H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3044123

Parent Sample Id: 579293-001

Matrix: Soil

MS Sample Id: 579293-001 S

Prep Method: TX1005P

Date Prep: 03.16.18

MSD Sample Id: 579293-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	999	997	100	998	100	70-135	0	35	mg/kg	03.17.18 01:47	
Diesel Range Organics (DRO)	167	999	1180	101	1190	103	70-135	1	35	mg/kg	03.17.18 01:47	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	108		111		70-135	%	03.17.18 01:47
o-Terphenyl	109		109		70-135	%	03.17.18 01:47

Analytical Method: BTEX by EPA 8021B

Seq Number: 3044104

MB Sample Id: 7641020-1-BLK

Matrix: Solid

LCS Sample Id: 7641020-1-BKS

Prep Method: SW5030B

Date Prep: 03.16.18

LCSD Sample Id: 7641020-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0959	95	0.0928	93	70-130	3	35	mg/kg	03.16.18 22:44	
Toluene	<0.00202	0.101	0.102	101	0.0976	98	70-130	4	35	mg/kg	03.16.18 22:44	
Ethylbenzene	<0.00202	0.101	0.115	114	0.109	109	70-130	5	35	mg/kg	03.16.18 22:44	
m,p-Xylenes	<0.00403	0.202	0.225	111	0.215	108	70-130	5	35	mg/kg	03.16.18 22:44	
o-Xylene	<0.00202	0.101	0.112	111	0.109	109	70-130	3	35	mg/kg	03.16.18 22:44	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	85		86		88		70-130	%	03.16.18 22:44
4-Bromofluorobenzene	123		128		130		70-130	%	03.16.18 22:44

Analytical Method: BTEX by EPA 8021B

Seq Number: 3044104

Parent Sample Id: 579293-004

Matrix: Soil

MS Sample Id: 579293-004 S

Prep Method: SW5030B

Date Prep: 03.16.18

MSD Sample Id: 579293-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0751	75	0.0709	70	70-130	6	35	mg/kg	03.16.18 23:22	
Toluene	<0.00200	0.100	0.0438	44	0.0420	42	70-130	4	35	mg/kg	03.16.18 23:22	X
Ethylbenzene	<0.00200	0.100	0.0573	57	0.0543	54	70-130	5	35	mg/kg	03.16.18 23:22	X
m,p-Xylenes	<0.00401	0.200	0.115	58	0.109	54	70-130	5	35	mg/kg	03.16.18 23:22	X
o-Xylene	<0.00200	0.100	0.0821	82	0.0785	78	70-130	4	35	mg/kg	03.16.18 23:22	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	85		82		70-130	%	03.16.18 23:22
4-Bromofluorobenzene	122		126		70-130	%	03.16.18 23:22

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

$[D] = 100 * (C-A) / B$
 $RPD = 200 * |(C-E) / (C+E)|$
 $[D] = 100 * (C) / [B]$

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

Buttford, TX (214) 240-4700
Dallas, TX (214) 902-9500

Ell Paso, TX (915) 925-2463
Lubbock, TX (806) 794-1296

San Antonio, TX (210) 529-2334

Phoenix, AZ (480) 355-0909
Service Center - Dallas, TX

Service Center - Amarillo, TX (800) 674-4514
Service Center - Hobbs, NM (575) 382-7550

CHAIN OF CUSTODY

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10/27/2016

[illegible]



Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 03/15/2018 08:26:00 AM

Work Order #: 579297

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)?	4.6
#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:

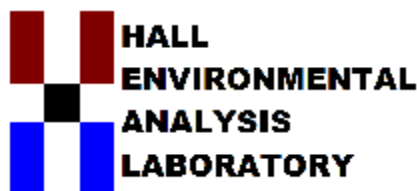
Connie Hernandez

Date: 03/15/2018

Checklist reviewed by:

Jessica Kramer

Date: 03/15/2018



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

April 04, 2018

Adrian Baker
XTO Midland
6401 Holiday Hill Rd #200
Midland, TX 79707
TEL: (432) 894-5641
FAX

RE: 2RP 3985 Delaware Soil Sampling

OrderNo.: 1803E20

Dear Adrian Baker:

Hall Environmental Analysis Laboratory received 3 sample(s) on 3/27/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 1803E20

Date Reported: 4/4/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: XTO Midland

Client Sample ID: SS01

Project: 2RP 3985 Delaware Soil Sampling

Collection Date: 3/20/2018 3:30:00 PM

Lab ID: 1803E20-001

Matrix: SOIL

Received Date: 3/27/2018 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	3/30/2018 4:59:07 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	3/30/2018 4:59:07 AM
Surr: DNOP	96.6	70-130		%Rec	1	3/30/2018 4:59:07 AM
EPA METHOD 300.0: ANIONS						Analyst: MRA
Chloride	120	30		mg/Kg	20	4/3/2018 2:31:27 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: AG
Benzene	ND	0.023		mg/Kg	1	3/30/2018 1:19:32 PM
Toluene	ND	0.046		mg/Kg	1	3/30/2018 1:19:32 PM
Ethylbenzene	ND	0.046		mg/Kg	1	3/30/2018 1:19:32 PM
Xylenes, Total	ND	0.092		mg/Kg	1	3/30/2018 1:19:32 PM
Surr: 4-Bromofluorobenzene	112	70-130		%Rec	1	3/30/2018 1:19:32 PM
Surr: Toluene-d8	89.0	70-130		%Rec	1	3/30/2018 1:19:32 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: AG
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	3/29/2018 12:26:17 AM
Surr: BFB	115	70-130		%Rec	1	3/29/2018 12:26:17 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

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Analytical Report

Lab Order 1803E20

Date Reported: 4/4/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: XTO Midland

Client Sample ID: SS02

Project: 2RP 3985 Delaware Soil Sampling

Collection Date: 3/20/2018 3:32:00 PM

Lab ID: 1803E20-002

Matrix: SOIL

Received Date: 3/27/2018 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	3/30/2018 5:21:17 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	3/30/2018 5:21:17 AM
Surr: DNOP	95.4	70-130		%Rec	1	3/30/2018 5:21:17 AM
EPA METHOD 300.0: ANIONS						Analyst: MRA
Chloride	ND	30		mg/Kg	20	4/3/2018 2:43:52 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: AG
Benzene	ND	0.023		mg/Kg	1	3/29/2018 11:33:31 PM
Toluene	ND	0.046		mg/Kg	1	3/29/2018 11:33:31 PM
Ethylbenzene	ND	0.046		mg/Kg	1	3/29/2018 11:33:31 PM
Xylenes, Total	ND	0.092		mg/Kg	1	3/29/2018 11:33:31 PM
Surr: 4-Bromofluorobenzene	115	70-130		%Rec	1	3/29/2018 11:33:31 PM
Surr: Toluene-d8	84.9	70-130		%Rec	1	3/29/2018 11:33:31 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: AG
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	3/29/2018 12:49:20 AM
Surr: BFB	115	70-130		%Rec	1	3/29/2018 12:49:20 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Page 2 of 7

Analytical Report

Lab Order 1803E20

Date Reported: 4/4/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: XTO Midland

Client Sample ID: SS03

Project: 2RP 3985 Delaware Soil Sampling

Collection Date: 3/20/2018 3:34:00 PM

Lab ID: 1803E20-003

Matrix: SOIL

Received Date: 3/27/2018 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	190	9.3		mg/Kg	1	3/30/2018 5:43:24 AM
Motor Oil Range Organics (MRO)	240	46		mg/Kg	1	3/30/2018 5:43:24 AM
Surr: DNOP	93.6	70-130		%Rec	1	3/30/2018 5:43:24 AM
EPA METHOD 300.0: ANIONS						Analyst: MRA
Chloride	ND	30		mg/Kg	20	4/3/2018 3:45:55 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: AG
Benzene	ND	0.024		mg/Kg	1	3/29/2018 11:56:34 PM
Toluene	ND	0.047		mg/Kg	1	3/29/2018 11:56:34 PM
Ethylbenzene	ND	0.047		mg/Kg	1	3/29/2018 11:56:34 PM
Xylenes, Total	ND	0.095		mg/Kg	1	3/29/2018 11:56:34 PM
Surr: 4-Bromofluorobenzene	117	70-130		%Rec	1	3/29/2018 11:56:34 PM
Surr: Toluene-d8	90.2	70-130		%Rec	1	3/29/2018 11:56:34 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: AG
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	3/29/2018 1:12:27 AM
Surr: BFB	110	70-130		%Rec	1	3/29/2018 1:12:27 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

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QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**WO#: **1803E20****04-Apr-18****Client:** XTO Midland**Project:** 2RP 3985 Delaware Soil Sampling

Sample ID	MB-37385	SampType:	mbk	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	37385	RunNo:	50271					
Prep Date:	4/2/2018	Analysis Date:	4/3/2018	SeqNo:	1628346	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-37385	SampType:	lcs	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	37385	RunNo:	50271					
Prep Date:	4/2/2018	Analysis Date:	4/3/2018	SeqNo:	1628347	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	91.8	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL Practical Quantitative Limit	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1803E20

04-Apr-18

Client: XTO Midland**Project:** 2RP 3985 Delaware Soil Sampling

Sample ID	MB-37283	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	37283	RunNo:	50178					
Prep Date:	3/28/2018	Analysis Date:	3/29/2018	SeqNo:	1625707	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	7.7		10.00		77.2	70	130			

Sample ID	LCS-37283	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	37283	RunNo:	50204					
Prep Date:	3/28/2018	Analysis Date:	3/30/2018	SeqNo:	1626106	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	10	50.00	0	102	70	130			
Surr: DNOP	3.7		5.000		73.6	70	130			

Sample ID	LCS-37326	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	37326	RunNo:	50229					
Prep Date:	3/29/2018	Analysis Date:	4/2/2018	SeqNo:	1627194	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.3		5.000		86.8	70	130			

Sample ID	MB-37326	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	37326	RunNo:	50229					
Prep Date:	3/29/2018	Analysis Date:	4/2/2018	SeqNo:	1627195	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.3		10.00		92.9	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

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QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1803E20

04-Apr-18

Client: XTO Midland**Project:** 2RP 3985 Delaware Soil Sampling

Sample ID	lcs-37273		SampType: LCS4		TestCode: EPA Method 8260B: Volatiles Short List					
Client ID:	BatchQC		Batch ID: 37273		RunNo: 50140					
Prep Date:	3/27/2018		Analysis Date: 3/28/2018		SeqNo: 1624719		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.025	1.000	0	90.8	80	120			
Toluene	0.94	0.050	1.000	0	93.9	80	120			
Ethylbenzene	0.99	0.050	1.000	0	98.5	80	120			
Xylenes, Total	3.0	0.10	3.000	0	99.4	80	120			
Surr: 4-Bromofluorobenzene	0.48		0.5000		95.8	70	130			
Surr: Toluene-d8	0.47		0.5000		94.3	70	130			

Sample ID	mb-37273		SampType: MBLK		TestCode: EPA Method 8260B: Volatiles Short List					
Client ID:	PBS		Batch ID: 37273		RunNo: 50140					
Prep Date:	3/27/2018		Analysis Date: 3/28/2018		SeqNo: 1624720		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.55		0.5000		111	70	130			
Surr: Toluene-d8	0.44		0.5000		88.6	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL Practical Quantitative Limit	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1803E20

04-Apr-18

Client: XTO Midland**Project:** 2RP 3985 Delaware Soil Sampling

Sample ID	lcs-37273		SampType: LCS			TestCode: EPA Method 8015D Mod: Gasoline Range				
Client ID:	LCSS		Batch ID: 37273			RunNo: 50140				
Prep Date:	3/27/2018		Analysis Date: 3/28/2018			SeqNo: 1624698		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	29	5.0	25.00	0	117	70	130			
Surr: BFB	490		500.0		97.8	70	130			

Sample ID	mb-37273		SampType: MBLK			TestCode: EPA Method 8015D Mod: Gasoline Range				
Client ID:	PBS		Batch ID: 37273			RunNo: 50140				
Prep Date:	3/27/2018		Analysis Date: 3/28/2018			SeqNo: 1624699		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	550		500.0		109	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL Practical Quantitative Limit	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory
4961 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: XTO MIDLAND

Work Order Number: 1803E20

ReptNo: 1

Received By: Mandy Woods 3/27/2018 9:30:00 AM

Completed By: Michelle Garcia 3/27/2018 11:57:47 AM

Reviewed By: *[Signature]* 03/27/18
labeled B JMO

[Signature]
Michelle Garcia

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier ☒

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐
of preserved bottles checked for pH:
(<2 or >12 unless noted)
Adjusted?
Checked by:

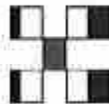
Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒
Person Notified:
By Whom:
Regarding:
Client Instructions:
Date:
Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

16. Additional remarks:

17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.3	Good	Yes			



**HALL ENVIRONMENTAL
ANALYSIS LABORATORY**

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

VARIABLES CHECKLIST						
Client:	XTO Energy, Delaware division	Standard	☒ Standard	☐ Rush		
Mailing Address:	Kyle Litterll 3300 N. A. Street Suite 103 Midland, Texas 79705	Project Name:	2RP - 3985 Delaware Soil Sampling			
Phone #:	433-704-5178	Project #:				
Email or Fax#:	abaker@ltenv.com	Project Manager:	Adrian Baker			
QA/QC Package:	☐ Standard ☐ Level 4 (Full Validation)	Sampler:	Josh Adams			
Accreditation:	☐ NELAP ☐ Other _____	On Job:	☒ Yes	☐ No		
EDD (Type)	Sample Temperature: 4.3°					
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
3/20/2018	1530	SOIL	SS01	(1) 4oz.	cool	1503E20
3/20/2018	1532	SOIL	SS02	(1) 4oz.	cool	002
3/20/2018	1534	SOIL	SS03	(1) 4oz.	cool	003
Relinquished by:	[Signature]	Received by:	[Signature]	Date:	Time:	
3/23/2018	0730			3/23/18	0730	
Relinquished by:	[Signature]	Received by:	[Signature]	Date:	Time:	
3/20/18	1400			3/27/18	0930	

Analytical Report 591481

for
LT Environmental, Inc.

Project Manager: Adrian Baker

PLU JU CVX Big Springs #017 H/012918091

012918091

31-JAN-20

Collected By: Client



1211 W. Florida Ave
Midland TX 79701

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)



31-JAN-20

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

Reference: XENCO Report No(s): **591481**
PLU JU CVX Big Springs #017 H/012918091
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) 591481. 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. 591481 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 591481****LT Environmental, Inc., Arvada, CO**

PLU JU CVX Big Springs #017 H/012918091

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS2	S	07-03-18 09:30	1 ft	591481-001
SS18	S	07-03-18 09:32	6 In	591481-002
SS19	S	07-03-18 09:34	6 In	591481-003
SS20	S	07-03-18 09:36	6 In	591481-004
FS1	S	07-03-18 11:30	5.5 ft	591481-005
SW1	S	07-03-18 11:35	4 ft	591481-006
SW2	S	07-03-18 11:40	4 ft	591481-007
SW3	S	07-03-18 11:45	4 ft	591481-008
SW4	S	07-03-18 11:50	4 ft	591481-009



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU JU CVX Big Springs #017 H/012918091

Project ID: 012918091
Work Order Number(s): 591481

Report Date: 31-JAN-20
Date Received: 07/07/2018

Sample receipt non conformances and comments:

V1.001 Corrected sample 001 name from SS1-3A to FS2, per Aimee Cole (email) JK 01/31/20

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3056210 BTEX by EPA 8021B

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



Certificate of Analysis Summary 591481

LT Environmental, Inc., Arvada, CO

Project Name: PLU JU CVX Big Springs #017 H/012918091

Project Id: 012918091
Contact: Adrian Baker
Project Location: NM

Date Received in Lab: Sat Jul-07-18 09:00 am
Report Date: 31-JAN-20
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	591481-001	591481-002	591481-003	591481-004	591481-005	591481-006
	<i>Field Id:</i>	FS2	SS18	SS19	SS20	FS1	SW1
	<i>Depth:</i>	1- ft	6- In	6- In	6- In	5.5- ft	4- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jul-03-18 09:30	Jul-03-18 09:32	Jul-03-18 09:34	Jul-03-18 09:36	Jul-03-18 11:30	Jul-03-18 11:35
BTEX by EPA 8021B	<i>Extracted:</i>	Jul-11-18 10:00	Jul-11-18 10:00	Jul-11-18 10:00	Jul-11-18 10:00	Jul-11-18 10:00	Jul-11-18 10:00
	<i>Analyzed:</i>	Jul-11-18 10:58	Jul-11-18 11:34	Jul-11-18 11:52	Jul-11-18 12:10	Jul-11-18 12:28	Jul-11-18 12:47
	<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	<0.00201 0.00201	<0.00202 0.00202	<0.00199 0.00199
Toluene		<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199	<0.00201 0.00201	<0.00202 0.00202	<0.00199 0.00199
Ethylbenzene		<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199	<0.00201 0.00201	<0.00202 0.00202	<0.00199 0.00199
m,p-Xylenes		<0.00401 0.00401	<0.00402 0.00402	<0.00398 0.00398	<0.00402 0.00402	<0.00403 0.00403	<0.00398 0.00398
o-Xylene		<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199	<0.00201 0.00201	<0.00202 0.00202	<0.00199 0.00199
Total Xylenes		<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199	<0.00201 0.00201	<0.00202 0.00202	<0.00199 0.00199
Total BTEX		<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199	<0.00201 0.00201	<0.00202 0.00202	<0.00199 0.00199
Inorganic Anions by EPA 300	<i>Extracted:</i>	Jul-11-18 17:15	Jul-11-18 17:15	Jul-11-18 17:15	Jul-11-18 17:15	Jul-11-18 17:15	Jul-11-18 17:15
	<i>Analyzed:</i>	Jul-11-18 23:15	Jul-11-18 23:21	Jul-11-18 23:26	Jul-11-18 23:31	Jul-11-18 23:37	Jul-11-18 23:42
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		<5.00 5.00	<4.99 4.99	<4.95 4.95	<4.95 4.95	150 4.92	173 4.98
TPH by SW8015 Mod	<i>Extracted:</i>	Jul-11-18 07:00	Jul-11-18 07:00	Jul-11-18 07:00	Jul-11-18 07:00	Jul-11-18 07:00	Jul-11-18 07:00
	<i>Analyzed:</i>	Jul-11-18 10:01	Jul-11-18 11:00	Jul-11-18 11:21	Jul-11-18 11:41	Jul-11-18 12:01	Jul-11-18 12:22
	<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)		16.8 15.0	23.0 15.0	20.5 14.9	19.3 15.0	<15.0 15.0	15.7 15.0
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0
Oil Range Hydrocarbons (ORO)		<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total TPH		16.8 15.0	23.0 15.0	20.5 14.9	19.3 15.0	<15.0 15.0	15.7 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

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 591481

LT Environmental, Inc., Arvada, CO

Project Name: PLU JU CVX Big Springs #017 H/012918091

Project Id: 012918091
Contact: Adrian Baker
Project Location: NM

Date Received in Lab: Sat Jul-07-18 09:00 am
Report Date: 31-JAN-20
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	591481-007	591481-008	591481-009			
	<i>Field Id:</i>	SW2	SW3	SW4			
	<i>Depth:</i>	4- ft	4- ft	4- ft			
	<i>Matrix:</i>	SOIL	SOIL	SOIL			
	<i>Sampled:</i>	Jul-03-18 11:40	Jul-03-18 11:45	Jul-03-18 11:50			
BTEX by EPA 8021B	<i>Extracted:</i>	Jul-11-18 10:00	Jul-11-18 10:00	Jul-11-18 10:00			
	<i>Analyzed:</i>	Jul-11-18 13:05	Jul-11-18 13:23	Jul-11-18 13:41			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
Benzene		<0.00200 0.00200	<0.00201 0.00201	<0.00198 0.00198			
Toluene		<0.00200 0.00200	<0.00201 0.00201	<0.00198 0.00198			
Ethylbenzene		<0.00200 0.00200	<0.00201 0.00201	<0.00198 0.00198			
m,p-Xylenes		<0.00399 0.00399	<0.00402 0.00402	<0.00397 0.00397			
o-Xylene		<0.00200 0.00200	<0.00201 0.00201	<0.00198 0.00198			
Total Xylenes		<0.00200 0.00200	<0.00201 0.00201	<0.00198 0.00198			
Total BTEX		<0.00200 0.00200	<0.00201 0.00201	<0.00198 0.00198			
Inorganic Anions by EPA 300	<i>Extracted:</i>	Jul-12-18 15:00	Jul-12-18 15:00	Jul-12-18 15:00			
	<i>Analyzed:</i>	Jul-12-18 17:17	Jul-12-18 17:33	Jul-12-18 17:38			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
Chloride		<4.94 4.94	<4.95 4.95	48.0 4.96			
TPH by SW8015 Mod	<i>Extracted:</i>	Jul-11-18 07:00	Jul-11-18 07:00	Jul-11-18 07:00			
	<i>Analyzed:</i>	Jul-11-18 12:42	Jul-11-18 13:03	Jul-11-18 13:23			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
Gasoline Range Hydrocarbons (GRO)		32.7 14.9	31.0 15.0	17.8 15.0			
Diesel Range Organics (DRO)		54.8 14.9	60.6 15.0	<15.0 15.0			
Oil Range Hydrocarbons (ORO)		19.0 14.9	18.0 15.0	<15.0 15.0			
Total TPH		107 14.9	110 15.0	17.8 15.0			

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Version: 1.9%

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Project Assistant



Certificate of Analytical Results 591481



LT Environmental, Inc., Arvada, CO PLU JU CVX Big Springs #017 H/012918091

Sample Id: FS2 Matrix: Soil Date Received: 07.07.18 09.00
 Lab Sample Id: 591481-001 Date Collected: 07.03.18 09.30 Sample Depth: 1 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.11.18 17.15 Basis: Wet Weight
 Seq Number: 3056230

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	07.11.18 23.15	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.11.18 07.00 Basis: Wet Weight
 Seq Number: 3056201

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	16.8	15.0	mg/kg	07.11.18 10.01		1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.11.18 10.01	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.11.18 10.01	U	1
Total TPH	PHC635	16.8	15.0	mg/kg	07.11.18 10.01		1

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
 Tech: ALJ % Moisture:
 Analyst: ALJ Date Prep: 07.11.18 10.00 Basis: Wet Weight
 Seq Number: 3056210

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.11.18 10.58	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.11.18 10.58	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.11.18 10.58	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.11.18 10.58	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.11.18 10.58	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.11.18 10.58	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.11.18 10.58	U	1



Certificate of Analytical Results 591481



LT Environmental, Inc., Arvada, CO PLU JU CVX Big Springs #017 H/012918091

Sample Id: **SS18** Matrix: Soil Date Received: 07.07.18 09.00
 Lab Sample Id: 591481-002 Date Collected: 07.03.18 09.32 Sample Depth: 6 In
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.11.18 17.15 Basis: Wet Weight
 Seq Number: 3056230

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	07.11.18 23.21	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.11.18 07.00 Basis: Wet Weight
 Seq Number: 3056201

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	23.0	15.0	mg/kg	07.11.18 11.00		1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.11.18 11.00	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.11.18 11.00	U	1
Total TPH	PHC635	23.0	15.0	mg/kg	07.11.18 11.00		1

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
 Tech: ALJ % Moisture:
 Analyst: ALJ Date Prep: 07.11.18 10.00 Basis: Wet Weight
 Seq Number: 3056210

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.11.18 11.34	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.11.18 11.34	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.11.18 11.34	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.11.18 11.34	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.11.18 11.34	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.11.18 11.34	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.11.18 11.34	U	1



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LT Environmental, Inc., Arvada, CO PLU JU CVX Big Springs #017 H/012918091

Sample Id: **SS19** Matrix: Soil Date Received: 07.07.18 09.00
 Lab Sample Id: 591481-003 Date Collected: 07.03.18 09.34 Sample Depth: 6 In
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.11.18 17.15 Basis: Wet Weight
 Seq Number: 3056230

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	07.11.18 23.26	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.11.18 07.00 Basis: Wet Weight
 Seq Number: 3056201

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	20.5	14.9	mg/kg	07.11.18 11.21		1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	07.11.18 11.21	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	07.11.18 11.21	U	1
Total TPH	PHC635	20.5	14.9	mg/kg	07.11.18 11.21		1

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
 Tech: ALJ % Moisture:
 Analyst: ALJ Date Prep: 07.11.18 10.00 Basis: Wet Weight
 Seq Number: 3056210

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.11.18 11.52	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.11.18 11.52	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.11.18 11.52	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.11.18 11.52	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.11.18 11.52	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.11.18 11.52	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.11.18 11.52	U	1



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LT Environmental, Inc., Arvada, CO PLU JU CVX Big Springs #017 H/012918091

Sample Id: **SS20** Matrix: Soil Date Received: 07.07.18 09.00
 Lab Sample Id: 591481-004 Date Collected: 07.03.18 09.36 Sample Depth: 6 In
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.11.18 17.15 Basis: Wet Weight
 Seq Number: 3056230

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	07.11.18 23.31	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.11.18 07.00 Basis: Wet Weight
 Seq Number: 3056201

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	19.3	15.0	mg/kg	07.11.18 11.41		1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.11.18 11.41	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.11.18 11.41	U	1
Total TPH	PHC635	19.3	15.0	mg/kg	07.11.18 11.41		1

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
 Tech: ALJ % Moisture:
 Analyst: ALJ Date Prep: 07.11.18 10.00 Basis: Wet Weight
 Seq Number: 3056210

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.11.18 12.10	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.11.18 12.10	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.11.18 12.10	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.11.18 12.10	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.11.18 12.10	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.11.18 12.10	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.11.18 12.10	U	1



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LT Environmental, Inc., Arvada, CO PLU JU CVX Big Springs #017 H/012918091

Sample Id: **FS1** Matrix: Soil Date Received: 07.07.18 09.00
 Lab Sample Id: 591481-005 Date Collected: 07.03.18 11.30 Sample Depth: 5.5 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.11.18 17.15 Basis: Wet Weight
 Seq Number: 3056230

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	150	4.92	mg/kg	07.11.18 23.37		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.11.18 07.00 Basis: Wet Weight
 Seq Number: 3056201

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.11.18 12.01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.11.18 12.01	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.11.18 12.01	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.11.18 12.01	U	1

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
 Tech: ALJ % Moisture:
 Analyst: ALJ Date Prep: 07.11.18 10.00 Basis: Wet Weight
 Seq Number: 3056210

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.11.18 12.28	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.11.18 12.28	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.11.18 12.28	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	07.11.18 12.28	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.11.18 12.28	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.11.18 12.28	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.11.18 12.28	U	1



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LT Environmental, Inc., Arvada, CO PLU JU CVX Big Springs #017 H/012918091

Sample Id: **SW1** Matrix: Soil Date Received: 07.07.18 09.00
 Lab Sample Id: 591481-006 Date Collected: 07.03.18 11.35 Sample Depth: 4 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.11.18 17.15 Basis: Wet Weight
 Seq Number: 3056230

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	173	4.98	mg/kg	07.11.18 23.42		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.11.18 07.00 Basis: Wet Weight
 Seq Number: 3056201

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	15.7	15.0	mg/kg	07.11.18 12.22		1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.11.18 12.22	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.11.18 12.22	U	1
Total TPH	PHC635	15.7	15.0	mg/kg	07.11.18 12.22		1

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
 Tech: ALJ % Moisture:
 Analyst: ALJ Date Prep: 07.11.18 10.00 Basis: Wet Weight
 Seq Number: 3056210

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.11.18 12.47	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.11.18 12.47	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.11.18 12.47	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.11.18 12.47	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.11.18 12.47	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.11.18 12.47	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.11.18 12.47	U	1



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LT Environmental, Inc., Arvada, CO PLU JU CVX Big Springs #017 H/012918091

Sample Id: **SW2** Matrix: Soil Date Received: 07.07.18 09.00
 Lab Sample Id: 591481-007 Date Collected: 07.03.18 11.40 Sample Depth: 4 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.12.18 15.00 Basis: Wet Weight
 Seq Number: 3056282

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.94	4.94	mg/kg	07.12.18 17.17	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.11.18 07.00 Basis: Wet Weight
 Seq Number: 3056201

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	32.7	14.9	mg/kg	07.11.18 12.42		1
Diesel Range Organics (DRO)	C10C28DRO	54.8	14.9	mg/kg	07.11.18 12.42		1
Oil Range Hydrocarbons (ORO)	PHCG2835	19.0	14.9	mg/kg	07.11.18 12.42		1
Total TPH	PHC635	107	14.9	mg/kg	07.11.18 12.42		1

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
 Tech: ALJ % Moisture:
 Analyst: ALJ Date Prep: 07.11.18 10.00 Basis: Wet Weight
 Seq Number: 3056210

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.11.18 13.05	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.11.18 13.05	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.11.18 13.05	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.11.18 13.05	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.11.18 13.05	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.11.18 13.05	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.11.18 13.05	U	1



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LT Environmental, Inc., Arvada, CO PLU JU CVX Big Springs #017 H/012918091

Sample Id: **SW3** Matrix: Soil Date Received: 07.07.18 09.00
 Lab Sample Id: 591481-008 Date Collected: 07.03.18 11.45 Sample Depth: 4 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.12.18 15.00 Basis: Wet Weight
 Seq Number: 3056282

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	07.12.18 17.33	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.11.18 07.00 Basis: Wet Weight
 Seq Number: 3056201

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	31.0	15.0	mg/kg	07.11.18 13.03		1
Diesel Range Organics (DRO)	C10C28DRO	60.6	15.0	mg/kg	07.11.18 13.03		1
Oil Range Hydrocarbons (ORO)	PHCG2835	18.0	15.0	mg/kg	07.11.18 13.03		1
Total TPH	PHC635	110	15.0	mg/kg	07.11.18 13.03		1

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
 Tech: ALJ % Moisture:
 Analyst: ALJ Date Prep: 07.11.18 10.00 Basis: Wet Weight
 Seq Number: 3056210

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.11.18 13.23	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.11.18 13.23	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.11.18 13.23	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.11.18 13.23	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.11.18 13.23	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.11.18 13.23	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.11.18 13.23	U	1



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LT Environmental, Inc., Arvada, CO
PLU JU CVX Big Springs #017 H/012918091

Sample Id: **SW4** Matrix: Soil Date Received: 07.07.18 09.00
 Lab Sample Id: 591481-009 Date Collected: 07.03.18 11.50 Sample Depth: 4 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.12.18 15.00 Basis: Wet Weight
 Seq Number: 3056282

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	48.0	4.96	mg/kg	07.12.18 17.38		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.11.18 07.00 Basis: Wet Weight
 Seq Number: 3056201

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	17.8	15.0	mg/kg	07.11.18 13.23		1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.11.18 13.23	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.11.18 13.23	U	1
Total TPH	PHC635	17.8	15.0	mg/kg	07.11.18 13.23		1

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
 Tech: ALJ % Moisture:
 Analyst: ALJ Date Prep: 07.11.18 10.00 Basis: Wet Weight
 Seq Number: 3056210

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	07.11.18 13.41	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.11.18 13.41	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.11.18 13.41	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	07.11.18 13.41	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.11.18 13.41	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	07.11.18 13.41	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.11.18 13.41	U	1



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 JU CVX Big Springs #017 H/012918091

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3056230

Matrix: Solid

Prep Method: E300P

MB Sample Id: 7658215-1-BLK

LCS Sample Id: 7658215-1-BKS

Date Prep: 07.11.18

LCSD Sample Id: 7658215-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.99	250	247	99	253	101	90-110	2	20	mg/kg	07.11.18 21:06	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3056282

Matrix: Solid

Prep Method: E300P

MB Sample Id: 7658306-1-BLK

LCS Sample Id: 7658306-1-BKS

Date Prep: 07.12.18

LCSD Sample Id: 7658306-1-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	264	106	263	105	90-110	0	20	mg/kg	07.12.18 17:06	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3056230

Matrix: Soil

Prep Method: E300P

Parent Sample Id: 591480-012

MS Sample Id: 591480-012 S

Date Prep: 07.11.18

MSD Sample Id: 591480-012 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.93	247	251	102	250	101	90-110	0	20	mg/kg	07.11.18 21:22	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3056230

Matrix: Soil

Prep Method: E300P

Parent Sample Id: 591480-013

MS Sample Id: 591480-013 S

Date Prep: 07.11.18

MSD Sample Id: 591480-013 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.98	249	244	98	248	100	90-110	2	20	mg/kg	07.11.18 22:37	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3056282

Matrix: Soil

Prep Method: E300P

Parent Sample Id: 591481-007

MS Sample Id: 591481-007 S

Date Prep: 07.12.18

MSD Sample Id: 591481-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.94	247	255	103	246	100	90-110	4	20	mg/kg	07.12.18 17:22	

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



LT Environmental, Inc.
PLU JU CVX Big Springs #017 H/012918091

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3056282

Matrix: Soil

Prep Method: E300P

Parent Sample Id: 592020-001

MS Sample Id: 592020-001 S

Date Prep: 07.12.18

MSD Sample Id: 592020-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	163	248	405	98	405	98	90-110	0	20	mg/kg	07.12.18 18:47	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3056201

Matrix: Solid

Prep Method: TX1005P

MB Sample Id: 7658219-1-BLK

LCS Sample Id: 7658219-1-BKS

Date Prep: 07.11.18

LCSD Sample Id: 7658219-1-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	997	100	982	98	70-135	2	20	mg/kg	07.11.18 09:21	
Diesel Range Organics (DRO)	<15.0	1000	1040	104	1020	102	70-135	2	20	mg/kg	07.11.18 09:21	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3056201

Matrix: Soil

Prep Method: TX1005P

Parent Sample Id: 591481-001

MS Sample Id: 591481-001 S

Date Prep: 07.11.18

MSD Sample Id: 591481-001 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)	16.8	999	950	93	1000	98	70-135	5	20	mg/kg	07.11.18 10:21	
Diesel Range Organics (DRO)	<15.0	999	993	99	1060	106	70-135	7	20	mg/kg	07.11.18 10:21	

Analytical Method: BTEX by EPA 8021B

Seq Number: 3056210

Matrix: Solid

Prep Method: SW5030B

MB Sample Id: 7658214-1-BLK

LCS Sample Id: 7658214-1-BKS

Date Prep: 07.11.18

LCSD Sample Id: 7658214-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.105	105	0.0999	99	70-130	5	35	mg/kg	07.11.18 09:10	
Toluene	<0.00200	0.0998	0.113	113	0.103	102	70-130	9	35	mg/kg	07.11.18 09:10	
Ethylbenzene	<0.00200	0.0998	0.109	109	0.102	101	70-130	7	35	mg/kg	07.11.18 09:10	
m,p-Xylenes	<0.00399	0.200	0.227	114	0.213	106	70-130	6	35	mg/kg	07.11.18 09:10	
o-Xylene	<0.00200	0.0998	0.101	101	0.0990	98	70-130	2	35	mg/kg	07.11.18 09:10	

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. = $\text{Log}(\text{Sample Duplicate}) - \text{Log}(\text{Original Sample})$

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 JU CVX Big Springs #017 H/012918091

Analytical Method: BTEX by EPA 8021B

Seq Number: 3056210

Parent Sample Id: 591481-001

Matrix: Soil

MS Sample Id: 591481-001 S

Prep Method: SW5030B

Date Prep: 07.11.18

MSD Sample Id: 591481-001 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	0.105	105	0.108	108	70-130	3	35	mg/kg	07.11.18 09:46	
Toluene	<0.00199	0.0996	0.0985	99	0.109	109	70-130	10	35	mg/kg	07.11.18 09:46	
Ethylbenzene	<0.00199	0.0996	0.0949	95	0.103	103	70-130	8	35	mg/kg	07.11.18 09:46	
m,p-Xylenes	<0.00398	0.199	0.195	98	0.216	108	70-130	10	35	mg/kg	07.11.18 09:46	
o-Xylene	<0.00199	0.0996	0.0917	92	0.107	107	70-130	15	35	mg/kg	07.11.18 09:46	

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



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Service Center - Baton Rouge

Service Center- Amarillo, TX (806)678-4514
Service Center- Hobbs, NM (575) 392-7550

CHAIN OF CUSTODY
Page 1 Of 1

Page 4 Of 5

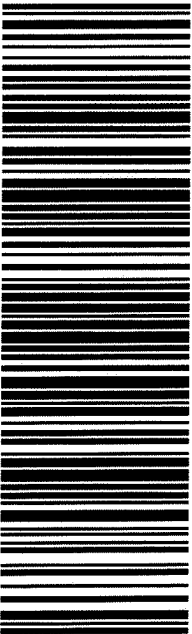
Revision 2016.7

[illegible]

ORIGIN ID:MAFA (806) 794-1296	SHIP DATE: 06 JUL 18
XENCO	ACTWGT: 49.00 LB
1211 W. FLORIDA AVE	CAD: 101813708/NET3980
MIDLAND, TX 79701	DIMS: 26x14x15 IN
UNITED STATES US	BILL RECIPIENT

TO XENCO	FEDEX ONSITE
WALGREENS 6122	
215 ANDREWS HWY	
MIDLAND TX 79701	
PO: (806) 794-1296	REF:
DEPT:	

TRK# 7726 5091 8565	SATURDAY HOLD
0201	PRIORITY OVERNIGHT
41 MAFA	HLD
TX-US	BUKMD
	LBB





552J28532/DCA5

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Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 07/07/2018 09:00:00 AM

Work Order #: 591481

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: 07/09/2018

Checklist reviewed by:

Jessica Kramer

Date: 07/09/2018

Analytical Report 609693

for
LT Environmental, Inc.

Project Manager: Adrian Baker

PLU CVXJV BS 17H

2RP-3985

02-JAN-19

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):

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

Xenco-Dallas (EPA Lab Code: TX01468):

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

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

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

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

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

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

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

Xenco-Atlanta (LELAP Lab ID #04176)

Xenco-Tampa: Florida (E87429)

Xenco-Lakeland: Florida (E84098)



02-JAN-19

Project Manager: **Adrian Baker**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **609693**

PLU CVXJV BS 17H

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) 609693. 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. 609693 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.

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Sample Cross Reference 609693

LT Environmental, Inc., Arvada, CO

PLU CVXJV BS 17H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS20A	S	12-19-18 15:25	4 ft	609693-001
SS02A	S	12-19-18 15:45	4 ft	609693-002
SS18A	S	12-19-18 15:30	4 ft	609693-003



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU CVXJV BS 17H

Project ID: 2RP-3985
Work Order Number(s): 609693

Report Date: 02-JAN-19
Date Received: 12/22/2018

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3074251 BTEX by EPA 8021B

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



Certificate of Analysis Summary 609693

LT Environmental, Inc., Arvada, CO

Project Name: PLU CVXJV BS 17H

Project Id: 2RP-3985
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Sat Dec-22-18 01:10 pm
Report Date: 02-JAN-19
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	609693-001	609693-002	609693-003			
	<i>Field Id:</i>	SS20A	SS02A	SS18A			
	<i>Depth:</i>	4- ft	4- ft	4- ft			
	<i>Matrix:</i>	SOIL	SOIL	SOIL			
	<i>Sampled:</i>	Dec-19-18 15:25	Dec-19-18 15:45	Dec-19-18 15:30			
BTEX by EPA 8021B	<i>Extracted:</i>	Dec-27-18 12:00	Dec-27-18 12:00	Dec-27-18 12:00			
	<i>Analyzed:</i>	Dec-28-18 01:37	Dec-28-18 01:59	Dec-28-18 02:26			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
Benzene		<0.00200 0.00200	<0.00201 0.00201	<0.00202 0.00202			
Toluene		<0.00200 0.00200	<0.00201 0.00201	<0.00202 0.00202			
Ethylbenzene		<0.00200 0.00200	<0.00201 0.00201	<0.00202 0.00202			
m,p-Xylenes		<0.00401 0.00401	<0.00402 0.00402	<0.00403 0.00403			
o-Xylene		<0.00200 0.00200	<0.00201 0.00201	<0.00202 0.00202			
Total Xylenes		<0.00200 0.00200	<0.00201 0.00201	<0.00202 0.00202			
Total BTEX		<0.00200 0.00200	<0.00201 0.00201	<0.00202 0.00202			
Inorganic Anions by EPA 300	<i>Extracted:</i>	Dec-28-18 17:30	Dec-28-18 17:30	Dec-28-18 17:30			
	<i>Analyzed:</i>	Dec-29-18 00:19	Dec-29-18 00:25	Dec-29-18 00:31			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
Chloride		<4.97 4.97	<4.97 4.97	52.5 4.97			
TPH by SW8015 Mod	<i>Extracted:</i>	Dec-27-18 07:00	Dec-27-18 07:00	Dec-27-18 07:00			
	<i>Analyzed:</i>	Dec-27-18 18:47	Dec-27-18 19:08	Dec-27-18 19:29			
	<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	<15.0 15.0			
Diesel Range Organics (DRO)		<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			
Total TPH		<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

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analytical Results 609693



LT Environmental, Inc., Arvada, CO

PLU CVXJV BS 17H

Sample Id: **SS20A**
Lab Sample Id: 609693-001

Matrix: Soil
Date Collected: 12.19.18 15.25

Date Received: 12.22.18 13.10
Sample Depth: 4 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: OJS

Analyst: OJS

Seq Number: 3074474

Date Prep: 12.28.18 17.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.97	4.97	mg/kg	12.29.18 00.19	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3074279

Date Prep: 12.27.18 07.00

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	12.27.18 18.47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	12.27.18 18.47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.27.18 18.47	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	12.27.18 18.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	12.27.18 18.47	
o-Terphenyl	84-15-1	107	%	70-135	12.27.18 18.47	



Certificate of Analytical Results 609693



LT Environmental, Inc., Arvada, CO

PLU CVXJV BS 17H

Sample Id: **SS20A**
Lab Sample Id: 609693-001

Matrix: Soil
Date Collected: 12.19.18 15.25

Date Received: 12.22.18 13.10
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 12.27.18 12.00

Basis: Wet Weight

Seq Number: 3074251

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.28.18 01.37	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.28.18 01.37	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.28.18 01.37	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	12.28.18 01.37	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.28.18 01.37	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.28.18 01.37	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.28.18 01.37	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	106	%	70-130	12.28.18 01.37		
1,4-Difluorobenzene	540-36-3	85	%	70-130	12.28.18 01.37		



Certificate of Analytical Results 609693



LT Environmental, Inc., Arvada, CO

PLU CVXJV BS 17H

Sample Id: **SS02A**
Lab Sample Id: 609693-002

Matrix: Soil
Date Collected: 12.19.18 15.45

Date Received: 12.22.18 13.10
Sample Depth: 4 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: OJS

Analyst: OJS

Seq Number: 3074474

Date Prep: 12.28.18 17.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.97	4.97	mg/kg	12.29.18 00.25	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3074279

Date Prep: 12.27.18 07.00

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	12.27.18 19.08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	12.27.18 19.08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.27.18 19.08	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	12.27.18 19.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	12.27.18 19.08	
o-Terphenyl	84-15-1	108	%	70-135	12.27.18 19.08	



Certificate of Analytical Results 609693



LT Environmental, Inc., Arvada, CO

PLU CVXJV BS 17H

Sample Id: **SS02A**
Lab Sample Id: 609693-002

Matrix: Soil
Date Collected: 12.19.18 15.45

Date Received: 12.22.18 13.10
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 12.27.18 12.00

Basis: Wet Weight

Seq Number: 3074251

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	12.28.18 01.59	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	12.28.18 01.59	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	12.28.18 01.59	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	12.28.18 01.59	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	12.28.18 01.59	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	12.28.18 01.59	U	1
Total BTEX		<0.00201	0.00201	mg/kg	12.28.18 01.59	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	107	%	70-130	12.28.18 01.59		
1,4-Difluorobenzene	540-36-3	87	%	70-130	12.28.18 01.59		



Certificate of Analytical Results 609693



LT Environmental, Inc., Arvada, CO

PLU CVXJV BS 17H

Sample Id: **SS18A**
Lab Sample Id: 609693-003

Matrix: Soil
Date Collected: 12.19.18 15.30

Date Received: 12.22.18 13.10
Sample Depth: 4 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: OJS

Analyst: OJS

Seq Number: 3074474

Date Prep: 12.28.18 17.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	52.5	4.97	mg/kg	12.29.18 00.31		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3074279

Date Prep: 12.27.18 07.00

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	12.27.18 19.29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	12.27.18 19.29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.27.18 19.29	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	12.27.18 19.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	12.27.18 19.29	
o-Terphenyl	84-15-1	93	%	70-135	12.27.18 19.29	



Certificate of Analytical Results 609693



LT Environmental, Inc., Arvada, CO

PLU CVXJV BS 17H

Sample Id: **SS18A**
Lab Sample Id: 609693-003

Matrix: Soil
Date Collected: 12.19.18 15.30

Date Received: 12.22.18 13.10
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3074251

Date Prep: 12.27.18 12.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	12.28.18 02.26	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	12.28.18 02.26	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	12.28.18 02.26	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	12.28.18 02.26	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	12.28.18 02.26	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	12.28.18 02.26	U	1
Total BTEX		<0.00202	0.00202	mg/kg	12.28.18 02.26	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	89	%	70-130	12.28.18 02.26		
4-Bromofluorobenzene	460-00-4	107	%	70-130	12.28.18 02.26		



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 CVXJV BS 17H

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3074474

MB Sample Id: 7668966-1-BLK

Matrix: Solid

LCS Sample Id: 7668966-1-BKS

Prep Method: E300P

Date Prep: 12.28.18

LCSD Sample Id: 7668966-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	256	102	254	102	90-110	1	20	mg/kg	12.28.18 22:56	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3074474

Parent Sample Id: 609691-011

Matrix: Soil

MS Sample Id: 609691-011 S

Prep Method: E300P

Date Prep: 12.28.18

MSD Sample Id: 609691-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	3.76	251	275	108	283	111	90-110	3	20	mg/kg	12.28.18 23:14	X

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3074474

Parent Sample Id: 609694-001

Matrix: Soil

MS Sample Id: 609694-001 S

Prep Method: E300P

Date Prep: 12.28.18

MSD Sample Id: 609694-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	12.3	249	280	108	283	109	90-110	1	20	mg/kg	12.29.18 00:44	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3074279

MB Sample Id: 7668885-1-BLK

Matrix: Solid

LCS Sample Id: 7668885-1-BKS

Prep Method: TX1005P

Date Prep: 12.27.18

LCSD Sample Id: 7668885-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	999	852	85	920	92	70-135	8	20	mg/kg	12.27.18 10:42	
Diesel Range Organics (DRO)	<8.12	999	941	94	1020	102	70-135	8	20	mg/kg	12.27.18 10:42	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	108		125		126		70-135	%	12.27.18 10:42
o-Terphenyl	114		102		110		70-135	%	12.27.18 10:42

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 CVXJV BS 17H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3074279

Parent Sample Id: 609691-001

Matrix: Soil

MS Sample Id: 609691-001 S

Prep Method: TX1005P

Date Prep: 12.27.18

MSD Sample Id: 609691-001 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	827	83	832	83	70-135	1	20	mg/kg	12.27.18 11:46	
Diesel Range Organics (DRO)	<8.10	997	922	92	932	93	70-135	1	20	mg/kg	12.27.18 11:46	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	123		123		70-135	%	12.27.18 11:46
o-Terphenyl	100		99		70-135	%	12.27.18 11:46

Analytical Method: BTEX by EPA 8021B

Seq Number: 3074251

MB Sample Id: 7668889-1-BLK

Matrix: Solid

LCS Sample Id: 7668889-1-BKS

Prep Method: SW5030B

Date Prep: 12.27.18

LCSD Sample Id: 7668889-1-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	0.122	122	70-130	19	35	mg/kg	12.27.18 12:37	
Toluene	<0.00202	0.101	0.0851	84	0.102	102	70-130	18	35	mg/kg	12.27.18 12:37	
Ethylbenzene	<0.00202	0.101	0.101	100	0.124	124	70-130	20	35	mg/kg	12.27.18 12:37	
m,p-Xylenes	0.00188	0.202	0.216	107	0.256	129	70-130	17	35	mg/kg	12.27.18 12:37	
o-Xylene	<0.00202	0.101	0.0997	99	0.120	120	70-130	18	35	mg/kg	12.27.18 12:37	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	83		75		118		70-130	%	12.27.18 12:37
4-Bromofluorobenzene	95		81		77		70-130	%	12.27.18 12:37

Analytical Method: BTEX by EPA 8021B

Seq Number: 3074251

Parent Sample Id: 609587-001

Matrix: Soil

MS Sample Id: 609587-001 S

Prep Method: SW5030B

Date Prep: 12.27.18

MSD Sample Id: 609587-001 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	0.0998	0.122	122	0.115	115	70-130	6	35	mg/kg	12.27.18 13:36	
Toluene	<0.00200	0.0998	0.104	104	0.0943	94	70-130	10	35	mg/kg	12.27.18 13:36	
Ethylbenzene	<0.00200	0.0998	0.122	122	0.113	113	70-130	8	35	mg/kg	12.27.18 13:36	
m,p-Xylenes	<0.00399	0.200	0.239	120	0.220	110	70-130	8	35	mg/kg	12.27.18 13:36	
o-Xylene	<0.00200	0.0998	0.113	113	0.105	105	70-130	7	35	mg/kg	12.27.18 13:36	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	109		96		70-130	%	12.27.18 13:36
4-Bromofluorobenzene	112		106		70-130	%	12.27.18 13:36

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:

10091093

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)	
Company Name:	LT Environmental, Inc., Permian office	Company Name:	Kyle L. Hill
Address:	3300 North A Street	Address:	XCO Energy
City, State ZIP:	Midland, TX 79705	City, State ZIP:	
Phone:	432.704.5178	Email:	kyle@xenco.com

Program: ☐ UST/PST ☐ RP ☐ Rowfields ☐ C ☐ Depth ☐ State of Project:	
Reporting Level I ☐	Level III ☐
Deliverables: EDD ☐	ADAPT ☐
Other:	

Project Name:	PLU CLK JV BS 12H	Turn Around	
Project Number:	2EP-3985	Routine ☒	
P.O. Number:		Rush:	
Sampler's Name:	Lydia L. Baker	Due Date:	12/31

SAMPLE RECEIPT		Temp Blank:	Yes ☐ No ☒	Well Ice:	Yes ☐ No ☒
Temperature (°C):	0.50	Thermometer ID:	100		
Received Intact:	Yes ☒ No ☐	Correction Factor:	-0.1		
Cooler Custody Seals:	Yes ☒ No ☐ N/A	Total Containers:	1		
Sample Custody Seals:	Yes ☒ No ☐ N/A				

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
SS20A	1	12/19/18	15:25	4'	1	X	X	X
SS20A	5		15:45	4'	1	X	X	X
SS18A	5		15:30	4'	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
 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
		12/19/18 1700			12/20/18 1310



Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 12/22/2018 01:10:00 PM

Work Order #: 609693

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist

Comments

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

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Brianna Teel

Date: 12/26/2018

Checklist reviewed by:

Jessica Kramer

Date: 12/26/2018

Analytical Report 631904

for
LT Environmental, Inc.

Project Manager: Dan Moir

PLU JV CVX #017H

2RP-3985

05-AUG-19

Collected By: Client



**1089 N Canal Street
Carlsbad, NM 88220**

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

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

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)

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

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

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

Xenco-Atlanta (LELAP Lab ID #04176)

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



05-AUG-19

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **631904**

PLU JV CVX #017H

Project Address: Delaware Basin

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) 631904. 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. 631904 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'. The signature is written in a cursive, flowing style.

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 631904****LT Environmental, Inc., Arvada, CO**

PLU JV CVX #017H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH01	S	07-22-19 08:00	1 ft	631904-001
PH01A	S	07-22-19 08:10	2 ft	631904-002
PH01B	S	07-22-19 08:20	3 ft	631904-003
PH01C	S	07-22-19 08:30	4 ft	631904-004
PH02	S	07-22-19 08:40	1 ft	631904-005
PH02A	S	07-22-19 08:50	2 ft	631904-006
PH02B	S	07-22-19 09:00	3 ft	631904-007
PH02C	S	07-22-19 09:10	4 ft	631904-008
PH03	S	07-22-19 09:20	1 ft	631904-009
PH03A	S	07-22-19 09:35	2 ft	631904-010
PH03B	S	07-22-19 09:50	3 ft	631904-011
PH03C	S	07-22-19 10:00	4 ft	631904-012
PH04	S	07-22-19 10:10	1 ft	631904-013
PH04A	S	07-22-19 10:20	2 ft	631904-014
PH04B	S	07-22-19 10:30	3 ft	631904-015
PH04C	S	07-22-19 10:40	4 ft	631904-016



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU JV CVX #017H

Project ID: 2RP-3985
Work Order Number(s): 631904

Report Date: 05-AUG-19
Date Received: 07/24/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3096943 BTEX by EPA 8021B

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

Batch: LBA-3096944 BTEX by EPA 8021B

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

Batch: LBA-3097392 TPH by SW8015 Mod

Surrogate o-Terphenyl recovered below QC limits. Matrix interferences is suspected.

Samples affected are: 631904-014.

Certificate of Analysis Summary 631904



LT Environmental, Inc., Arvada, CO

Project Name: PLU JV CVX #017H

Project Id: 2RP-3985

Contact: Dan Moir

Project Location: Delaware Basin

Date Received in Lab: Wed Jul-24-19 09:17 am

Report Date: 05-AUG-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	631904-001	631904-002	631904-003	631904-004	631904-005	631904-006
	<i>Field Id:</i>	PH01	PH01A	PH01B	PH01C	PH02	PH02A
	<i>Depth:</i>	1- ft	2- ft	3- ft	4- ft	1- ft	2- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jul-22-19 08:00	Jul-22-19 08:10	Jul-22-19 08:20	Jul-22-19 08:30	Jul-22-19 08:40	Jul-22-19 08:50
BTEX by EPA 8021B SUB: T104704400-18-16	<i>Extracted:</i>	Jul-26-19 16:40	Jul-26-19 16:40	Jul-26-19 16:40	Jul-26-19 16:40	Jul-26-19 16:40	Jul-26-19 16:40
	<i>Analyzed:</i>	Jul-29-19 12:44	Jul-29-19 13:05	Jul-29-19 13:26	Jul-29-19 13:47	Jul-29-19 14:09	Jul-29-19 14:31
	<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	<0.00199 0.00199	<0.00198 0.00198	<0.00202 0.00202	<0.00201 0.00201	<0.00200 0.00200
Toluene		<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198	<0.00202 0.00202	<0.00201 0.00201	<0.00200 0.00200
Ethylbenzene		<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198	<0.00202 0.00202	<0.00201 0.00201	<0.00200 0.00200
m,p-Xylenes		<0.00400 0.00400	<0.00398 0.00398	<0.00396 0.00396	<0.00403 0.00403	<0.00402 0.00402	<0.00401 0.00401
o-Xylene		<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198	<0.00202 0.00202	<0.00201 0.00201	<0.00200 0.00200
Total Xylenes		<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198	<0.00202 0.00202	<0.00201 0.00201	<0.00200 0.00200
Total BTEX		<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198	<0.00202 0.00202	<0.00201 0.00201	<0.00200 0.00200
Chloride by EPA 300 SUB: T104704400-18-16	<i>Extracted:</i>	Jul-25-19 16:30	Jul-25-19 16:30	Jul-25-19 16:30	Jul-25-19 16:30	Jul-25-19 16:30	Jul-25-19 16:30
	<i>Analyzed:</i>	Jul-26-19 01:52	Jul-26-19 02:11	Jul-26-19 02:17	Jul-26-19 02:24	Jul-26-19 02:30	Jul-26-19 02:36
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		<5.05 5.05	<5.03 5.03	<4.97 4.97	<5.01 5.01	<5.01 5.01	<5.04 5.04
TPH by SW8015 Mod SUB: T104704400-18-16	<i>Extracted:</i>	Jul-26-19 14:00	Jul-26-19 14:00	Jul-26-19 14:00	Jul-26-19 14:00	Jul-26-19 14:00	Jul-26-19 14:00
	<i>Analyzed:</i>	Aug-03-19 13:52	Aug-03-19 14:16	Aug-03-19 14:39	Aug-03-19 15:01	Aug-03-19 15:24	Aug-03-19 16:10
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
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

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Jessica Kramer
Project Assistant

Certificate of Analysis Summary 631904



LT Environmental, Inc., Arvada, CO

Project Name: PLU JV CVX #017H

Project Id: 2RP-3985

Contact: Dan Moir

Project Location: Delaware Basin

Date Received in Lab: Wed Jul-24-19 09:17 am

Report Date: 05-AUG-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	631904-007	631904-008	631904-009	631904-010	631904-011	631904-012
	<i>Field Id:</i>	PH02B	PH02C	PH03	PH03A	PH03B	PH03C
	<i>Depth:</i>	3- ft	4- ft	1- ft	2- ft	3- ft	4- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jul-22-19 09:00	Jul-22-19 09:10	Jul-22-19 09:20	Jul-22-19 09:35	Jul-22-19 09:50	Jul-22-19 10:00
BTEX by EPA 8021B SUB: T104704400-18-16	<i>Extracted:</i>	Jul-26-19 16:40	Jul-26-19 16:40	Jul-26-19 17:11	Jul-26-19 17:11	Jul-26-19 17:11	Jul-26-19 17:11
	<i>Analyzed:</i>	Jul-29-19 14:52	Jul-29-19 15:14	Jul-29-19 18:47	Jul-29-19 19:07	Jul-29-19 19:27	Jul-29-19 19:48
	<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	<0.00198 0.00198	<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200
Toluene		<0.00200 0.00200	<0.00198 0.00198	<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200
Ethylbenzene		<0.00200 0.00200	<0.00198 0.00198	<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200
m,p-Xylenes		<0.00400 0.00400	<0.00396 0.00396	<0.00402 0.00402	<0.00400 0.00400	<0.00396 0.00396	<0.00400 0.00400
o-Xylene		<0.00200 0.00200	<0.00198 0.00198	<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200
Total Xylenes		<0.00200 0.00200	<0.00198 0.00198	<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200
Total BTEX		<0.00200 0.00200	<0.00198 0.00198	<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200
Chloride by EPA 300 SUB: T104704400-18-16	<i>Extracted:</i>	Jul-25-19 16:30	Jul-25-19 16:30	Jul-25-19 16:30	Jul-25-19 16:30	Jul-25-19 16:30	Jul-25-19 16:30
	<i>Analyzed:</i>	Jul-26-19 02:43	Jul-26-19 03:02	Jul-26-19 03:08	Jul-26-19 03:27	Jul-26-19 03:33	Jul-26-19 03:40
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		<5.03 5.03	<5.01 5.01	15.1 4.99	<4.99 4.99	<5.01 5.01	<5.04 5.04
TPH by SW8015 Mod SUB: T104704400-18-16	<i>Extracted:</i>	Jul-26-19 14:00	Jul-26-19 14:00	Jul-26-19 14:00	Jul-26-19 14:00	Jul-26-19 14:00	Jul-26-19 14:00
	<i>Analyzed:</i>	Aug-03-19 16:33	Aug-03-19 16:56	Aug-03-19 17:19	Aug-03-19 17:43	Aug-03-19 18:06	Aug-03-19 18:28
	<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)		<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

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Jessica Kramer
Project Assistant



Certificate of Analysis Summary 631904

LT Environmental, Inc., Arvada, CO

Project Name: PLU JV CVX #017H

Project Id: 2RP-3985
Contact: Dan Moir
Project Location: Delaware Basin

Date Received in Lab: Wed Jul-24-19 09:17 am
Report Date: 05-AUG-19
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	631904-013	631904-014	631904-015	631904-016		
	<i>Field Id:</i>	PH04	PH04A	PH04B	PH04C		
	<i>Depth:</i>	1- ft	2- ft	3- ft	4- ft		
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	Jul-22-19 10:10	Jul-22-19 10:20	Jul-22-19 10:30	Jul-22-19 10:40		
BTEX by EPA 8021B SUB: T104704400-18-16	<i>Extracted:</i>	Jul-26-19 17:11	Jul-26-19 17:11	Jul-26-19 17:11	Jul-26-19 17:11		
	<i>Analyzed:</i>	Jul-29-19 20:08	Jul-29-19 20:28	Jul-29-19 20:48	Jul-29-19 21:08		
	<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	<0.00200 0.00200	<0.00199 0.00199		
Toluene		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199		
Ethylbenzene		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199		
m,p-Xylenes		<0.00400 0.00400	<0.00402 0.00402	<0.00401 0.00401	<0.00398 0.00398		
o-Xylene		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199		
Total Xylenes		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199		
Total BTEX		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199		
Chloride by EPA 300 SUB: T104704400-18-16	<i>Extracted:</i>	Jul-25-19 16:30	Jul-25-19 16:30	Jul-25-19 16:30	Jul-25-19 16:30		
	<i>Analyzed:</i>	Jul-26-19 03:46	Jul-26-19 03:52	Jul-26-19 03:59	Jul-26-19 04:05		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		<5.05 5.05	5.16 5.01	<4.96 4.96	<5.01 5.01		
TPH by SW8015 Mod SUB: T104704400-18-16	<i>Extracted:</i>	Jul-26-19 14:00	Jul-26-19 14:00	Jul-26-19 14:00	Jul-26-19 17:00		
	<i>Analyzed:</i>	Aug-03-19 18:51	Aug-03-19 19:14	Aug-03-19 19:37	Aug-03-19 23:50		
	<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		

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analytical Results 631904

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH01**
Lab Sample Id: 631904-001

Matrix: Soil
Date Collected: 07.22.19 08.00

Date Received: 07.24.19 09.17
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096555

Date Prep: 07.25.19 16.30

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	<5.05	5.05	mg/kg	07.26.19 01.52	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097392

Date Prep: 07.26.19 14.00

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	08.03.19 13.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.03.19 13.52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.03.19 13.52	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.03.19 13.52	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.03.19 13.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	08.03.19 13.52	
o-Terphenyl	84-15-1	88	%	70-135	08.03.19 13.52	



Certificate of Analytical Results 631904

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH01**
Lab Sample Id: 631904-001

Matrix: Soil
Date Collected: 07.22.19 08.00

Date Received: 07.24.19 09.17
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096944

Prep Method: SW5030B

% Moisture:

Date Prep: 07.26.19 16.40

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	07.29.19 12.44	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.29.19 12.44	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.29.19 12.44	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	07.29.19 12.44	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.29.19 12.44	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.29.19 12.44	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.29.19 12.44	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	107	%	70-130	07.29.19 12.44		
1,4-Difluorobenzene	540-36-3	107	%	70-130	07.29.19 12.44		



Certificate of Analytical Results 631904

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH01A**
Lab Sample Id: 631904-002

Matrix: Soil
Date Collected: 07.22.19 08.10

Date Received: 07.24.19 09.17
Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096555

Date Prep: 07.25.19 16.30

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	<5.03	5.03	mg/kg	07.26.19 02.11	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097392

Date Prep: 07.26.19 14.00

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	08.03.19 14.16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.03.19 14.16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.03.19 14.16	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.03.19 14.16	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.03.19 14.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	08.03.19 14.16	
o-Terphenyl	84-15-1	79	%	70-135	08.03.19 14.16	



Certificate of Analytical Results 631904

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH01A**
Lab Sample Id: 631904-002

Matrix: Soil
Date Collected: 07.22.19 08.10

Date Received: 07.24.19 09.17
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096944

Prep Method: SW5030B

% Moisture:

Date Prep: 07.26.19 16.40

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.29.19 13.05	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.29.19 13.05	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.29.19 13.05	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.29.19 13.05	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.29.19 13.05	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.29.19 13.05	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.29.19 13.05	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	108	%	70-130	07.29.19 13.05		
4-Bromofluorobenzene	460-00-4	108	%	70-130	07.29.19 13.05		



Certificate of Analytical Results 631904

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH01B**
Lab Sample Id: 631904-003

Matrix: Soil
Date Collected: 07.22.19 08.20

Date Received: 07.24.19 09.17
Sample Depth: 3 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096555

Date Prep: 07.25.19 16.30

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	<4.97	4.97	mg/kg	07.26.19 02.17	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097392

Date Prep: 07.26.19 14.00

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	08.03.19 14.39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.03.19 14.39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.03.19 14.39	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.03.19 14.39	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.03.19 14.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	08.03.19 14.39	
o-Terphenyl	84-15-1	86	%	70-135	08.03.19 14.39	



Certificate of Analytical Results 631904

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH01B**
Lab Sample Id: 631904-003

Matrix: Soil
Date Collected: 07.22.19 08.20

Date Received: 07.24.19 09.17
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096944

Prep Method: SW5030B

% Moisture:

Date Prep: 07.26.19 16.40

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	07.29.19 13.26	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.29.19 13.26	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.29.19 13.26	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	07.29.19 13.26	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.29.19 13.26	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	07.29.19 13.26	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.29.19 13.26	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	105	%	70-130	07.29.19 13.26		
4-Bromofluorobenzene	460-00-4	105	%	70-130	07.29.19 13.26		



Certificate of Analytical Results 631904

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH01C**
Lab Sample Id: 631904-004

Matrix: Soil
Date Collected: 07.22.19 08.30

Date Received: 07.24.19 09.17
Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096555

Date Prep: 07.25.19 16.30

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	<5.01	5.01	mg/kg	07.26.19 02.24	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097392

Date Prep: 07.26.19 14.00

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	08.03.19 15.01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.03.19 15.01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.03.19 15.01	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.03.19 15.01	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.03.19 15.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	08.03.19 15.01	
o-Terphenyl	84-15-1	83	%	70-135	08.03.19 15.01	



Certificate of Analytical Results 631904

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH01C**
Lab Sample Id: 631904-004

Matrix: Soil
Date Collected: 07.22.19 08.30

Date Received: 07.24.19 09.17
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096944

Date Prep: 07.26.19 16.40

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	<0.00202	0.00202	mg/kg	07.29.19 13.47	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.29.19 13.47	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.29.19 13.47	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	07.29.19 13.47	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.29.19 13.47	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.29.19 13.47	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.29.19 13.47	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	106	%	70-130	07.29.19 13.47		
1,4-Difluorobenzene	540-36-3	104	%	70-130	07.29.19 13.47		



Certificate of Analytical Results 631904

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH02**
Lab Sample Id: 631904-005

Matrix: Soil
Date Collected: 07.22.19 08.40

Date Received: 07.24.19 09.17
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096555

Date Prep: 07.25.19 16.30

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	<5.01	5.01	mg/kg	07.26.19 02.30	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097392

Date Prep: 07.26.19 14.00

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	08.03.19 15.24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.03.19 15.24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.03.19 15.24	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.03.19 15.24	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.03.19 15.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	08.03.19 15.24	
o-Terphenyl	84-15-1	81	%	70-135	08.03.19 15.24	



Certificate of Analytical Results 631904

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH02**
Lab Sample Id: 631904-005

Matrix: Soil
Date Collected: 07.22.19 08.40

Date Received: 07.24.19 09.17
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096944

Prep Method: SW5030B

% Moisture:

Date Prep: 07.26.19 16.40

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	07.29.19 14.09	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.29.19 14.09	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.29.19 14.09	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.29.19 14.09	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.29.19 14.09	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.29.19 14.09	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.29.19 14.09	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	116	%	70-130	07.29.19 14.09		
1,4-Difluorobenzene	540-36-3	107	%	70-130	07.29.19 14.09		



Certificate of Analytical Results 631904

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH02A**
Lab Sample Id: 631904-006

Matrix: Soil
Date Collected: 07.22.19 08.50

Date Received: 07.24.19 09.17
Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096555

Date Prep: 07.25.19 16.30

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	<5.04	5.04	mg/kg	07.26.19 02.36	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097392

Date Prep: 07.26.19 14.00

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	08.03.19 16.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.03.19 16.10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.03.19 16.10	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.03.19 16.10	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.03.19 16.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	08.03.19 16.10	
o-Terphenyl	84-15-1	81	%	70-135	08.03.19 16.10	



Certificate of Analytical Results 631904

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH02A**
Lab Sample Id: 631904-006

Matrix: Soil
Date Collected: 07.22.19 08.50

Date Received: 07.24.19 09.17
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096944

Date Prep: 07.26.19 16.40

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	07.29.19 14.31	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.29.19 14.31	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.29.19 14.31	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.29.19 14.31	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.29.19 14.31	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.29.19 14.31	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.29.19 14.31	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	115	%	70-130	07.29.19 14.31		
1,4-Difluorobenzene	540-36-3	105	%	70-130	07.29.19 14.31		



Certificate of Analytical Results 631904

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH02B**
Lab Sample Id: 631904-007

Matrix: Soil
Date Collected: 07.22.19 09.00

Date Received: 07.24.19 09.17
Sample Depth: 3 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096555

Date Prep: 07.25.19 16.30

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	<5.03	5.03	mg/kg	07.26.19 02.43	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097392

Date Prep: 07.26.19 14.00

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	08.03.19 16.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.03.19 16.33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.03.19 16.33	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.03.19 16.33	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.03.19 16.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	08.03.19 16.33	
o-Terphenyl	84-15-1	82	%	70-135	08.03.19 16.33	



Certificate of Analytical Results 631904

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH02B**
Lab Sample Id: 631904-007

Matrix: Soil
Date Collected: 07.22.19 09.00

Date Received: 07.24.19 09.17
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096944

Prep Method: SW5030B

% Moisture:

Date Prep: 07.26.19 16.40

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	07.29.19 14.52	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.29.19 14.52	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.29.19 14.52	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	07.29.19 14.52	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.29.19 14.52	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.29.19 14.52	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.29.19 14.52	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	105	%	70-130	07.29.19 14.52		
1,4-Difluorobenzene	540-36-3	106	%	70-130	07.29.19 14.52		



Certificate of Analytical Results 631904

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH02C**
Lab Sample Id: 631904-008

Matrix: Soil
Date Collected: 07.22.19 09.10

Date Received: 07.24.19 09.17
Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096555

Date Prep: 07.25.19 16.30

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	<5.01	5.01	mg/kg	07.26.19 03.02	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097392

Date Prep: 07.26.19 14.00

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	08.03.19 16.56	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.03.19 16.56	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.03.19 16.56	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.03.19 16.56	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.03.19 16.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	08.03.19 16.56	
o-Terphenyl	84-15-1	91	%	70-135	08.03.19 16.56	



Certificate of Analytical Results 631904

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH02C**
Lab Sample Id: 631904-008

Matrix: Soil
Date Collected: 07.22.19 09.10

Date Received: 07.24.19 09.17
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096944

Date Prep: 07.26.19 16.40

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	<0.00198	0.00198	mg/kg	07.29.19 15.14	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.29.19 15.14	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.29.19 15.14	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	07.29.19 15.14	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.29.19 15.14	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	07.29.19 15.14	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.29.19 15.14	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	115	%	70-130	07.29.19 15.14		
1,4-Difluorobenzene	540-36-3	108	%	70-130	07.29.19 15.14		



Certificate of Analytical Results 631904

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH03**
Lab Sample Id: 631904-009

Matrix: Soil
Date Collected: 07.22.19 09.20

Date Received: 07.24.19 09.17
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096555

Date Prep: 07.25.19 16.30

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	15.1	4.99	mg/kg	07.26.19 03.08		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097392

Date Prep: 07.26.19 14.00

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	08.03.19 17.19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.03.19 17.19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.03.19 17.19	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.03.19 17.19	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.03.19 17.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	08.03.19 17.19	
o-Terphenyl	84-15-1	89	%	70-135	08.03.19 17.19	



Certificate of Analytical Results 631904

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH03**
Lab Sample Id: 631904-009

Matrix: Soil
Date Collected: 07.22.19 09.20

Date Received: 07.24.19 09.17
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096943

Prep Method: SW5030B

% Moisture:

Date Prep: 07.26.19 17.11

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	07.29.19 18.47	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.29.19 18.47	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.29.19 18.47	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.29.19 18.47	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.29.19 18.47	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.29.19 18.47	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.29.19 18.47	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	107	%	70-130	07.29.19 18.47		
4-Bromofluorobenzene	460-00-4	107	%	70-130	07.29.19 18.47		



Certificate of Analytical Results 631904

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH03A**
Lab Sample Id: 631904-010

Matrix: Soil
Date Collected: 07.22.19 09.35

Date Received: 07.24.19 09.17
Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096555

Date Prep: 07.25.19 16.30

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	<4.99	4.99	mg/kg	07.26.19 03.27	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097392

Date Prep: 07.26.19 14.00

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	08.03.19 17.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.03.19 17.43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.03.19 17.43	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.03.19 17.43	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.03.19 17.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	08.03.19 17.43	
o-Terphenyl	84-15-1	90	%	70-135	08.03.19 17.43	



Certificate of Analytical Results 631904

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH03A**
Lab Sample Id: 631904-010

Matrix: Soil
Date Collected: 07.22.19 09.35

Date Received: 07.24.19 09.17
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096943

Date Prep: 07.26.19 17.11

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	07.29.19 19.07	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.29.19 19.07	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.29.19 19.07	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	07.29.19 19.07	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.29.19 19.07	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.29.19 19.07	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.29.19 19.07	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	118	%	70-130	07.29.19 19.07		
1,4-Difluorobenzene	540-36-3	107	%	70-130	07.29.19 19.07		



Certificate of Analytical Results 631904

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH03B**
Lab Sample Id: 631904-011

Matrix: Soil
Date Collected: 07.22.19 09.50

Date Received: 07.24.19 09.17
Sample Depth: 3 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096555

Date Prep: 07.25.19 16.30

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	<5.01	5.01	mg/kg	07.26.19 03.33	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097392

Date Prep: 07.26.19 14.00

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	08.03.19 18.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.03.19 18.06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.03.19 18.06	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.03.19 18.06	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.03.19 18.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	08.03.19 18.06	
o-Terphenyl	84-15-1	80	%	70-135	08.03.19 18.06	



Certificate of Analytical Results 631904

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH03B**
Lab Sample Id: 631904-011

Matrix: Soil
Date Collected: 07.22.19 09.50

Date Received: 07.24.19 09.17
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096943

Prep Method: SW5030B

% Moisture:

Date Prep: 07.26.19 17.11

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	07.29.19 19.27	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.29.19 19.27	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.29.19 19.27	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	07.29.19 19.27	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.29.19 19.27	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	07.29.19 19.27	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.29.19 19.27	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	102	%	70-130	07.29.19 19.27		
4-Bromofluorobenzene	460-00-4	110	%	70-130	07.29.19 19.27		



Certificate of Analytical Results 631904

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH03C**
Lab Sample Id: 631904-012

Matrix: Soil
Date Collected: 07.22.19 10.00

Date Received: 07.24.19 09.17
Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096555

Date Prep: 07.25.19 16.30

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	<5.04	5.04	mg/kg	07.26.19 03.40	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097392

Date Prep: 07.26.19 14.00

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	08.03.19 18.28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.03.19 18.28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.03.19 18.28	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.03.19 18.28	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.03.19 18.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	08.03.19 18.28	
o-Terphenyl	84-15-1	75	%	70-135	08.03.19 18.28	



Certificate of Analytical Results 631904

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH03C**
Lab Sample Id: 631904-012

Matrix: Soil
Date Collected: 07.22.19 10.00

Date Received: 07.24.19 09.17
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096943

Date Prep: 07.26.19 17.11

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	07.29.19 19.48	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.29.19 19.48	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.29.19 19.48	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	07.29.19 19.48	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.29.19 19.48	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.29.19 19.48	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.29.19 19.48	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	106	%	70-130	07.29.19 19.48		
1,4-Difluorobenzene	540-36-3	103	%	70-130	07.29.19 19.48		



Certificate of Analytical Results 631904

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH04**
Lab Sample Id: 631904-013

Matrix: Soil
Date Collected: 07.22.19 10.10

Date Received: 07.24.19 09.17
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096555

Date Prep: 07.25.19 16.30

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	<5.05	5.05	mg/kg	07.26.19 03.46	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097392

Date Prep: 07.26.19 14.00

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	08.03.19 18.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.03.19 18.51	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.03.19 18.51	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.03.19 18.51	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.03.19 18.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	08.03.19 18.51	
o-Terphenyl	84-15-1	74	%	70-135	08.03.19 18.51	



Certificate of Analytical Results 631904

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH04**
Lab Sample Id: 631904-013

Matrix: Soil
Date Collected: 07.22.19 10.10

Date Received: 07.24.19 09.17
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096943

Prep Method: SW5030B

% Moisture:

Date Prep: 07.26.19 17.11

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	07.29.19 20.08	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.29.19 20.08	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.29.19 20.08	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	07.29.19 20.08	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.29.19 20.08	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.29.19 20.08	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.29.19 20.08	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	112	%	70-130	07.29.19 20.08		
1,4-Difluorobenzene	540-36-3	106	%	70-130	07.29.19 20.08		



Certificate of Analytical Results 631904

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH04A**
Lab Sample Id: 631904-014

Matrix: Soil
Date Collected: 07.22.19 10.20

Date Received: 07.24.19 09.17
Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096555

Date Prep: 07.25.19 16.30

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	5.16	5.01	mg/kg	07.26.19 03.52		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097392

Date Prep: 07.26.19 14.00

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	08.03.19 19.14	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.03.19 19.14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.03.19 19.14	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.03.19 19.14	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.03.19 19.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	08.03.19 19.14	
o-Terphenyl	84-15-1	64	%	70-135	08.03.19 19.14	**



Certificate of Analytical Results 631904

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH04A**
Lab Sample Id: 631904-014

Matrix: Soil
Date Collected: 07.22.19 10.20

Date Received: 07.24.19 09.17
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096943

Prep Method: SW5030B

% Moisture:

Date Prep: 07.26.19 17.11

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	07.29.19 20.28	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.29.19 20.28	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.29.19 20.28	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.29.19 20.28	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.29.19 20.28	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.29.19 20.28	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.29.19 20.28	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	115	%	70-130	07.29.19 20.28		
1,4-Difluorobenzene	540-36-3	104	%	70-130	07.29.19 20.28		



Certificate of Analytical Results 631904

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH04B**
Lab Sample Id: 631904-015

Matrix: Soil
Date Collected: 07.22.19 10.30

Date Received: 07.24.19 09.17
Sample Depth: 3 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096555

Date Prep: 07.25.19 16.30

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	<4.96	4.96	mg/kg	07.26.19 03.59	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097392

Date Prep: 07.26.19 14.00

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	08.03.19 19.37	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.03.19 19.37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.03.19 19.37	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.03.19 19.37	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.03.19 19.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	08.03.19 19.37	
o-Terphenyl	84-15-1	83	%	70-135	08.03.19 19.37	



Certificate of Analytical Results 631904

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH04B**
Lab Sample Id: 631904-015

Matrix: Soil
Date Collected: 07.22.19 10.30

Date Received: 07.24.19 09.17
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096943

Prep Method: SW5030B

% Moisture:

Date Prep: 07.26.19 17.11

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	07.29.19 20.48	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.29.19 20.48	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.29.19 20.48	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.29.19 20.48	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.29.19 20.48	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.29.19 20.48	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.29.19 20.48	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	107	%	70-130	07.29.19 20.48		
1,4-Difluorobenzene	540-36-3	105	%	70-130	07.29.19 20.48		



Certificate of Analytical Results 631904

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH04C**
Lab Sample Id: 631904-016

Matrix: Soil
Date Collected: 07.22.19 10.40

Date Received: 07.24.19 09.17
Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096555

Date Prep: 07.25.19 16.30

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	<5.01	5.01	mg/kg	07.26.19 04.05	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097393

Date Prep: 07.26.19 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	08.03.19 23.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.03.19 23.50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.03.19 23.50	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.03.19 23.50	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.03.19 23.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	08.03.19 23.50	
o-Terphenyl	84-15-1	80	%	70-135	08.03.19 23.50	



Certificate of Analytical Results 631904

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH04C**
Lab Sample Id: 631904-016

Matrix: Soil
Date Collected: 07.22.19 10.40

Date Received: 07.24.19 09.17
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096943

Date Prep: 07.26.19 17.11

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	<0.00199	0.00199	mg/kg	07.29.19 21.08	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.29.19 21.08	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.29.19 21.08	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.29.19 21.08	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.29.19 21.08	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.29.19 21.08	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.29.19 21.08	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	107	%	70-130	07.29.19 21.08		
1,4-Difluorobenzene	540-36-3	102	%	70-130	07.29.19 21.08		



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 JV CVX #017H

Analytical Method: Chloride by EPA 300

Seq Number: 3096555

MB Sample Id: 7682869-1-BLK

Matrix: Solid

LCS Sample Id: 7682869-1-BKS

Prep Method: E300P

Date Prep: 07.25.19

LCSD Sample Id: 7682869-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	244	98	243	97	90-110	0	20	mg/kg	07.26.19 01:02	

Analytical Method: Chloride by EPA 300

Seq Number: 3096555

Parent Sample Id: 631897-010

Matrix: Soil

MS Sample Id: 631897-010 S

Prep Method: E300P

Date Prep: 07.25.19

MSD Sample Id: 631897-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	359	250	603	98	604	98	90-110	0	20	mg/kg	07.26.19 01:20	

Analytical Method: Chloride by EPA 300

Seq Number: 3096555

Parent Sample Id: 631904-007

Matrix: Soil

MS Sample Id: 631904-007 S

Prep Method: E300P

Date Prep: 07.25.19

MSD Sample Id: 631904-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1.31	252	249	98	250	99	90-110	0	20	mg/kg	07.26.19 02:49	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3097392

MB Sample Id: 7683056-1-BLK

Matrix: Solid

LCS Sample Id: 7683056-1-BKS

Prep Method: TX1005P

Date Prep: 07.26.19

LCSD Sample Id: 7683056-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	1030	103	1050	105	70-135	2	20	mg/kg	08.03.19 10:25	
Diesel Range Organics (DRO)	<8.13	1000	1080	108	1170	117	70-135	8	20	mg/kg	08.03.19 10:25	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	91		94		96		70-135	%	08.03.19 10:25
o-Terphenyl	84		114		110		70-135	%	08.03.19 10:25

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

$[D] = 100 * (C-A) / B$
 $RPD = 200 * |(C-E) / (C+E)|$
 $[D] = 100 * (C) / [B]$
 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 JV CVX #017H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3097393

MB Sample Id: 7683062-1-BLK

Matrix: Solid

LCS Sample Id: 7683062-1-BKS

Prep Method: TX1005P

Date Prep: 07.26.19

LCSD Sample Id: 7683062-1-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	1100	110	1100	110	70-135	0	20	mg/kg	08.03.19 20:46	
Diesel Range Organics (DRO)	<8.13	1000	1150	115	1180	118	70-135	3	20	mg/kg	08.03.19 20:46	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date			
1-Chlorooctane	94		100		99		70-135	%	08.03.19 20:46			
o-Terphenyl	79		103		96		70-135	%	08.03.19 20:46			

Analytical Method: TPH by SW8015 Mod

Seq Number: 3097392

Parent Sample Id: 631892-012

Matrix: Soil

MS Sample Id: 631892-012 S

Prep Method: TX1005P

Date Prep: 07.26.19

MSD Sample Id: 631892-012 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	13.1	997	1130	112	1130	112	70-135	0	20	mg/kg	08.03.19 11:34	
Diesel Range Organics (DRO)	14.6	997	1150	114	1120	111	70-135	3	20	mg/kg	08.03.19 11:34	
Surrogate			MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date			
1-Chlorooctane			93		92		70-135	%	08.03.19 11:34			
o-Terphenyl			89		96		70-135	%	08.03.19 11:34			

Analytical Method: TPH by SW8015 Mod

Seq Number: 3097393

Parent Sample Id: 631892-008

Matrix: Soil

MS Sample Id: 631892-008 S

Prep Method: TX1005P

Date Prep: 07.26.19

MSD Sample Id: 631892-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	13.4	997	1050	104	1060	105	70-135	1	20	mg/kg	08.03.19 21:55	
Diesel Range Organics (DRO)	8.66	997	1150	114	1170	117	70-135	2	20	mg/kg	08.03.19 21:55	
Surrogate			MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date			
1-Chlorooctane			93		92		70-135	%	08.03.19 21:55			
o-Terphenyl			98		92		70-135	%	08.03.19 21:55			

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 JV CVX #017H

Analytical Method: BTEX by EPA 8021B

Seq Number: 3096944

MB Sample Id: 7682925-1-BLK

Matrix: Solid

LCS Sample Id: 7682925-1-BKS

Prep Method: SW5030B

Date Prep: 07.26.19

LCSD Sample Id: 7682925-1-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	0.0966	97	0.110	110	70-130	13	35	mg/kg	07.28.19 21:34	
Toluene	<0.00200	0.100	0.0968	97	0.109	109	70-130	12	35	mg/kg	07.28.19 21:34	
Ethylbenzene	<0.00200	0.100	0.113	113	0.126	126	70-130	11	35	mg/kg	07.28.19 21:34	
m,p-Xylenes	<0.00400	0.200	0.230	115	0.257	129	70-130	11	35	mg/kg	07.28.19 21:34	
o-Xylene	<0.00200	0.100	0.108	108	0.124	124	70-130	14	35	mg/kg	07.28.19 21:34	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		95		100		70-130	%	07.28.19 21:34
4-Bromofluorobenzene	100		105		119		70-130	%	07.28.19 21:34

Analytical Method: BTEX by EPA 8021B

Seq Number: 3096943

MB Sample Id: 7682927-1-BLK

Matrix: Solid

LCS Sample Id: 7682927-1-BKS

Prep Method: SW5030B

Date Prep: 07.26.19

LCSD Sample Id: 7682927-1-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	0.0966	97	0.112	112	70-130	15	35	mg/kg	07.29.19 16:39	
Toluene	<0.00200	0.100	0.0944	94	0.107	107	70-130	13	35	mg/kg	07.29.19 16:39	
Ethylbenzene	<0.00200	0.100	0.107	107	0.121	121	70-130	12	35	mg/kg	07.29.19 16:39	
m,p-Xylenes	<0.00400	0.200	0.213	107	0.246	123	70-130	14	35	mg/kg	07.29.19 16:39	
o-Xylene	<0.00200	0.100	0.103	103	0.122	122	70-130	17	35	mg/kg	07.29.19 16:39	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		99		105		70-130	%	07.29.19 16:39
4-Bromofluorobenzene	94		105		122		70-130	%	07.29.19 16:39

Analytical Method: BTEX by EPA 8021B

Seq Number: 3096944

Parent Sample Id: 631892-005

Matrix: Soil

MS Sample Id: 631892-005 S

Prep Method: SW5030B

Date Prep: 07.26.19

MSD Sample Id: 631892-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00198	0.0992	0.111	112	0.114	114	70-130	3	35	mg/kg	07.28.19 22:14	
Toluene	<0.00198	0.0992	0.107	108	0.112	112	70-130	5	35	mg/kg	07.28.19 22:14	
Ethylbenzene	<0.00198	0.0992	0.125	126	0.127	127	70-130	2	35	mg/kg	07.28.19 22:14	
m,p-Xylenes	<0.00397	0.198	0.255	129	0.260	129	70-130	2	35	mg/kg	07.28.19 22:14	
o-Xylene	<0.00198	0.0992	0.122	123	0.126	126	70-130	3	35	mg/kg	07.28.19 22:14	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		106		70-130	%	07.28.19 22:14
4-Bromofluorobenzene	127		122		70-130	%	07.28.19 22:14

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 JV CVX #017H

Analytical Method: BTEX by EPA 8021B

Seq Number: 3096943

Parent Sample Id: 631904-009

Matrix: Soil

MS Sample Id: 631904-009 S

Prep Method: SW5030B

Date Prep: 07.26.19

MSD Sample Id: 631904-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.105	105	0.0988	99	70-130	6	35	mg/kg	07.29.19 17:22	
Toluene	<0.00200	0.100	0.0969	97	0.0905	91	70-130	7	35	mg/kg	07.29.19 17:22	
Ethylbenzene	<0.00200	0.100	0.107	107	0.0997	100	70-130	7	35	mg/kg	07.29.19 17:22	
m,p-Xylenes	<0.00401	0.200	0.213	107	0.198	99	70-130	7	35	mg/kg	07.29.19 17:22	
o-Xylene	<0.00200	0.100	0.107	107	0.0985	99	70-130	8	35	mg/kg	07.29.19 17:22	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		104		70-130	%	07.29.19 17:22
4-Bromofluorobenzene	127		122		70-130	%	07.29.19 17:22

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: 431904

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 (480) 355-0900 Atlanta, GA (770) 448-8800 Tampa, FL (813) 020-2000 West Palm Beach, FL (561) 688-6701

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Project Manager:	<u>Don Meir</u>	Bill to: (if different)	<u>Eugene Little</u>
Company Name:	<u>CT Environmental, Inc.</u>	Company Name:	<u>XTD</u>
Address:	<u>3702 North 4 Street</u>	Address:	<u>7104 E Green Street</u>
City, State ZIP:	<u>Midland TX 79705</u>	City, State ZIP:	<u>Carlsbad NM 88220</u>
Phone:	<u>432.236.3849</u>	Email:	<u>Slo@Hans.com</u>

Program: UST/PST ☐ PRP ☐ Brownfield ☐ RRC ☐ Superfund ☐	
State of Project:	
Reporting Level: I ☐ Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐	Deliverables: EDD ☐ ADAPT ☐ Other: ☐

Project Name:	<u>PCV DUCTS AT SITES #017H</u>	Turn Around	☒
Project Number:	<u>280-3985</u>	Rush:	
Project Location:		Due Date:	
Sampler's Name:	<u>Spencer L</u>	Quote #:	
PO #:			

SAMPLE RECEIPT	Temp Blank:	☒ Yes ☐ No	Wet Ice:	☒ Yes ☐ No
Temperature (°C):	<u>1.1</u>	Thermometer ID:	<u>T-NM-07</u>	
Received Intact:	<u>Yes</u>	Correction Factor:	<u>-0.2</u>	
Cooler Custody Seals:	<u>Yes</u>	Total Containers:	<u>10</u>	
Sample Custody Seals:	<u>Yes</u>			

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	ANALYSIS REQUEST																Preservative Codes	Sample Comments
PH01		S	7/21/19	8:00	1'	1	TPH (EPA 812)																	
PH01A				8:10	2'		BTEX (EPA 801)																	
PH01B				8:20	3'		Chlorides (EPA 300)																	
PH01C				8:30	7'																			
PH01D				8:40	1'																			
PH01E				8:50	2'																			
PH01F				9:00	3'																			
PH01G				9:10	4'																			
PH01H				9:20	1'																			
PH01I				9:35	2'																			

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Toxics 11 Al Sb Ar Ba Be B Cd 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 \$5.00 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously dispensed.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<u>[Signature]</u>	<u>[Signature]</u>	7/24/19 9:17			



Chain of Custody

Work Order No: 631904

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 569-3334
 Midland, TX (432) 704-5440 EL Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296 Crystal, NM (432) 704-5440
 Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 440-8900 Tampa, FL (813) 620-2000 West Palm Beach, FL (561) 689-6701

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Page 2 of 2

Project Manager:	Don Nois	Bill to: (if different)	Kyle C. Howell
Company Name:	LT Environmental, Inc.	Company Name:	X72
Address:	3300 North A. Street	Address:	3104 E Green Street
City, State ZIP:	Midland TX 79705	City, State ZIP:	Crystal NM 88120
Phone:	432. 236. 3849	Email:	shel@ltenv.com

Project Name:	PCU JV CUX 4017H	Turn Around	
Project Number:	200-2985	Routine	☒
Project Location:		Rush:	
Sampler's Name:	Spence L	Due Date:	
PO #:		Quote #:	

SAMPLE RECEIPT	Temperature (°C):	Temp Blank:	☒ Yes ☒ No	Wet Ice:	☒ Yes ☒ No
	Received intact:			Thermometer ID	
	Cooler Custody Seals:	Yes ☒ No ☒		Correction Factor:	T-M-N-M-Q-2
	Sample Custody Seals:	Yes ☒ No ☒		Total Containers:	

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	ANALYSIS REQUEST	Preservative Codes
PH03B			7.21.15	950	3'	1	TPH (EPA 8012)	MeOH: Me
PA03C				1010	1'	1	BTX (EPA 8021)	None: NO
PH04				1010	1'	1	Chloride (EPA 300)	HNO3: HN
PH04A				1010	3'	1		H2SO4: H2
PH04B				1010	7'	1		HCL: HL
PH04C				1010	7'	1		NaOH: Na
								Zn Acetate+ NaOH: Zn
								TAT starts the day received by the lab. If received by 4:00pm
								Sample Comments

Total 200.7 / 6010 200.8 / 6020: BRCRA 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: BRCRA SP 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 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
		7/24/19 7:17			



Inter-Office Shipment

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IOS Number **44865**

Date/Time: 07/24/19 11:23

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.: 775826350686

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
631904-001	S	PH01	07/22/19 08:00	E300_CL	Chloride by EPA 300	07/30/19	01/18/20	JKR	CL	
631904-001	S	PH01	07/22/19 08:00	SW8021B	BTEX by EPA 8021B	07/30/19	08/05/19	JKR	BR4FBZ BZ BZME EBZ X	
631904-001	S	PH01	07/22/19 08:00	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/05/19	JKR	GRO-DRO PHCC10C28 PF	
631904-002	S	PH01A	07/22/19 08:10	SW8021B	BTEX by EPA 8021B	07/30/19	08/05/19	JKR	BR4FBZ BZ BZME EBZ X	
631904-002	S	PH01A	07/22/19 08:10	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/05/19	JKR	GRO-DRO PHCC10C28 PF	
631904-002	S	PH01A	07/22/19 08:10	E300_CL	Chloride by EPA 300	07/30/19	01/18/20	JKR	CL	
631904-003	S	PH01B	07/22/19 08:20	SW8021B	BTEX by EPA 8021B	07/30/19	08/05/19	JKR	BR4FBZ BZ BZME EBZ X	
631904-003	S	PH01B	07/22/19 08:20	E300_CL	Chloride by EPA 300	07/30/19	01/18/20	JKR	CL	
631904-003	S	PH01B	07/22/19 08:20	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/05/19	JKR	GRO-DRO PHCC10C28 PF	
631904-004	S	PH01C	07/22/19 08:30	SW8021B	BTEX by EPA 8021B	07/30/19	08/05/19	JKR	BR4FBZ BZ BZME EBZ X	
631904-004	S	PH01C	07/22/19 08:30	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/05/19	JKR	GRO-DRO PHCC10C28 PF	
631904-004	S	PH01C	07/22/19 08:30	E300_CL	Chloride by EPA 300	07/30/19	01/18/20	JKR	CL	
631904-005	S	PH02	07/22/19 08:40	E300_CL	Chloride by EPA 300	07/30/19	01/18/20	JKR	CL	
631904-005	S	PH02	07/22/19 08:40	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/05/19	JKR	GRO-DRO PHCC10C28 PF	
631904-005	S	PH02	07/22/19 08:40	SW8021B	BTEX by EPA 8021B	07/30/19	08/05/19	JKR	BR4FBZ BZ BZME EBZ X	
631904-006	S	PH02A	07/22/19 08:50	SW8021B	BTEX by EPA 8021B	07/30/19	08/05/19	JKR	BR4FBZ BZ BZME EBZ X	
631904-006	S	PH02A	07/22/19 08:50	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/05/19	JKR	GRO-DRO PHCC10C28 PF	
631904-006	S	PH02A	07/22/19 08:50	E300_CL	Chloride by EPA 300	07/30/19	01/18/20	JKR	CL	
631904-007	S	PH02B	07/22/19 09:00	SW8021B	BTEX by EPA 8021B	07/30/19	08/05/19	JKR	BR4FBZ BZ BZME EBZ X	
631904-007	S	PH02B	07/22/19 09:00	E300_CL	Chloride by EPA 300	07/30/19	01/18/20	JKR	CL	
631904-007	S	PH02B	07/22/19 09:00	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/05/19	JKR	GRO-DRO PHCC10C28 PF	
631904-008	S	PH02C	07/22/19 09:10	E300_CL	Chloride by EPA 300	07/30/19	01/18/20	JKR	CL	
631904-008	S	PH02C	07/22/19 09:10	SW8021B	BTEX by EPA 8021B	07/30/19	08/05/19	JKR	BR4FBZ BZ BZME EBZ X	
631904-008	S	PH02C	07/22/19 09:10	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/05/19	JKR	GRO-DRO PHCC10C28 PF	
631904-009	S	PH03	07/22/19 09:20	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/05/19	JKR	GRO-DRO PHCC10C28 PF	



Inter-Office Shipment

Page 2 of 3

IOS Number **44865**

Date/Time: 07/24/19 11:23

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.: 775826350686

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
631904-009	S	PH03	07/22/19 09:20	E300_CL	Chloride by EPA 300	07/30/19	01/18/20	JKR	CL	
631904-009	S	PH03	07/22/19 09:20	SW8021B	BTEX by EPA 8021B	07/30/19	08/05/19	JKR	BR4FBZ BZ BZME EBZ X	
631904-010	S	PH03A	07/22/19 09:35	E300_CL	Chloride by EPA 300	07/30/19	01/18/20	JKR	CL	
631904-010	S	PH03A	07/22/19 09:35	SW8021B	BTEX by EPA 8021B	07/30/19	08/05/19	JKR	BR4FBZ BZ BZME EBZ X	
631904-010	S	PH03A	07/22/19 09:35	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/05/19	JKR	GRO-DRO PHCC10C28 PF	
631904-011	S	PH03B	07/22/19 09:50	E300_CL	Chloride by EPA 300	07/30/19	01/18/20	JKR	CL	
631904-011	S	PH03B	07/22/19 09:50	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/05/19	JKR	GRO-DRO PHCC10C28 PF	
631904-011	S	PH03B	07/22/19 09:50	SW8021B	BTEX by EPA 8021B	07/30/19	08/05/19	JKR	BR4FBZ BZ BZME EBZ X	
631904-012	S	PH03C	07/22/19 10:00	SW8021B	BTEX by EPA 8021B	07/30/19	08/05/19	JKR	BR4FBZ BZ BZME EBZ X	
631904-012	S	PH03C	07/22/19 10:00	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/05/19	JKR	GRO-DRO PHCC10C28 PF	
631904-012	S	PH03C	07/22/19 10:00	E300_CL	Chloride by EPA 300	07/30/19	01/18/20	JKR	CL	
631904-013	S	PH04	07/22/19 10:10	SW8021B	BTEX by EPA 8021B	07/30/19	08/05/19	JKR	BR4FBZ BZ BZME EBZ X	
631904-013	S	PH04	07/22/19 10:10	E300_CL	Chloride by EPA 300	07/30/19	01/18/20	JKR	CL	
631904-013	S	PH04	07/22/19 10:10	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/05/19	JKR	GRO-DRO PHCC10C28 PF	
631904-014	S	PH04A	07/22/19 10:20	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/05/19	JKR	GRO-DRO PHCC10C28 PF	
631904-014	S	PH04A	07/22/19 10:20	SW8021B	BTEX by EPA 8021B	07/30/19	08/05/19	JKR	BR4FBZ BZ BZME EBZ X	
631904-014	S	PH04A	07/22/19 10:20	E300_CL	Chloride by EPA 300	07/30/19	01/18/20	JKR	CL	
631904-015	S	PH04B	07/22/19 10:30	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/05/19	JKR	GRO-DRO PHCC10C28 PF	
631904-015	S	PH04B	07/22/19 10:30	E300_CL	Chloride by EPA 300	07/30/19	01/18/20	JKR	CL	
631904-015	S	PH04B	07/22/19 10:30	SW8021B	BTEX by EPA 8021B	07/30/19	08/05/19	JKR	BR4FBZ BZ BZME EBZ X	
631904-016	S	PH04C	07/22/19 10:40	SW8021B	BTEX by EPA 8021B	07/30/19	08/05/19	JKR	BR4FBZ BZ BZME EBZ X	
631904-016	S	PH04C	07/22/19 10:40	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/05/19	JKR	GRO-DRO PHCC10C28 PF	
631904-016	S	PH04C	07/22/19 10:40	E300_CL	Chloride by EPA 300	07/30/19	01/18/20	JKR	CL	

Inter Office Shipment or Sample Comments:

Relinquished By:

Received By:

Released to Imaging: 7/1/2022 4:09:16 PM



Inter-Office Shipment

Page 3 of 3

IOS Number 44865

Date/Time: 07/24/19 11:23

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.: 775826350686

E-Mail: jessica.kramer@xenco.com

Inter Office Shipment or Sample Comments:

Date Relinquished:

A handwritten signature in black ink, appearing to read 'Elizabeth McClellan', written over a light gray rectangular background.

Elizabeth McClellan

07/24/2019

Date Received:

A handwritten signature in black ink, appearing to read 'Brianna Teel', written over a light gray rectangular background.

Cooler Temperature:

Brianna Teel

07/25/2019 11:31

0.4



XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 44865

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sent By: Elizabeth McClellan

Date Sent: 07/24/2019 11:23 AM

Received By: Brianna Teel

Date Received: 07/25/2019 11:31 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	.4
#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: 07/25/2019



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 07/24/2019 09:17:00 AM

Work Order #: 631904

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-07

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.6
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	No
#5 Custody Seals intact on sample bottles?	N/A
#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
#18 Water VOC samples have zero headspace?	N/A

Subbed to Xenco Midland.

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

Analyst:

PH Device/Lot#:

Checklist completed by:

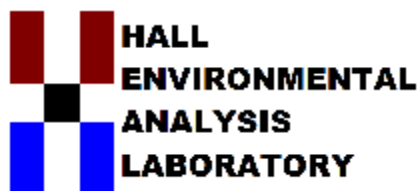
Elizabeth McClellan

Date: 07/24/2019

Checklist reviewed by:

Jessica Kramer

Date: 07/29/2019



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

April 04, 2018

Adrian Baker
XTO Midland
6401 Holiday Hill Rd #200
Midland, TX 79707
TEL: (432) 894-5641
FAX

RE: 2RP 3024 Delaware Soil Sampling

OrderNo.: 1803E03

Dear Adrian Baker:

Hall Environmental Analysis Laboratory received 5 sample(s) on 3/27/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 1803E03

Date Reported: 4/4/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: XTO Midland

Client Sample ID: SS01

Project: 2RP 3024 Delaware Soil Sampling

Collection Date: 3/20/2018 3:05:00 PM

Lab ID: 1803E03-001

Matrix: SOIL

Received Date: 3/27/2018 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	27	9.8		mg/Kg	1	3/29/2018 4:32:34 PM
Motor Oil Range Organics (MRO)	59	49		mg/Kg	1	3/29/2018 4:32:34 PM
Surr: DNOP	97.4	70-130		%Rec	1	3/29/2018 4:32:34 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/28/2018 5:18:29 PM
Surr: BFB	89.9	15-316		%Rec	1	3/28/2018 5:18:29 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	3/28/2018 5:18:29 PM
Toluene	ND	0.049		mg/Kg	1	3/28/2018 5:18:29 PM
Ethylbenzene	ND	0.049		mg/Kg	1	3/28/2018 5:18:29 PM
Xylenes, Total	ND	0.097		mg/Kg	1	3/28/2018 5:18:29 PM
Surr: 4-Bromofluorobenzene	85.7	80-120		%Rec	1	3/28/2018 5:18:29 PM
EPA METHOD 300.0: ANIONS						Analyst: CJS
Chloride	ND	30		mg/Kg	20	4/2/2018 8:45:13 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

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Analytical Report

Lab Order 1803E03

Date Reported: 4/4/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: XTO Midland

Client Sample ID: SS02

Project: 2RP 3024 Delaware Soil Sampling

Collection Date: 3/20/2018 3:07:00 PM

Lab ID: 1803E03-002

Matrix: SOIL

Received Date: 3/27/2018 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	3/29/2018 4:54:39 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	3/29/2018 4:54:39 PM
Surr: DNOP	100	70-130		%Rec	1	3/29/2018 4:54:39 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	3/28/2018 5:41:51 PM
Surr: BFB	92.6	15-316		%Rec	1	3/28/2018 5:41:51 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	3/28/2018 5:41:51 PM
Toluene	ND	0.047		mg/Kg	1	3/28/2018 5:41:51 PM
Ethylbenzene	ND	0.047		mg/Kg	1	3/28/2018 5:41:51 PM
Xylenes, Total	ND	0.094		mg/Kg	1	3/28/2018 5:41:51 PM
Surr: 4-Bromofluorobenzene	85.3	80-120		%Rec	1	3/28/2018 5:41:51 PM
EPA METHOD 300.0: ANIONS						Analyst: CJS
Chloride	ND	30		mg/Kg	20	4/2/2018 9:47:15 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

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Analytical Report

Lab Order 1803E03

Date Reported: 4/4/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: XTO Midland

Client Sample ID: SS03

Project: 2RP 3024 Delaware Soil Sampling

Collection Date: 3/20/2018 3:09:00 PM

Lab ID: 1803E03-003

Matrix: SOIL

Received Date: 3/27/2018 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	3/29/2018 5:16:37 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	3/29/2018 5:16:37 PM
Surr: DNOP	96.0	70-130		%Rec	1	3/29/2018 5:16:37 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	3/28/2018 6:05:13 PM
Surr: BFB	93.9	15-316		%Rec	1	3/28/2018 6:05:13 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	3/28/2018 6:05:13 PM
Toluene	ND	0.047		mg/Kg	1	3/28/2018 6:05:13 PM
Ethylbenzene	ND	0.047		mg/Kg	1	3/28/2018 6:05:13 PM
Xylenes, Total	ND	0.095		mg/Kg	1	3/28/2018 6:05:13 PM
Surr: 4-Bromofluorobenzene	86.7	80-120		%Rec	1	3/28/2018 6:05:13 PM
EPA METHOD 300.0: ANIONS						Analyst: CJS
Chloride	ND	30		mg/Kg	20	4/2/2018 9:59:40 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

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Analytical Report

Lab Order 1803E03

Date Reported: 4/4/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: XTO Midland

Client Sample ID: SS04

Project: 2RP 3024 Delaware Soil Sampling

Collection Date: 3/20/2018 3:11:00 PM

Lab ID: 1803E03-004

Matrix: SOIL

Received Date: 3/27/2018 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	3/29/2018 5:38:41 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	3/29/2018 5:38:41 PM
Surr: DNOP	90.4	70-130		%Rec	1	3/29/2018 5:38:41 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/28/2018 6:28:41 PM
Surr: BFB	95.0	15-316		%Rec	1	3/28/2018 6:28:41 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	3/28/2018 6:28:41 PM
Toluene	ND	0.048		mg/Kg	1	3/28/2018 6:28:41 PM
Ethylbenzene	ND	0.048		mg/Kg	1	3/28/2018 6:28:41 PM
Xylenes, Total	ND	0.095		mg/Kg	1	3/28/2018 6:28:41 PM
Surr: 4-Bromofluorobenzene	87.3	80-120		%Rec	1	3/28/2018 6:28:41 PM
EPA METHOD 300.0: ANIONS						Analyst: CJS
Chloride	ND	30		mg/Kg	20	4/2/2018 10:12:05 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

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Analytical Report

Lab Order 1803E03

Date Reported: 4/4/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: XTO Midland

Client Sample ID: SS05

Project: 2RP 3024 Delaware Soil Sampling

Collection Date: 3/20/2018 3:13:00 PM

Lab ID: 1803E03-005

Matrix: SOIL

Received Date: 3/27/2018 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	19	9.3		mg/Kg	1	3/29/2018 6:00:37 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	3/29/2018 6:00:37 PM
Surr: DNOP	97.1	70-130		%Rec	1	3/29/2018 6:00:37 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	3/28/2018 6:52:13 PM
Surr: BFB	90.6	15-316		%Rec	1	3/28/2018 6:52:13 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	3/28/2018 6:52:13 PM
Toluene	ND	0.047		mg/Kg	1	3/28/2018 6:52:13 PM
Ethylbenzene	ND	0.047		mg/Kg	1	3/28/2018 6:52:13 PM
Xylenes, Total	ND	0.094		mg/Kg	1	3/28/2018 6:52:13 PM
Surr: 4-Bromofluorobenzene	85.3	80-120		%Rec	1	3/28/2018 6:52:13 PM
EPA METHOD 300.0: ANIONS						Analyst: CJS
Chloride	ND	30		mg/Kg	20	4/2/2018 10:24:30 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Page 5 of 9

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1803E03
04-Apr-18

Client: XTO Midland
Project: 2RP 3024 Delaware Soil Sampling

Sample ID	MB-37382	SampType:	mblk	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	37382	RunNo:	50253					
Prep Date:	4/2/2018	Analysis Date:	4/2/2018	SeqNo:	1628264	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-37382	SampType:	lcs	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	37382	RunNo:	50253					
Prep Date:	4/2/2018	Analysis Date:	4/2/2018	SeqNo:	1628265	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.7	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

Page 6 of 9

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1803E03
04-Apr-18

Client: XTO Midland
Project: 2RP 3024 Delaware Soil Sampling

Sample ID	MB-37282	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	37282	RunNo:	50178					
Prep Date:	3/28/2018	Analysis Date:	3/29/2018	SeqNo:	1625706	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	10		10.00		104	70	130			

Sample ID	LCS-37282	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	37282	RunNo:	50178					
Prep Date:	3/28/2018	Analysis Date:	3/29/2018	SeqNo:	1625708	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	10	50.00	0	102	70	130			
Surr: DNOP	4.5		5.000		90.0	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL Practical Quantitative Limit	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Page 7 of 9

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1803E03

04-Apr-18

Client: XTO Midland**Project:** 2RP 3024 Delaware Soil Sampling

Sample ID MB-37267	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 37267		RunNo: 50162							
Prep Date: 3/27/2018	Analysis Date: 3/28/2018		SeqNo: 1624553		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	930		1000		92.6	15	316			

Sample ID LCS-37267	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 37267		RunNo: 50162							
Prep Date: 3/27/2018	Analysis Date: 3/28/2018		SeqNo: 1624554		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.0	25.00	0	113	75.9	131			
Surr: BFB	1000		1000		105	15	316			

Sample ID RB	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: G50163		RunNo: 50163							
Prep Date:	Analysis Date: 3/28/2018		SeqNo: 1624630		Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	910		1000		90.8	15	316			

Sample ID 2.5UG GRO LCS	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: G50163		RunNo: 50163							
Prep Date:	Analysis Date: 3/28/2018		SeqNo: 1624631		Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1100		1000		107	15	316			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1803E03

04-Apr-18

Client: XTO Midland**Project:** 2RP 3024 Delaware Soil Sampling

Sample ID MB-37267	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: 37267		RunNo: 50162							
Prep Date: 3/27/2018	Analysis Date: 3/28/2018		SeqNo: 1624591		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.86		1.000		86.4	80	120			

Sample ID LCS-37267	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: 37267		RunNo: 50162							
Prep Date: 3/27/2018	Analysis Date: 3/28/2018		SeqNo: 1624592		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.025	1.000	0	97.2	77.3	128			
Toluene	0.98	0.050	1.000	0	98.4	79.2	125			
Ethylbenzene	0.98	0.050	1.000	0	97.6	80.7	127			
Xylenes, Total	3.0	0.10	3.000	0	101	81.6	129			
Surr: 4-Bromofluorobenzene	0.90		1.000		90.5	80	120			

Sample ID 1803E03-001AMS	SampType: MS		TestCode: EPA Method 8021B: Volatiles							
Client ID: SS01	Batch ID: 37267		RunNo: 50162							
Prep Date: 3/27/2018	Analysis Date: 3/28/2018		SeqNo: 1624594		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.024	0.9718	0	99.3	68.5	133			
Toluene	0.99	0.049	0.9718	0	101	75	130			
Ethylbenzene	0.98	0.049	0.9718	0	101	79.4	128			
Xylenes, Total	3.0	0.097	2.915	0	103	77.3	131			
Surr: 4-Bromofluorobenzene	0.84		0.9718		86.6	80	120			

Sample ID 1803E03-001AMSD	SampType: MSD		TestCode: EPA Method 8021B: Volatiles							
Client ID: SS01	Batch ID: 37267		RunNo: 50162							
Prep Date: 3/27/2018	Analysis Date: 3/28/2018		SeqNo: 1624595		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.024	0.9524	0	102	68.5	133	0.624	20	
Toluene	0.98	0.048	0.9524	0	103	75	130	0.358	20	
Ethylbenzene	0.98	0.048	0.9524	0	103	79.4	128	0.00774	20	
Xylenes, Total	3.0	0.095	2.857	0	106	77.3	131	0.663	20	
Surr: 4-Bromofluorobenzene	0.83		0.9524		87.0	80	120	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

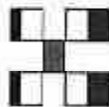
J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

Page 9 of 9



**HALL ENVIRONMENTAL
ANALYSIS LABORATORY**

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel 505-345-3975 Fax 505-345-4107

Analysis Request

VIRIDIAN ENVIRONMENTAL	Client: XTO Energy, Delaware division					
	Mailing Address: Kyle Litterll 3500 N. A. Street Suite 103 Midland, Texas 79705					
	Phone #: 433-704-5178					
	Email or Fax#: abaker@viridien.com					
	DVQC Package:					
	☐ Standard ☒ Level 4 (Full Validation)					
	Accreditation:					
	☐ NELAP ☐ Other _____					
	☐ EDD (Type) _____					
Date	Time	Matrix	Sample Request ID	Container Type and #	Perservative Type	HEAL No.
3/20/2018	1505	SOIL	SS01	(1) 4oz.	cool	1803EDB-001
3/20/2018	1507	SOIL	SS02	(1) 4oz.	cool	DOZ
3/20/2018	1509	SOIL	SS03	(1) 4oz.	cool	DOZ
3/20/2018	1511	SOIL	SS04	(1) 4oz.	cool	DOH
3/20/2018	1513	SOIL	SS05	(1) 4oz.	cool	AVS
3/23/2018	Time: <i>0730</i>	Relinquished by: <i>[Signature]</i>	Received by: <i>[Signature]</i> Date Time <i>3/23/18 0730</i>			
Date: <i>3/26/18</i>	Time: <i>1900</i>	Relinquished by: <i>[Signature]</i>	Received by: Collector Date Time <i>[Signature] 3/27/18 0930</i>			

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories as notice of this.

If necessary, samples submitted to 'Hill Environmental' may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any subcontracted data will be clearly related on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-1975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: XTO MIDLAND

Work Order Number: 1803E03

RcptNo: 1

Received By: Mandy Woods

3/27/2018 9:30:00 AM

Completed By: Michelle Garcia

3/27/2018 10:34:50 AM

Reviewed By:

MWS
3/27/18

[Signature]
Michelle Garcia

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐
of preserved bottles checked for pH: Adjusted?
(<2 or >12 unless noted)
Checked by: _____

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp. °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.3	Good	Yes			

Analytical Report 591480

for
LT Environmental, Inc.

Project Manager: Adrian Baker

PLU JU CVX Big Springs #017H/012918091

012918091

31-JAN-20

Collected By: Client



1211 W. Florida Ave
Midland TX 79701

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)



31-JAN-20

Project Manager: **Adrian Baker**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **591480**

PLU JU CVX Big Springs #017H/012918091

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) 591480. 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. 591480 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 591480****LT Environmental, Inc., Arvada, CO**

PLU JU CVX Big Springs #017H/012918091

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	07-03-18 09:45	1 ft	591480-001
SS06	S	07-03-18 10:00	6 In	591480-002
SS07	S	07-03-18 10:05	6 In	591480-003
SS08	S	07-03-18 10:10	6 In	591480-004
SS09	S	07-03-18 12:00	6 In	591480-005
SS10	S	07-03-18 12:05	6 In	591480-006
SS11	S	07-03-18 12:10	6 In	591480-007
SS12	S	07-03-18 12:15	6 In	591480-008
SS13	S	07-03-18 12:20	6 In	591480-009
SS14	S	07-03-18 12:25	6 In	591480-010
SS15	S	07-03-18 12:30	6 In	591480-011
SS16	S	07-03-18 12:35	6 In	591480-012
SS17	S	07-03-18 12:40	6 In	591480-013



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU JU CVX Big Springs #017H/012918091

Project ID: 012918091
Work Order Number(s): 591480

Report Date: 31-JAN-20
Date Received: 07/09/2018

Sample receipt non conformance and comments:

V1.001 - Corrected sample 001 name from SS2-2A to FS01, per Aimee Cole (email) JK 01/31/20

Sample receipt non conformance and comments per sample:

None

Analytical non conformance and comments:

Batch: LBA-3056049 BTEX by EPA 8021B

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

Batch: LBA-3056210 BTEX by EPA 8021B

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



Certificate of Analysis Summary 591480

LT Environmental, Inc., Arvada, CO

Project Name: PLU JU CVX Big Springs #017H/012918091

Project Id: 012918091
Contact: Adrian Baker
Project Location: NM

Date Received in Lab: Mon Jul-09-18 08:18 am
Report Date: 31-JAN-20
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	591480-001	591480-002	591480-003	591480-004	591480-005	591480-006
	<i>Field Id:</i>	FS01	SS06	SS07	SS08	SS09	SS10
	<i>Depth:</i>	1- ft	6- In	6- In	6- In	6- In	6- In
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jul-03-18 09:45	Jul-03-18 10:00	Jul-03-18 10:05	Jul-03-18 10:10	Jul-03-18 12:00	Jul-03-18 12:05
BTEX by EPA 8021B	<i>Extracted:</i>	Jul-10-18 08:00	Jul-10-18 08:00	Jul-10-18 08:00	Jul-10-18 08:00	Jul-10-18 08:00	Jul-10-18 08:00
	<i>Analyzed:</i>	Jul-10-18 17:10	Jul-10-18 17:28	Jul-10-18 17:47	Jul-10-18 20:12	Jul-10-18 20:30	Jul-10-18 20:48
	<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	<0.00202 0.00202
Toluene		<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202
Ethylbenzene		<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202
m,p-Xylenes		<0.00398 0.00398	<0.00401 0.00401	<0.00402 0.00402	<0.00398 0.00398	<0.00399 0.00399	<0.00403 0.00403
o-Xylene		<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202
Total Xylenes		<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202
Total BTEX		<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202
Inorganic Anions by EPA 300	<i>Extracted:</i>	Jul-11-18 16:30	Jul-11-18 16:30	Jul-11-18 16:30	Jul-11-18 16:30	Jul-11-18 16:30	Jul-11-18 16:30
	<i>Analyzed:</i>	Jul-11-18 18:18	Jul-11-18 18:34	Jul-11-18 18:40	Jul-11-18 18:45	Jul-11-18 18:50	Jul-11-18 19:07
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		177 4.97	35.2 5.00	29.1 4.94	32.3 4.98	<4.98 4.98	<4.90 4.90
TPH by SW8015 Mod	<i>Extracted:</i>	Jul-10-18 07:00	Jul-10-18 07:00	Jul-10-18 07:00	Jul-10-18 07:00	Jul-10-18 07:00	Jul-10-18 07:00
	<i>Analyzed:</i>	Jul-10-18 11:42	Jul-10-18 12:41	Jul-10-18 13:01	Jul-10-18 13:21	Jul-10-18 13:41	Jul-11-18 07:10
	<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	<14.9 14.9	<15.0 15.0
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0
Oil Range Hydrocarbons (ORO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0
Total TPH		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 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

Version: 1.9%

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 591480

LT Environmental, Inc., Arvada, CO

Project Name: PLU JU CVX Big Springs #017H/012918091

Project Id: 012918091
Contact: Adrian Baker
Project Location: NM

Date Received in Lab: Mon Jul-09-18 08:18 am
Report Date: 31-JAN-20
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	591480-007	591480-008	591480-009	591480-010	591480-011	591480-012
	<i>Field Id:</i>	SS11	SS12	SS13	SS14	SS15	SS16
	<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>	Jul-03-18 12:10	Jul-03-18 12:15	Jul-03-18 12:20	Jul-03-18 12:25	Jul-03-18 12:30	Jul-03-18 12:35
BTEX by EPA 8021B	<i>Extracted:</i>	Jul-10-18 08:00	Jul-10-18 08:00	Jul-10-18 08:00	Jul-10-18 08:00	Jul-10-18 08:00	Jul-11-18 10:00
	<i>Analyzed:</i>	Jul-10-18 21:06	Jul-10-18 21:24	Jul-10-18 21:42	Jul-10-18 22:00	Jul-10-18 22:18	Jul-11-18 11:16
	<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	<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201	<0.00199 0.00199
Toluene		<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201	<0.00199 0.00199
Ethylbenzene		<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201	<0.00199 0.00199
m,p-Xylenes		<0.00398 0.00398	<0.00399 0.00399	<0.00398 0.00398	<0.00402 0.00402	<0.00402 0.00402	<0.00398 0.00398
o-Xylene		<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201	<0.00199 0.00199
Total Xylenes		<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201	<0.00199 0.00199
Total BTEX		<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201	<0.00199 0.00199
Inorganic Anions by EPA 300	<i>Extracted:</i>	Jul-11-18 16:30	Jul-11-18 16:30	Jul-11-18 16:30	Jul-11-18 16:30	Jul-11-18 16:30	Jul-11-18 17:15
	<i>Analyzed:</i>	Jul-11-18 19:12	Jul-11-18 19:18	Jul-11-18 19:23	Jul-11-18 19:28	Jul-11-18 19:34	Jul-11-18 21:16
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		<4.94 4.94	<4.97 4.97	<4.97 4.97	<4.99 4.99	<4.96 4.96	<4.93 4.93
TPH by SW8015 Mod	<i>Extracted:</i>	Jul-10-18 07:00	Jul-10-18 07:00	Jul-10-18 07:00	Jul-10-18 07:00	Jul-10-18 07:00	Jul-10-18 07:00
	<i>Analyzed:</i>	Jul-10-18 14:21	Jul-10-18 14:40	Jul-10-18 15:00	Jul-10-18 15:20	Jul-10-18 16:21	Jul-10-18 16:41
	<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
Oil Range Hydrocarbons (ORO)		<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

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Jessica Kramer
Project Assistant



Certificate of Analysis Summary 591480

LT Environmental, Inc., Arvada, CO

Project Name: PLU JU CVX Big Springs #017H/012918091

Project Id: 012918091
Contact: Adrian Baker
Project Location: NM

Date Received in Lab: Mon Jul-09-18 08:18 am
Report Date: 31-JAN-20
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	591480-013					
	Field Id:	SS17					
	Depth:	6- In					
	Matrix:	SOIL					
	Sampled:	Jul-03-18 12:40					
BTEX by EPA 8021B	Extracted:	Jul-10-18 08:00					
	Analyzed:	Jul-10-18 16:15					
	Units/RL:	mg/kg RL					
	Benzene	<0.00201 0.00201					
	Toluene	0.00314 0.00201					
Ethylbenzene		<0.00201 0.00201					
m,p-Xylenes		<0.00402 0.00402					
o-Xylene		<0.00201 0.00201					
Total Xylenes		<0.00201 0.00201					
Total BTEX		0.00314 0.00201					
Inorganic Anions by EPA 300	Extracted:	Jul-11-18 17:15					
	Analyzed:	Jul-11-18 22:32					
	Units/RL:	mg/kg RL					
	Chloride	<4.98 4.98					
TPH by SW8015 Mod	Extracted:	Jul-10-18 07:00					
	Analyzed:	Jul-10-18 17:01					
	Units/RL:	mg/kg RL					
	Gasoline Range Hydrocarbons (GRO)	<15.0 15.0					
	Diesel Range Organics (DRO)	<15.0 15.0					
Oil Range Hydrocarbons (ORO)		<15.0 15.0					
Total TPH		<15.0 15.0					

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: 1.0%

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analytical Results 591480



LT Environmental, Inc., Arvada, CO

PLU JU CVX Big Springs #017H/012918091

Sample Id: **FS01** Matrix: Soil Date Received: 07.09.18 08.18
 Lab Sample Id: 591480-001 Date Collected: 07.03.18 09.45 Sample Depth: 1 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.11.18 16.30 Basis: Wet Weight
 Seq Number: 3056229

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	177	4.97	mg/kg	07.11.18 18.18		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.10.18 07.00 Basis: Wet Weight
 Seq Number: 3056087

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.10.18 11.42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.10.18 11.42	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.10.18 11.42	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.10.18 11.42	U	1

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
 Tech: ALJ % Moisture:
 Analyst: ALJ Date Prep: 07.10.18 08.00 Basis: Wet Weight
 Seq Number: 3056049

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.10.18 17.10	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.10.18 17.10	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.10.18 17.10	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.10.18 17.10	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.10.18 17.10	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.10.18 17.10	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.10.18 17.10	U	1



Certificate of Analytical Results 591480



LT Environmental, Inc., Arvada, CO

PLU JU CVX Big Springs #017H/012918091

Sample Id: **SS06** Matrix: Soil Date Received: 07.09.18 08.18
 Lab Sample Id: 591480-002 Date Collected: 07.03.18 10.00 Sample Depth: 6 In
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.11.18 16.30 Basis: Wet Weight
 Seq Number: 3056229

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	35.2	5.00	mg/kg	07.11.18 18.34		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.10.18 07.00 Basis: Wet Weight
 Seq Number: 3056087

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.10.18 12.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.10.18 12.41	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.10.18 12.41	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.10.18 12.41	U	1

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
 Tech: ALJ % Moisture:
 Analyst: ALJ Date Prep: 07.10.18 08.00 Basis: Wet Weight
 Seq Number: 3056049

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.10.18 17.28	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.10.18 17.28	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.10.18 17.28	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.10.18 17.28	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.10.18 17.28	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.10.18 17.28	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.10.18 17.28	U	1



Certificate of Analytical Results 591480



LT Environmental, Inc., Arvada, CO

PLU JU CVX Big Springs #017H/012918091

Sample Id: **SS07** Matrix: Soil Date Received: 07.09.18 08.18
 Lab Sample Id: 591480-003 Date Collected: 07.03.18 10.05 Sample Depth: 6 In
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.11.18 16.30 Basis: Wet Weight
 Seq Number: 3056229

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	29.1	4.94	mg/kg	07.11.18 18.40		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.10.18 07.00 Basis: Wet Weight
 Seq Number: 3056087

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.10.18 13.01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.10.18 13.01	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.10.18 13.01	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.10.18 13.01	U	1

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
 Tech: ALJ % Moisture:
 Analyst: ALJ Date Prep: 07.10.18 08.00 Basis: Wet Weight
 Seq Number: 3056049

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.10.18 17.47	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.10.18 17.47	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.10.18 17.47	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.10.18 17.47	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.10.18 17.47	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.10.18 17.47	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.10.18 17.47	U	1



Certificate of Analytical Results 591480



LT Environmental, Inc., Arvada, CO

PLU JU CVX Big Springs #017H/012918091

Sample Id: **SS08** Matrix: Soil Date Received: 07.09.18 08.18
 Lab Sample Id: 591480-004 Date Collected: 07.03.18 10.10 Sample Depth: 6 In
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.11.18 16.30 Basis: Wet Weight
 Seq Number: 3056229

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	32.3	4.98	mg/kg	07.11.18 18.45		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.10.18 07.00 Basis: Wet Weight
 Seq Number: 3056087

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.10.18 13.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.10.18 13.21	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.10.18 13.21	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.10.18 13.21	U	1

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
 Tech: ALJ % Moisture:
 Analyst: ALJ Date Prep: 07.10.18 08.00 Basis: Wet Weight
 Seq Number: 3056049

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.10.18 20.12	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.10.18 20.12	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.10.18 20.12	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.10.18 20.12	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.10.18 20.12	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.10.18 20.12	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.10.18 20.12	U	1



Certificate of Analytical Results 591480



LT Environmental, Inc., Arvada, CO

PLU JU CVX Big Springs #017H/012918091

Sample Id: **SS09** Matrix: Soil Date Received: 07.09.18 08.18
 Lab Sample Id: 591480-005 Date Collected: 07.03.18 12.00 Sample Depth: 6 In
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.11.18 16.30 Basis: Wet Weight
 Seq Number: 3056229

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.98	4.98	mg/kg	07.11.18 18.50	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.10.18 07.00 Basis: Wet Weight
 Seq Number: 3056087

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	07.10.18 13.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	07.10.18 13.41	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	07.10.18 13.41	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	07.10.18 13.41	U	1

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
 Tech: ALJ % Moisture:
 Analyst: ALJ Date Prep: 07.10.18 08.00 Basis: Wet Weight
 Seq Number: 3056049

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.10.18 20.30	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.10.18 20.30	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.10.18 20.30	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.10.18 20.30	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.10.18 20.30	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.10.18 20.30	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.10.18 20.30	U	1



Certificate of Analytical Results 591480



LT Environmental, Inc., Arvada, CO

PLU JU CVX Big Springs #017H/012918091

Sample Id: **SS10** Matrix: Soil Date Received: 07.09.18 08.18
 Lab Sample Id: 591480-006 Date Collected: 07.03.18 12.05 Sample Depth: 6 In
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.11.18 16.30 Basis: Wet Weight
 Seq Number: 3056229

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.90	4.90	mg/kg	07.11.18 19.07	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.10.18 07.00 Basis: Wet Weight
 Seq Number: 3056087

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.11.18 07.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.11.18 07.10	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.11.18 07.10	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.11.18 07.10	U	1

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
 Tech: ALJ % Moisture:
 Analyst: ALJ Date Prep: 07.10.18 08.00 Basis: Wet Weight
 Seq Number: 3056049

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.10.18 20.48	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.10.18 20.48	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.10.18 20.48	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	07.10.18 20.48	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.10.18 20.48	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.10.18 20.48	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.10.18 20.48	U	1



Certificate of Analytical Results 591480



LT Environmental, Inc., Arvada, CO

PLU JU CVX Big Springs #017H/012918091

Sample Id: **SS11** Matrix: Soil Date Received: 07.09.18 08.18
 Lab Sample Id: 591480-007 Date Collected: 07.03.18 12.10 Sample Depth: 6 In
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.11.18 16.30 Basis: Wet Weight
 Seq Number: 3056229

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.94	4.94	mg/kg	07.11.18 19.12	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.10.18 07.00 Basis: Wet Weight
 Seq Number: 3056087

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.10.18 14.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.10.18 14.21	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.10.18 14.21	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.10.18 14.21	U	1

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
 Tech: ALJ % Moisture:
 Analyst: ALJ Date Prep: 07.10.18 08.00 Basis: Wet Weight
 Seq Number: 3056049

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.10.18 21.06	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.10.18 21.06	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.10.18 21.06	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.10.18 21.06	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.10.18 21.06	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.10.18 21.06	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.10.18 21.06	U	1



Certificate of Analytical Results 591480



LT Environmental, Inc., Arvada, CO

PLU JU CVX Big Springs #017H/012918091

Sample Id: **SS12** Matrix: Soil Date Received: 07.09.18 08.18
 Lab Sample Id: 591480-008 Date Collected: 07.03.18 12.15 Sample Depth: 6 In
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.11.18 16.30 Basis: Wet Weight
 Seq Number: 3056229

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.97	4.97	mg/kg	07.11.18 19.18	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.10.18 07.00 Basis: Wet Weight
 Seq Number: 3056087

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.10.18 14.40	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.10.18 14.40	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.10.18 14.40	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.10.18 14.40	U	1

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
 Tech: ALJ % Moisture:
 Analyst: ALJ Date Prep: 07.10.18 08.00 Basis: Wet Weight
 Seq Number: 3056049

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.10.18 21.24	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.10.18 21.24	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.10.18 21.24	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.10.18 21.24	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.10.18 21.24	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.10.18 21.24	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.10.18 21.24	U	1



Certificate of Analytical Results 591480



LT Environmental, Inc., Arvada, CO

PLU JU CVX Big Springs #017H/012918091

Sample Id: **SS13** Matrix: Soil Date Received: 07.09.18 08.18
 Lab Sample Id: 591480-009 Date Collected: 07.03.18 12.20 Sample Depth: 6 In
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.11.18 16.30 Basis: Wet Weight
 Seq Number: 3056229

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.97	4.97	mg/kg	07.11.18 19.23	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.10.18 07.00 Basis: Wet Weight
 Seq Number: 3056087

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.10.18 15.00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.10.18 15.00	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.10.18 15.00	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.10.18 15.00	U	1

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
 Tech: ALJ % Moisture:
 Analyst: ALJ Date Prep: 07.10.18 08.00 Basis: Wet Weight
 Seq Number: 3056049

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.10.18 21.42	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.10.18 21.42	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.10.18 21.42	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.10.18 21.42	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.10.18 21.42	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.10.18 21.42	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.10.18 21.42	U	1



Certificate of Analytical Results 591480



LT Environmental, Inc., Arvada, CO

PLU JU CVX Big Springs #017H/012918091

Sample Id: **SS14** Matrix: Soil Date Received: 07.09.18 08.18
 Lab Sample Id: 591480-010 Date Collected: 07.03.18 12.25 Sample Depth: 6 In
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.11.18 16.30 Basis: Wet Weight
 Seq Number: 3056229

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	07.11.18 19.28	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.10.18 07.00 Basis: Wet Weight
 Seq Number: 3056087

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.10.18 15.20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.10.18 15.20	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.10.18 15.20	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.10.18 15.20	U	1

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
 Tech: ALJ % Moisture:
 Analyst: ALJ Date Prep: 07.10.18 08.00 Basis: Wet Weight
 Seq Number: 3056049

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.10.18 22.00	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.10.18 22.00	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.10.18 22.00	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.10.18 22.00	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.10.18 22.00	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.10.18 22.00	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.10.18 22.00	U	1



Certificate of Analytical Results 591480



LT Environmental, Inc., Arvada, CO

PLU JU CVX Big Springs #017H/012918091

Sample Id: **SS15**
Lab Sample Id: 591480-011

Matrix: Soil
Date Collected: 07.03.18 12.30

Date Received: 07.09.18 08.18
Sample Depth: 6 In

Analytical Method: Inorganic Anions by EPA 300
Tech: SCM
Analyst: SCM
Seq Number: 3056229

Date Prep: 07.11.18 16.30

Prep Method: E300P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	07.11.18 19.34	U	1

Analytical Method: TPH by SW8015 Mod
Tech: ARM
Analyst: ARM
Seq Number: 3056087

Date Prep: 07.10.18 07.00

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	07.10.18 16.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.10.18 16.21	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.10.18 16.21	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.10.18 16.21	U	1

Analytical Method: BTEX by EPA 8021B
Tech: ALJ
Analyst: ALJ
Seq Number: 3056049

Date Prep: 07.10.18 08.00

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	07.10.18 22.18	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.10.18 22.18	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.10.18 22.18	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.10.18 22.18	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.10.18 22.18	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.10.18 22.18	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.10.18 22.18	U	1



Certificate of Analytical Results 591480



LT Environmental, Inc., Arvada, CO

PLU JU CVX Big Springs #017H/012918091

Sample Id: **SS16** Matrix: Soil Date Received: 07.09.18 08.18
 Lab Sample Id: 591480-012 Date Collected: 07.03.18 12.35 Sample Depth: 6 In
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.11.18 17.15 Basis: Wet Weight
 Seq Number: 3056230

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.93	4.93	mg/kg	07.11.18 21.16	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.10.18 07.00 Basis: Wet Weight
 Seq Number: 3056087

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.10.18 16.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.10.18 16.41	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.10.18 16.41	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.10.18 16.41	U	1

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
 Tech: ALJ % Moisture:
 Analyst: ALJ Date Prep: 07.11.18 10.00 Basis: Wet Weight
 Seq Number: 3056210

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.11.18 11.16	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.11.18 11.16	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.11.18 11.16	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.11.18 11.16	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.11.18 11.16	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.11.18 11.16	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.11.18 11.16	U	1



Certificate of Analytical Results 591480



LT Environmental, Inc., Arvada, CO

PLU JU CVX Big Springs #017H/012918091

Sample Id: **SS17** Matrix: Soil Date Received: 07.09.18 08.18
 Lab Sample Id: 591480-013 Date Collected: 07.03.18 12.40 Sample Depth: 6 In
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.11.18 17.15 Basis: Wet Weight
 Seq Number: 3056230

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.98	4.98	mg/kg	07.11.18 22.32	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.10.18 07.00 Basis: Wet Weight
 Seq Number: 3056087

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.10.18 17.01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.10.18 17.01	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.10.18 17.01	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.10.18 17.01	U	1

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
 Tech: ALJ % Moisture:
 Analyst: ALJ Date Prep: 07.10.18 08.00 Basis: Wet Weight
 Seq Number: 3056049

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.10.18 16.15	U	1
Toluene	108-88-3	0.00314	0.00201	mg/kg	07.10.18 16.15		1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.10.18 16.15	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.10.18 16.15	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.10.18 16.15	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.10.18 16.15	U	1
Total BTEX		0.00314	0.00201	mg/kg	07.10.18 16.15		1



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 JU CVX Big Springs #017H/012918091

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3056229

Matrix: Solid

Prep Method: E300P

MB Sample Id: 7658213-1-BLK

LCS Sample Id: 7658213-1-BKS

Date Prep: 07.11.18

LCSD Sample Id: 7658213-1-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	265	106	90-110	0	20	mg/kg	07.11.18 18:07	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3056230

Matrix: Solid

Prep Method: E300P

MB Sample Id: 7658215-1-BLK

LCS Sample Id: 7658215-1-BKS

Date Prep: 07.11.18

LCSD Sample Id: 7658215-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.99	250	247	99	253	101	90-110	2	20	mg/kg	07.11.18 21:06	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3056229

Matrix: Soil

Prep Method: E300P

Parent Sample Id: 591480-001

MS Sample Id: 591480-001 S

Date Prep: 07.11.18

MSD Sample Id: 591480-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	177	249	417	96	415	96	90-110	0	20	mg/kg	07.11.18 18:24	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3056229

Matrix: Soil

Prep Method: E300P

Parent Sample Id: 591480-011

MS Sample Id: 591480-011 S

Date Prep: 07.11.18

MSD Sample Id: 591480-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.96	248	247	100	252	102	90-110	2	20	mg/kg	07.11.18 19:39	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3056230

Matrix: Soil

Prep Method: E300P

Parent Sample Id: 591480-012

MS Sample Id: 591480-012 S

Date Prep: 07.11.18

MSD Sample Id: 591480-012 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.93	247	251	102	250	101	90-110	0	20	mg/kg	07.11.18 21:22	

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



LT Environmental, Inc.
PLU JU CVX Big Springs #017H/012918091

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3056230

Matrix: Soil

Prep Method: E300P

Parent Sample Id: 591480-013

MS Sample Id: 591480-013 S

Date Prep: 07.11.18

MSD Sample Id: 591480-013 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.98	249	244	98	248	100	90-110	2	20	mg/kg	07.11.18 22:37	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3056087

Matrix: Solid

Prep Method: TX1005P

MB Sample Id: 7658178-1-BLK

LCS Sample Id: 7658178-1-BKS

Date Prep: 07.10.18

LCSD Sample Id: 7658178-1-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	996	100	977	98	70-135	2	20	mg/kg	07.10.18 11:03	
Diesel Range Organics (DRO)	<15.0	1000	1030	103	1020	102	70-135	1	20	mg/kg	07.10.18 11:03	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3056087

Matrix: Soil

Prep Method: TX1005P

Parent Sample Id: 591480-001

MS Sample Id: 591480-001 S

Date Prep: 07.10.18

MSD Sample Id: 591480-001 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	940	94	1080	108	70-135	14	20	mg/kg	07.10.18 12:02	
Diesel Range Organics (DRO)	<15.0	997	972	97	1070	107	70-135	10	20	mg/kg	07.10.18 12:02	

Analytical Method: BTEX by EPA 8021B

Seq Number: 3056049

Matrix: Solid

Prep Method: SW5030B

MB Sample Id: 7658168-1-BLK

LCS Sample Id: 7658168-1-BKS

Date Prep: 07.10.18

LCSD Sample Id: 7658168-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.0926	93	0.0950	94	70-130	3	35	mg/kg	07.10.18 14:28	
Toluene	<0.00201	0.100	0.0956	96	0.0972	96	70-130	2	35	mg/kg	07.10.18 14:28	
Ethylbenzene	<0.00201	0.100	0.0852	85	0.0945	94	70-130	10	35	mg/kg	07.10.18 14:28	
m,p-Xylenes	<0.00402	0.201	0.182	91	0.196	97	70-130	7	35	mg/kg	07.10.18 14:28	
o-Xylene	<0.00201	0.100	0.0833	83	0.0874	87	70-130	5	35	mg/kg	07.10.18 14:28	

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 JU CVX Big Springs #017H/012918091

Analytical Method: BTEX by EPA 8021B

Seq Number: 3056210

MB Sample Id: 7658214-1-BLK

Matrix: Solid

LCS Sample Id: 7658214-1-BKS

Prep Method: SW5030B

Date Prep: 07.11.18

LCSD Sample Id: 7658214-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.105	105	0.0999	99	70-130	5	35	mg/kg	07.11.18 09:10	
Toluene	<0.00200	0.0998	0.113	113	0.103	102	70-130	9	35	mg/kg	07.11.18 09:10	
Ethylbenzene	<0.00200	0.0998	0.109	109	0.102	101	70-130	7	35	mg/kg	07.11.18 09:10	
m,p-Xylenes	<0.00399	0.200	0.227	114	0.213	106	70-130	6	35	mg/kg	07.11.18 09:10	
o-Xylene	<0.00200	0.0998	0.101	101	0.0990	98	70-130	2	35	mg/kg	07.11.18 09:10	

Analytical Method: BTEX by EPA 8021B

Seq Number: 3056049

Parent Sample Id: 591480-013

Matrix: Soil

MS Sample Id: 591480-013 S

Prep Method: SW5030B

Date Prep: 07.10.18

MSD Sample Id: 591480-013 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	0.103	102	0.0813	81	70-130	24	35	mg/kg	07.10.18 15:03	
Toluene	0.00314	0.101	0.108	104	0.0824	79	70-130	27	35	mg/kg	07.10.18 15:03	
Ethylbenzene	<0.00202	0.101	0.103	102	0.0809	81	70-130	24	35	mg/kg	07.10.18 15:03	
m,p-Xylenes	<0.00403	0.202	0.218	108	0.167	84	70-130	26	35	mg/kg	07.10.18 15:03	
o-Xylene	<0.00202	0.101	0.102	101	0.0762	76	70-130	29	35	mg/kg	07.10.18 15:03	

Analytical Method: BTEX by EPA 8021B

Seq Number: 3056210

Parent Sample Id: 591481-001

Matrix: Soil

MS Sample Id: 591481-001 S

Prep Method: SW5030B

Date Prep: 07.11.18

MSD Sample Id: 591481-001 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	0.105	105	0.108	108	70-130	3	35	mg/kg	07.11.18 09:46	
Toluene	<0.00199	0.0996	0.0985	99	0.109	109	70-130	10	35	mg/kg	07.11.18 09:46	
Ethylbenzene	<0.00199	0.0996	0.0949	95	0.103	103	70-130	8	35	mg/kg	07.11.18 09:46	
m,p-Xylenes	<0.00398	0.199	0.195	98	0.216	108	70-130	10	35	mg/kg	07.11.18 09:46	
o-Xylene	<0.00199	0.0996	0.0917	92	0.107	107	70-130	15	35	mg/kg	07.11.18 09:46	

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

Dallas, TX (214) 902-0300

El Paso, TX (915) 585-3443
Lubbock, TX (806) 794-1296

Midland, TX (432) 704-5440
San Antonio, TX (210) 509-3334

Phoenix, AZ (480) 355-0900
Service Center - Baton Rouge

Service Center- Amarillo, TX (806)678-4514
Service Center- Hobbs, NM (575) 392-7550

CHAIN OF CUSTODY
Page 1 of 2

Page 1 Of 2

Revision 2016.1

[illegible]



Setting the Standard since 1990

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CHAIN OF CUSTODY

Page 2 of 2

Revision 2016.1

[illegible]

ORIGIN ID:MAFA (806) 794-1296 XENCO 1211 W. FLORIDA AVE MIDLAND, TX 79701 UNITED STATES US		SHIP DATE: 06 JUL 18 ACTWGT: 49.00 LB CAD: 101813706IN/ET3980 DIMS: 28x14x15 IN BILL RECIPIENT	
TO XENCO FEDEX ONSITE WALGREENS 6122 215 ANDREWS HWY MIDLAND TX 79701 (806) 794-1296 INV. REF: PO. DEPT:			
TRACK# 7726 5091 8565 0201 SATURDAY HOLD PRIORITY OVERNIGHT HLD BUKMD TX-US LBB 41 MAFA			



552J2/B532/DCA5

After printing this label:

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

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Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 07/09/2018 08:18:07 AM

Work Order #: 591480

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: 07/09/2018

Checklist reviewed by:

Jessica Kramer

Date: 07/09/2018

Analytical Report 631892

for
LT Environmental, Inc.

Project Manager: Dan Moir

PLU CVX Big Sinks #17H

2RP-3024

05-AUG-19

Collected By: Client



**1089 N Canal Street
Carlsbad, NM 88220**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)



05-AUG-19

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **631892**

PLU CVX Big Sinks #17H

Project Address: Delaware Basin

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) 631892. 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. 631892 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'. The signature is written in a cursive, flowing style.

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 631892****LT Environmental, Inc., Arvada, CO**

PLU CVX Big Sinks #17H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH01	S	07-22-19 13:10	1 ft	631892-001
PH01A	S	07-22-19 13:20	2 ft	631892-002
PH01B	S	07-22-19 13:35	3 ft	631892-003
PH01C	S	07-22-19 13:45	4 ft	631892-004
PH02	S	07-22-19 14:00	1 ft	631892-005
PH02A	S	07-22-19 14:10	2 ft	631892-006
PH02B	S	07-22-19 14:15	3 ft	631892-007
PH02C	S	07-22-19 14:20	4 ft	631892-008
PH03	S	07-22-19 14:30	1 ft	631892-009
PH03A	S	07-22-19 14:35	2 ft	631892-010
PH03B	S	07-22-19 14:45	3 ft	631892-011
PH03C	S	07-22-19 14:55	4 ft	631892-012
PH04	S	07-22-19 15:05	1 ft	631892-013
PH04A	S	07-22-19 15:15	2 ft	631892-014
PH04B	S	07-22-19 15:20	3 ft	631892-015
PH04C	S	07-22-19 15:25	4 ft	631892-016



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU CVX Big Sinks #17H

Project ID: 2RP-3024
Work Order Number(s): 631892

Report Date: 05-AUG-19
Date Received: 07/24/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3096940 BTEX by EPA 8021B

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

Batch: LBA-3096944 BTEX by EPA 8021B

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



Certificate of Analysis Summary 631892

LT Environmental, Inc., Arvada, CO

Project Name: PLU CVX Big Sinks #17H

Project Id: 2RP-3024

Contact: Dan Moir

Project Location: Delaware Basin

Date Received in Lab: Wed Jul-24-19 09:17 am

Report Date: 05-AUG-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	631892-001	631892-002	631892-003	631892-004	631892-005	631892-006
	<i>Field Id:</i>	PH01	PH01A	PH01B	PH01C	PH02	PH02A
	<i>Depth:</i>	1- ft	2- ft	3- ft	4- ft	1- ft	2- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jul-22-19 13:10	Jul-22-19 13:20	Jul-22-19 13:35	Jul-22-19 13:45	Jul-22-19 14:00	Jul-22-19 14:10
BTEX by EPA 8021B SUB: T104704400-18-16	<i>Extracted:</i>	Jul-26-19 14:30	Jul-26-19 14:30	Jul-26-19 14:30	Jul-26-19 14:30	Jul-26-19 16:40	Jul-26-19 16:40
	<i>Analyzed:</i>	Jul-29-19 21:58	Jul-29-19 22:18	Jul-29-19 22:39	Jul-29-19 22:59	Jul-28-19 23:36	Jul-28-19 23:57
	<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	<0.00198 0.00198	<0.00200 0.00200	<0.00201 0.00201
Toluene		<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00198 0.00198	<0.00200 0.00200	<0.00201 0.00201
Ethylbenzene		<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00198 0.00198	<0.00200 0.00200	<0.00201 0.00201
m,p-Xylenes		<0.00398 0.00398	<0.00400 0.00400	<0.00402 0.00402	<0.00396 0.00396	<0.00400 0.00400	<0.00402 0.00402
o-Xylene		<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00198 0.00198	<0.00200 0.00200	<0.00201 0.00201
Total Xylenes		<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00198 0.00198	<0.00200 0.00200	<0.00201 0.00201
Total BTEX		<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00198 0.00198	<0.00200 0.00200	<0.00201 0.00201
Chloride by EPA 300 SUB: T104704400-18-16	<i>Extracted:</i>	Jul-25-19 16:45	Jul-25-19 16:45	Jul-25-19 16:45	Jul-25-19 16:45	Jul-25-19 16:45	Jul-25-19 16:45
	<i>Analyzed:</i>	Jul-26-19 06:37	Jul-26-19 06:56	Jul-26-19 07:02	Jul-26-19 07:08	Jul-26-19 07:15	Jul-26-19 07:21
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		11.3 4.96	10.2 4.97	15.9 5.00	18.5 4.98	24.3 4.99	<5.01 5.01
TPH by SW8015 Mod SUB: T104704400-18-16	<i>Extracted:</i>	Jul-26-19 15:00	Jul-26-19 15:00	Jul-26-19 15:00	Jul-26-19 15:00	Jul-26-19 15:00	Jul-26-19 15:00
	<i>Analyzed:</i>	Aug-03-19 03:57	Aug-03-19 04:20	Aug-03-19 04:43	Aug-03-19 05:06	Aug-03-19 05:29	Aug-03-19 05:51
	<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

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 631892

LT Environmental, Inc., Arvada, CO

Project Name: PLU CVX Big Sinks #17H

Project Id: 2RP-3024

Contact: Dan Moir

Project Location: Delaware Basin

Date Received in Lab: Wed Jul-24-19 09:17 am

Report Date: 05-AUG-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	631892-007	631892-008	631892-009	631892-010	631892-011	631892-012
	<i>Field Id:</i>	PH02B	PH02C	PH03	PH03A	PH03B	PH03C
	<i>Depth:</i>	3- ft	4- ft	1- ft	2- ft	3- ft	4- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jul-22-19 14:15	Jul-22-19 14:20	Jul-22-19 14:30	Jul-22-19 14:35	Jul-22-19 14:45	Jul-22-19 14:55
BTEX by EPA 8021B SUB: T104704400-18-16	<i>Extracted:</i>	Jul-26-19 16:40	Jul-26-19 16:40	Jul-26-19 16:40	Jul-26-19 16:40	Jul-26-19 16:40	Jul-26-19 16:40
	<i>Analyzed:</i>	Jul-29-19 00:17	Jul-29-19 00:37	Jul-29-19 00:57	Jul-29-19 01:17	Jul-29-19 01:37	Jul-29-19 10:20
	<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	<0.00199 0.00199	<0.00201 0.00201	<0.00198 0.00198	<0.00199 0.00199
Toluene		<0.00199 0.00199	<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00198 0.00198	<0.00199 0.00199
Ethylbenzene		<0.00199 0.00199	<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00198 0.00198	<0.00199 0.00199
m,p-Xylenes		<0.00398 0.00398	<0.00398 0.00398	<0.00398 0.00398	<0.00402 0.00402	<0.00396 0.00396	<0.00398 0.00398
o-Xylene		<0.00199 0.00199	<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00198 0.00198	<0.00199 0.00199
Total Xylenes		<0.00199 0.00199	<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00198 0.00198	<0.00199 0.00199
Total BTEX		<0.00199 0.00199	<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00198 0.00198	<0.00199 0.00199
Chloride by EPA 300 SUB: T104704400-18-16	<i>Extracted:</i>	Jul-25-19 16:45	Jul-25-19 16:45	Jul-26-19 09:10	Jul-26-19 09:10	Jul-26-19 09:10	Jul-26-19 09:10
	<i>Analyzed:</i>	Jul-26-19 07:27	Jul-26-19 07:33	Jul-26-19 09:39	Jul-26-19 09:58	Jul-26-19 10:04	Jul-26-19 10:10
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		26.9 4.96	28.0 5.03	40.5 5.03	13.3 4.98	53.1 4.97	61.8 4.99
TPH by SW8015 Mod SUB: T104704400-18-16	<i>Extracted:</i>	Jul-26-19 15:00	Jul-26-19 17:00	Jul-26-19 17:00	Jul-26-19 17:00	Jul-26-19 17:00	Jul-26-19 14:00
	<i>Analyzed:</i>	Aug-03-19 06:14	Aug-03-19 21:32	Aug-03-19 22:41	Aug-03-19 23:05	Aug-03-19 23:28	Aug-03-19 11:11
	<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	<14.9 14.9	<15.0 15.0
Diesel Range Organics (DRO)		<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0
Motor Oil Range Hydrocarbons (MRO)		<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0
Total TPH		<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0
Total GRO-DRO		<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 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 Analysis Summary 631892

LT Environmental, Inc., Arvada, CO

Project Name: PLU CVX Big Sinks #17H

Project Id: 2RP-3024

Contact: Dan Moir

Project Location: Delaware Basin

Date Received in Lab: Wed Jul-24-19 09:17 am

Report Date: 05-AUG-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	631892-013	631892-014	631892-015	631892-016		
	<i>Field Id:</i>	PH04	PH04A	PH04B	PH04C		
	<i>Depth:</i>	1- ft	2- ft	3- ft	4- ft		
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	Jul-22-19 15:05	Jul-22-19 15:15	Jul-22-19 15:20	Jul-22-19 15:25		
BTEX by EPA 8021B SUB: T104704400-18-16	<i>Extracted:</i>	Jul-26-19 16:40	Jul-26-19 16:40	Jul-26-19 16:40	Jul-26-19 16:40		
	<i>Analyzed:</i>	Jul-29-19 10:00	Jul-29-19 10:40	Jul-29-19 12:02	Jul-29-19 12:23		
	<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	<0.00200 0.00200	<0.00198 0.00198		
Toluene		<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198		
Ethylbenzene		<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198		
m,p-Xylenes		<0.00404 0.00404	<0.00400 0.00400	<0.00401 0.00401	<0.00396 0.00396		
o-Xylene		<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198		
Total Xylenes		<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198		
Total BTEX		<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198		
Chloride by EPA 300 SUB: T104704400-18-16	<i>Extracted:</i>	Jul-26-19 09:10	Jul-26-19 09:10	Jul-26-19 09:10	Jul-26-19 09:10		
	<i>Analyzed:</i>	Jul-26-19 10:17	Jul-26-19 10:36	Jul-26-19 10:42	Jul-26-19 10:48		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		<5.02 5.02	5.93 4.97	<5.00 5.00	5.34 5.00		
TPH by SW8015 Mod SUB: T104704400-18-16	<i>Extracted:</i>	Jul-26-19 14:00	Jul-26-19 14:00	Jul-26-19 14:00	Jul-26-19 14:00		
	<i>Analyzed:</i>	Aug-03-19 12:20	Aug-03-19 12:43	Aug-03-19 13:06	Aug-03-19 13:29		
	<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		

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

Jessica Kramer
Project Assistant



Certificate of Analytical Results 631892

LT Environmental, Inc., Arvada, CO

PLU CVX Big Sinks #17H

Sample Id: **PH01**
Lab Sample Id: 631892-001

Matrix: Soil
Date Collected: 07.22.19 13.10

Date Received: 07.24.19 09.17
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096565

Date Prep: 07.25.19 16.45

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	11.3	4.96	mg/kg	07.26.19 06.37		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097389

Date Prep: 07.26.19 15.00

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	08.03.19 03.57	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.03.19 03.57	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.03.19 03.57	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.03.19 03.57	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.03.19 03.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	08.03.19 03.57	
o-Terphenyl	84-15-1	92	%	70-135	08.03.19 03.57	



Certificate of Analytical Results 631892

LT Environmental, Inc., Arvada, CO

PLU CVX Big Sinks #17H

Sample Id: **PH01**
Lab Sample Id: 631892-001

Matrix: Soil
Date Collected: 07.22.19 13.10

Date Received: 07.24.19 09.17
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096940

Prep Method: SW5030B

% Moisture:

Date Prep: 07.26.19 14.30

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.29.19 21.58	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.29.19 21.58	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.29.19 21.58	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.29.19 21.58	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.29.19 21.58	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.29.19 21.58	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.29.19 21.58	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	108	%	70-130	07.29.19 21.58		
1,4-Difluorobenzene	540-36-3	106	%	70-130	07.29.19 21.58		



Certificate of Analytical Results 631892

LT Environmental, Inc., Arvada, CO

PLU CVX Big Sinks #17H

Sample Id: **PH01A**
Lab Sample Id: 631892-002

Matrix: Soil
Date Collected: 07.22.19 13.20

Date Received: 07.24.19 09.17
Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096565

Date Prep: 07.25.19 16.45

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	10.2	4.97	mg/kg	07.26.19 06.56		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097389

Date Prep: 07.26.19 15.00

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	08.03.19 04.20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.03.19 04.20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.03.19 04.20	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.03.19 04.20	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.03.19 04.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	08.03.19 04.20	
o-Terphenyl	84-15-1	89	%	70-135	08.03.19 04.20	



Certificate of Analytical Results 631892

LT Environmental, Inc., Arvada, CO

PLU CVX Big Sinks #17H

Sample Id: **PH01A**
Lab Sample Id: 631892-002

Matrix: Soil
Date Collected: 07.22.19 13.20

Date Received: 07.24.19 09.17
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096940

Prep Method: SW5030B

% Moisture:

Date Prep: 07.26.19 14.30

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	07.29.19 22.18	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.29.19 22.18	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.29.19 22.18	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	07.29.19 22.18	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.29.19 22.18	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.29.19 22.18	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.29.19 22.18	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	112	%	70-130	07.29.19 22.18		
1,4-Difluorobenzene	540-36-3	107	%	70-130	07.29.19 22.18		



Certificate of Analytical Results 631892

LT Environmental, Inc., Arvada, CO

PLU CVX Big Sinks #17H

Sample Id: **PH01B**
Lab Sample Id: 631892-003

Matrix: Soil
Date Collected: 07.22.19 13.35

Date Received: 07.24.19 09.17
Sample Depth: 3 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096565

Date Prep: 07.25.19 16.45

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	15.9	5.00	mg/kg	07.26.19 07.02		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097389

Date Prep: 07.26.19 15.00

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	08.03.19 04.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.03.19 04.43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.03.19 04.43	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.03.19 04.43	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.03.19 04.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	08.03.19 04.43	
o-Terphenyl	84-15-1	87	%	70-135	08.03.19 04.43	



Certificate of Analytical Results 631892

LT Environmental, Inc., Arvada, CO

PLU CVX Big Sinks #17H

Sample Id: **PH01B**
Lab Sample Id: 631892-003

Matrix: Soil
Date Collected: 07.22.19 13.35

Date Received: 07.24.19 09.17
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096940

Prep Method: SW5030B

% Moisture:

Date Prep: 07.26.19 14.30

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	07.29.19 22.39	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.29.19 22.39	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.29.19 22.39	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.29.19 22.39	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.29.19 22.39	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.29.19 22.39	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.29.19 22.39	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	108	%	70-130	07.29.19 22.39		
4-Bromofluorobenzene	460-00-4	120	%	70-130	07.29.19 22.39		



Certificate of Analytical Results 631892

LT Environmental, Inc., Arvada, CO

PLU CVX Big Sinks #17H

Sample Id: **PH01C**
Lab Sample Id: 631892-004

Matrix: Soil
Date Collected: 07.22.19 13.45

Date Received: 07.24.19 09.17
Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096565

Date Prep: 07.25.19 16.45

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	18.5	4.98	mg/kg	07.26.19 07.08		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097389

Date Prep: 07.26.19 15.00

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	08.03.19 05.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.03.19 05.06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.03.19 05.06	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.03.19 05.06	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.03.19 05.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	08.03.19 05.06	
o-Terphenyl	84-15-1	111	%	70-135	08.03.19 05.06	



Certificate of Analytical Results 631892

LT Environmental, Inc., Arvada, CO

PLU CVX Big Sinks #17H

Sample Id: **PH01C**
Lab Sample Id: 631892-004

Matrix: Soil
Date Collected: 07.22.19 13.45

Date Received: 07.24.19 09.17
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096940

Prep Method: SW5030B

% Moisture:

Date Prep: 07.26.19 14.30

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	07.29.19 22.59	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.29.19 22.59	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.29.19 22.59	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	07.29.19 22.59	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.29.19 22.59	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	07.29.19 22.59	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.29.19 22.59	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	119	%	70-130	07.29.19 22.59		
1,4-Difluorobenzene	540-36-3	109	%	70-130	07.29.19 22.59		



Certificate of Analytical Results 631892

LT Environmental, Inc., Arvada, CO

PLU CVX Big Sinks #17H

Sample Id: **PH02**
Lab Sample Id: 631892-005

Matrix: Soil
Date Collected: 07.22.19 14.00

Date Received: 07.24.19 09.17
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096565

Date Prep: 07.25.19 16.45

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	24.3	4.99	mg/kg	07.26.19 07.15		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097389

Date Prep: 07.26.19 15.00

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	08.03.19 05.29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.03.19 05.29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.03.19 05.29	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.03.19 05.29	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.03.19 05.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	08.03.19 05.29	
o-Terphenyl	84-15-1	107	%	70-135	08.03.19 05.29	



Certificate of Analytical Results 631892

LT Environmental, Inc., Arvada, CO

PLU CVX Big Sinks #17H

Sample Id: **PH02**
Lab Sample Id: 631892-005

Matrix: Soil
Date Collected: 07.22.19 14.00

Date Received: 07.24.19 09.17
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096944

Date Prep: 07.26.19 16.40

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	07.28.19 23.36	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.28.19 23.36	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.28.19 23.36	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	07.28.19 23.36	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.28.19 23.36	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.28.19 23.36	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.28.19 23.36	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	112	%	70-130	07.28.19 23.36		
1,4-Difluorobenzene	540-36-3	106	%	70-130	07.28.19 23.36		



Certificate of Analytical Results 631892

LT Environmental, Inc., Arvada, CO

PLU CVX Big Sinks #17H

Sample Id: **PH02A**
Lab Sample Id: 631892-006

Matrix: Soil
Date Collected: 07.22.19 14.10

Date Received: 07.24.19 09.17
Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096565

Date Prep: 07.25.19 16.45

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	<5.01	5.01	mg/kg	07.26.19 07.21	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097389

Date Prep: 07.26.19 15.00

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	08.03.19 05.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.03.19 05.51	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.03.19 05.51	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.03.19 05.51	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.03.19 05.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	08.03.19 05.51	
o-Terphenyl	84-15-1	96	%	70-135	08.03.19 05.51	



Certificate of Analytical Results 631892

LT Environmental, Inc., Arvada, CO

PLU CVX Big Sinks #17H

Sample Id: **PH02A**
Lab Sample Id: 631892-006

Matrix: Soil
Date Collected: 07.22.19 14.10

Date Received: 07.24.19 09.17
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096944

Date Prep: 07.26.19 16.40

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	<0.00201	0.00201	mg/kg	07.28.19 23.57	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.28.19 23.57	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.28.19 23.57	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.28.19 23.57	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.28.19 23.57	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.28.19 23.57	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.28.19 23.57	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	105	%	70-130	07.28.19 23.57		
1,4-Difluorobenzene	540-36-3	102	%	70-130	07.28.19 23.57		



Certificate of Analytical Results 631892

LT Environmental, Inc., Arvada, CO

PLU CVX Big Sinks #17H

Sample Id: **PH02B**
Lab Sample Id: 631892-007

Matrix: Soil
Date Collected: 07.22.19 14.15

Date Received: 07.24.19 09.17
Sample Depth: 3 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096565

Date Prep: 07.25.19 16.45

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	26.9	4.96	mg/kg	07.26.19 07.27		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097389

Date Prep: 07.26.19 15.00

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	<14.9	14.9	mg/kg	08.03.19 06.14	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	08.03.19 06.14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	08.03.19 06.14	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	08.03.19 06.14	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	08.03.19 06.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	08.03.19 06.14	
o-Terphenyl	84-15-1	90	%	70-135	08.03.19 06.14	



Certificate of Analytical Results 631892

LT Environmental, Inc., Arvada, CO

PLU CVX Big Sinks #17H

Sample Id: **PH02B**
Lab Sample Id: 631892-007

Matrix: Soil
Date Collected: 07.22.19 14.15

Date Received: 07.24.19 09.17
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096944

Date Prep: 07.26.19 16.40

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	<0.00199	0.00199	mg/kg	07.29.19 00.17	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.29.19 00.17	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.29.19 00.17	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.29.19 00.17	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.29.19 00.17	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.29.19 00.17	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.29.19 00.17	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	108	%	70-130	07.29.19 00.17		
1,4-Difluorobenzene	540-36-3	104	%	70-130	07.29.19 00.17		



Certificate of Analytical Results 631892

LT Environmental, Inc., Arvada, CO

PLU CVX Big Sinks #17H

Sample Id: **PH02C**
Lab Sample Id: 631892-008

Matrix: Soil
Date Collected: 07.22.19 14.20

Date Received: 07.24.19 09.17
Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096565

Date Prep: 07.25.19 16.45

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	28.0	5.03	mg/kg	07.26.19 07.33		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097393

Date Prep: 07.26.19 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	08.03.19 21.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.03.19 21.32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.03.19 21.32	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.03.19 21.32	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.03.19 21.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	08.03.19 21.32	
o-Terphenyl	84-15-1	80	%	70-135	08.03.19 21.32	



Certificate of Analytical Results 631892

LT Environmental, Inc., Arvada, CO

PLU CVX Big Sinks #17H

Sample Id: **PH02C**
Lab Sample Id: 631892-008

Matrix: Soil
Date Collected: 07.22.19 14.20

Date Received: 07.24.19 09.17
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096944

Date Prep: 07.26.19 16.40

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	<0.00199	0.00199	mg/kg	07.29.19 00.37	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.29.19 00.37	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.29.19 00.37	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.29.19 00.37	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.29.19 00.37	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.29.19 00.37	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.29.19 00.37	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	108	%	70-130	07.29.19 00.37		
1,4-Difluorobenzene	540-36-3	105	%	70-130	07.29.19 00.37		



Certificate of Analytical Results 631892

LT Environmental, Inc., Arvada, CO

PLU CVX Big Sinks #17H

Sample Id: **PH03**
Lab Sample Id: 631892-009

Matrix: Soil
Date Collected: 07.22.19 14.30

Date Received: 07.24.19 09.17
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096662

Date Prep: 07.26.19 09.10

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	40.5	5.03	mg/kg	07.26.19 09.39		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097393

Date Prep: 07.26.19 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	08.03.19 22.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.03.19 22.41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.03.19 22.41	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.03.19 22.41	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.03.19 22.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	08.03.19 22.41	
o-Terphenyl	84-15-1	93	%	70-135	08.03.19 22.41	



Certificate of Analytical Results 631892

LT Environmental, Inc., Arvada, CO

PLU CVX Big Sinks #17H

Sample Id: **PH03**
Lab Sample Id: 631892-009

Matrix: Soil
Date Collected: 07.22.19 14.30

Date Received: 07.24.19 09.17
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096944

Prep Method: SW5030B

% Moisture:

Date Prep: 07.26.19 16.40

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.29.19 00.57	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.29.19 00.57	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.29.19 00.57	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.29.19 00.57	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.29.19 00.57	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.29.19 00.57	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.29.19 00.57	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	106	%	70-130	07.29.19 00.57		
4-Bromofluorobenzene	460-00-4	113	%	70-130	07.29.19 00.57		



Certificate of Analytical Results 631892

LT Environmental, Inc., Arvada, CO

PLU CVX Big Sinks #17H

Sample Id: **PH03A**
Lab Sample Id: 631892-010

Matrix: Soil
Date Collected: 07.22.19 14.35

Date Received: 07.24.19 09.17
Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096662

Date Prep: 07.26.19 09.10

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	13.3	4.98	mg/kg	07.26.19 09.58		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097393

Date Prep: 07.26.19 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	08.03.19 23.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.03.19 23.05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.03.19 23.05	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.03.19 23.05	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.03.19 23.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	08.03.19 23.05	
o-Terphenyl	84-15-1	89	%	70-135	08.03.19 23.05	



Certificate of Analytical Results 631892

LT Environmental, Inc., Arvada, CO

PLU CVX Big Sinks #17H

Sample Id: **PH03A**
Lab Sample Id: 631892-010

Matrix: Soil
Date Collected: 07.22.19 14.35

Date Received: 07.24.19 09.17
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096944

Date Prep: 07.26.19 16.40

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	<0.00201	0.00201	mg/kg	07.29.19 01.17	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.29.19 01.17	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.29.19 01.17	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.29.19 01.17	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.29.19 01.17	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.29.19 01.17	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.29.19 01.17	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	07.29.19 01.17		
4-Bromofluorobenzene	460-00-4	107	%	70-130	07.29.19 01.17		



Certificate of Analytical Results 631892

LT Environmental, Inc., Arvada, CO

PLU CVX Big Sinks #17H

Sample Id: **PH03B**
Lab Sample Id: 631892-011

Matrix: Soil
Date Collected: 07.22.19 14.45

Date Received: 07.24.19 09.17
Sample Depth: 3 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096662

Date Prep: 07.26.19 09.10

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	53.1	4.97	mg/kg	07.26.19 10.04		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097393

Date Prep: 07.26.19 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	<14.9	14.9	mg/kg	08.03.19 23.28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	08.03.19 23.28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	08.03.19 23.28	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	08.03.19 23.28	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	08.03.19 23.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	08.03.19 23.28	
o-Terphenyl	84-15-1	85	%	70-135	08.03.19 23.28	



Certificate of Analytical Results 631892

LT Environmental, Inc., Arvada, CO

PLU CVX Big Sinks #17H

Sample Id: **PH03B**
Lab Sample Id: 631892-011

Matrix: Soil
Date Collected: 07.22.19 14.45

Date Received: 07.24.19 09.17
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096944

Date Prep: 07.26.19 16.40

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	<0.00198	0.00198	mg/kg	07.29.19 01.37	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.29.19 01.37	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.29.19 01.37	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	07.29.19 01.37	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.29.19 01.37	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	07.29.19 01.37	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.29.19 01.37	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	111	%	70-130	07.29.19 01.37		
1,4-Difluorobenzene	540-36-3	102	%	70-130	07.29.19 01.37		



Certificate of Analytical Results 631892

LT Environmental, Inc., Arvada, CO

PLU CVX Big Sinks #17H

Sample Id: **PH03C**
Lab Sample Id: 631892-012

Matrix: Soil
Date Collected: 07.22.19 14.55

Date Received: 07.24.19 09.17
Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096662

Date Prep: 07.26.19 09.10

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	61.8	4.99	mg/kg	07.26.19 10.10		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097392

Date Prep: 07.26.19 14.00

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	08.03.19 11.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.03.19 11.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.03.19 11.11	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.03.19 11.11	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.03.19 11.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	08.03.19 11.11	
o-Terphenyl	84-15-1	99	%	70-135	08.03.19 11.11	



Certificate of Analytical Results 631892

LT Environmental, Inc., Arvada, CO

PLU CVX Big Sinks #17H

Sample Id: **PH03C**
Lab Sample Id: 631892-012

Matrix: Soil
Date Collected: 07.22.19 14.55

Date Received: 07.24.19 09.17
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096944

Date Prep: 07.26.19 16.40

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	<0.00199	0.00199	mg/kg	07.29.19 10.20	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.29.19 10.20	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.29.19 10.20	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.29.19 10.20	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.29.19 10.20	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.29.19 10.20	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.29.19 10.20	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	106	%	70-130	07.29.19 10.20		
1,4-Difluorobenzene	540-36-3	108	%	70-130	07.29.19 10.20		



Certificate of Analytical Results 631892

LT Environmental, Inc., Arvada, CO

PLU CVX Big Sinks #17H

Sample Id: **PH04**
Lab Sample Id: 631892-013

Matrix: Soil
Date Collected: 07.22.19 15.05

Date Received: 07.24.19 09.17
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096662

Date Prep: 07.26.19 09.10

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	<5.02	5.02	mg/kg	07.26.19 10.17	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097392

Date Prep: 07.26.19 14.00

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	08.03.19 12.20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.03.19 12.20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.03.19 12.20	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.03.19 12.20	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.03.19 12.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	08.03.19 12.20	
o-Terphenyl	84-15-1	96	%	70-135	08.03.19 12.20	



Certificate of Analytical Results 631892

LT Environmental, Inc., Arvada, CO

PLU CVX Big Sinks #17H

Sample Id: **PH04**
Lab Sample Id: 631892-013

Matrix: Soil
Date Collected: 07.22.19 15.05

Date Received: 07.24.19 09.17
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096944

Prep Method: SW5030B

% Moisture:

Date Prep: 07.26.19 16.40

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.29.19 10.00	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.29.19 10.00	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.29.19 10.00	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	07.29.19 10.00	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.29.19 10.00	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.29.19 10.00	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.29.19 10.00	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	104	%	70-130	07.29.19 10.00		
1,4-Difluorobenzene	540-36-3	108	%	70-130	07.29.19 10.00		



Certificate of Analytical Results 631892

LT Environmental, Inc., Arvada, CO

PLU CVX Big Sinks #17H

Sample Id: **PH04A**
Lab Sample Id: 631892-014

Matrix: Soil
Date Collected: 07.22.19 15.15

Date Received: 07.24.19 09.17
Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096662

Date Prep: 07.26.19 09.10

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	5.93	4.97	mg/kg	07.26.19 10.36		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097392

Date Prep: 07.26.19 14.00

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	08.03.19 12.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.03.19 12.43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.03.19 12.43	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.03.19 12.43	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.03.19 12.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	08.03.19 12.43	
o-Terphenyl	84-15-1	93	%	70-135	08.03.19 12.43	



Certificate of Analytical Results 631892

LT Environmental, Inc., Arvada, CO

PLU CVX Big Sinks #17H

Sample Id: **PH04A**
Lab Sample Id: 631892-014

Matrix: Soil
Date Collected: 07.22.19 15.15

Date Received: 07.24.19 09.17
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096944

Date Prep: 07.26.19 16.40

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	07.29.19 10.40	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.29.19 10.40	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.29.19 10.40	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	07.29.19 10.40	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.29.19 10.40	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.29.19 10.40	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.29.19 10.40	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	105	%	70-130	07.29.19 10.40		
4-Bromofluorobenzene	460-00-4	106	%	70-130	07.29.19 10.40		



Certificate of Analytical Results 631892

LT Environmental, Inc., Arvada, CO

PLU CVX Big Sinks #17H

Sample Id: **PH04B**
Lab Sample Id: 631892-015

Matrix: Soil
Date Collected: 07.22.19 15.20

Date Received: 07.24.19 09.17
Sample Depth: 3 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096662

Date Prep: 07.26.19 09.10

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	<5.00	5.00	mg/kg	07.26.19 10.42	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097392

Date Prep: 07.26.19 14.00

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	08.03.19 13.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.03.19 13.06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.03.19 13.06	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.03.19 13.06	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.03.19 13.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	08.03.19 13.06	
o-Terphenyl	84-15-1	94	%	70-135	08.03.19 13.06	



Certificate of Analytical Results 631892

LT Environmental, Inc., Arvada, CO

PLU CVX Big Sinks #17H

Sample Id: **PH04B**
Lab Sample Id: 631892-015

Matrix: Soil
Date Collected: 07.22.19 15.20

Date Received: 07.24.19 09.17
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096944

Date Prep: 07.26.19 16.40

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	07.29.19 12.02	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.29.19 12.02	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.29.19 12.02	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.29.19 12.02	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.29.19 12.02	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.29.19 12.02	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.29.19 12.02	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	98	%	70-130	07.29.19 12.02		
1,4-Difluorobenzene	540-36-3	104	%	70-130	07.29.19 12.02		



Certificate of Analytical Results 631892

LT Environmental, Inc., Arvada, CO

PLU CVX Big Sinks #17H

Sample Id: **PH04C**
Lab Sample Id: 631892-016

Matrix: Soil
Date Collected: 07.22.19 15.25

Date Received: 07.24.19 09.17
Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096662

Date Prep: 07.26.19 09.10

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	5.34	5.00	mg/kg	07.26.19 10.48		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097392

Date Prep: 07.26.19 14.00

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	08.03.19 13.29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.03.19 13.29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.03.19 13.29	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.03.19 13.29	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.03.19 13.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	08.03.19 13.29	
o-Terphenyl	84-15-1	86	%	70-135	08.03.19 13.29	



Certificate of Analytical Results 631892

LT Environmental, Inc., Arvada, CO

PLU CVX Big Sinks #17H

Sample Id: **PH04C**
Lab Sample Id: 631892-016

Matrix: Soil
Date Collected: 07.22.19 15.25

Date Received: 07.24.19 09.17
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096944

Date Prep: 07.26.19 16.40

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	<0.00198	0.00198	mg/kg	07.29.19 12.23	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.29.19 12.23	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.29.19 12.23	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	07.29.19 12.23	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.29.19 12.23	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	07.29.19 12.23	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.29.19 12.23	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	108	%	70-130	07.29.19 12.23		
1,4-Difluorobenzene	540-36-3	106	%	70-130	07.29.19 12.23		



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 Big Sinks #17H

Analytical Method: Chloride by EPA 300

Seq Number: 3096565

MB Sample Id: 7682870-1-BLK

Matrix: Solid

LCS Sample Id: 7682870-1-BKS

Prep Method: E300P

Date Prep: 07.25.19

LCSD Sample Id: 7682870-1-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	246	98	246	98	90-110	0	20	mg/kg	07.26.19 04:30	

Analytical Method: Chloride by EPA 300

Seq Number: 3096662

MB Sample Id: 7682887-1-BLK

Matrix: Solid

LCS Sample Id: 7682887-1-BKS

Prep Method: E300P

Date Prep: 07.26.19

LCSD Sample Id: 7682887-1-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	238	95	237	95	90-110	0	20	mg/kg	07.26.19 09:26	

Analytical Method: Chloride by EPA 300

Seq Number: 3096565

Parent Sample Id: 631697-001

Matrix: Soil

MS Sample Id: 631697-001 S

Prep Method: E300P

Date Prep: 07.25.19

MSD Sample Id: 631697-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	16.6	251	263	98	264	99	90-110	0	20	mg/kg	07.26.19 06:18	

Analytical Method: Chloride by EPA 300

Seq Number: 3096565

Parent Sample Id: 631910-001

Matrix: Soil

MS Sample Id: 631910-001 S

Prep Method: E300P

Date Prep: 07.25.19

MSD Sample Id: 631910-001 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	249	277	99	278	100	90-110	0	20	mg/kg	07.26.19 04:49	

Analytical Method: Chloride by EPA 300

Seq Number: 3096662

Parent Sample Id: 631892-009

Matrix: Soil

MS Sample Id: 631892-009 S

Prep Method: E300P

Date Prep: 07.26.19

MSD Sample Id: 631892-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	40.5	252	286	97	287	98	90-110	0	20	mg/kg	07.26.19 09:45	

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



LT Environmental, Inc.

PLU CVX Big Sinks #17H

Analytical Method: Chloride by EPA 300

Seq Number: 3096662

Parent Sample Id: 631951-003

Matrix: Soil

MS Sample Id: 631951-003 S

Prep Method: E300P

Date Prep: 07.26.19

MSD Sample Id: 631951-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2.14	249	242	96	242	96	90-110	0	20	mg/kg	07.26.19 11:19	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3097392

MB Sample Id: 7683056-1-BLK

Matrix: Solid

LCS Sample Id: 7683056-1-BKS

Prep Method: TX1005P

Date Prep: 07.26.19

LCSD Sample Id: 7683056-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	1030	103	1050	105	70-135	2	20	mg/kg	08.03.19 10:25	
Diesel Range Organics (DRO)	<8.13	1000	1080	108	1170	117	70-135	8	20	mg/kg	08.03.19 10:25	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	91		94		96		70-135	%	08.03.19 10:25
o-Terphenyl	84		114		110		70-135	%	08.03.19 10:25

Analytical Method: TPH by SW8015 Mod

Seq Number: 3097389

MB Sample Id: 7683058-1-BLK

Matrix: Solid

LCS Sample Id: 7683058-1-BKS

Prep Method: TX1005P

Date Prep: 07.26.19

LCSD Sample Id: 7683058-1-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	1100	110	1110	111	70-135	1	20	mg/kg	08.02.19 21:04	
Diesel Range Organics (DRO)	<8.13	1000	1130	113	1160	116	70-135	3	20	mg/kg	08.02.19 21:04	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	99		98		100		70-135	%	08.02.19 21:04
o-Terphenyl	81		98		104		70-135	%	08.02.19 21:04

Analytical Method: TPH by SW8015 Mod

Seq Number: 3097393

MB Sample Id: 7683062-1-BLK

Matrix: Solid

LCS Sample Id: 7683062-1-BKS

Prep Method: TX1005P

Date Prep: 07.26.19

LCSD Sample Id: 7683062-1-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	1100	110	1100	110	70-135	0	20	mg/kg	08.03.19 20:46	
Diesel Range Organics (DRO)	<8.13	1000	1150	115	1180	118	70-135	3	20	mg/kg	08.03.19 20:46	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	94		100		99		70-135	%	08.03.19 20:46
o-Terphenyl	79		103		96		70-135	%	08.03.19 20:46

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 Big Sinks #17H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3097392

Parent Sample Id: 631892-012

Matrix: Soil

MS Sample Id: 631892-012 S

Prep Method: TX1005P

Date Prep: 07.26.19

MSD Sample Id: 631892-012 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	13.1	997	1130	112	1130	112	70-135	0	20	mg/kg	08.03.19 11:34	
Diesel Range Organics (DRO)	14.6	997	1150	114	1120	111	70-135	3	20	mg/kg	08.03.19 11:34	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	93		92		70-135	%	08.03.19 11:34
o-Terphenyl	89		96		70-135	%	08.03.19 11:34

Analytical Method: TPH by SW8015 Mod

Seq Number: 3097389

Parent Sample Id: 631781-038

Matrix: Soil

MS Sample Id: 631781-038 S

Prep Method: TX1005P

Date Prep: 07.26.19

MSD Sample Id: 631781-038 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)	10.3	997	1140	113	1140	113	70-135	0	20	mg/kg	08.02.19 22:13	
Diesel Range Organics (DRO)	12.9	997	1150	114	1190	118	70-135	3	20	mg/kg	08.02.19 22:13	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	97		98		70-135	%	08.02.19 22:13
o-Terphenyl	96		103		70-135	%	08.02.19 22:13

Analytical Method: TPH by SW8015 Mod

Seq Number: 3097393

Parent Sample Id: 631892-008

Matrix: Soil

MS Sample Id: 631892-008 S

Prep Method: TX1005P

Date Prep: 07.26.19

MSD Sample Id: 631892-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	13.4	997	1050	104	1060	105	70-135	1	20	mg/kg	08.03.19 21:55	
Diesel Range Organics (DRO)	8.66	997	1150	114	1170	117	70-135	2	20	mg/kg	08.03.19 21:55	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	93		92		70-135	%	08.03.19 21:55
o-Terphenyl	98		92		70-135	%	08.03.19 21:55

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 Big Sinks #17H

Analytical Method: BTEX by EPA 8021B

Seq Number: 3096940

MB Sample Id: 7682923-1-BLK

Matrix: Solid

LCS Sample Id: 7682923-1-BKS

Prep Method: SW5030B

Date Prep: 07.26.19

LCSD Sample Id: 7682923-1-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	0.0928	93	0.104	104	70-130	11	35	mg/kg	07.29.19 14:59	
Toluene	<0.000456	0.100	0.0824	82	0.0934	93	70-130	13	35	mg/kg	07.29.19 14:59	
Ethylbenzene	0.000720	0.100	0.0807	81	0.0918	92	70-130	13	35	mg/kg	07.29.19 14:59	
m,p-Xylenes	<0.00101	0.200	0.161	81	0.183	92	70-130	13	35	mg/kg	07.29.19 14:59	
o-Xylene	0.000480	0.100	0.0849	85	0.0977	98	70-130	14	35	mg/kg	07.29.19 14:59	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	109		102		104		70-130	%	07.29.19 14:59
4-Bromofluorobenzene	108		99		109		70-130	%	07.29.19 14:59

Analytical Method: BTEX by EPA 8021B

Seq Number: 3096944

MB Sample Id: 7682925-1-BLK

Matrix: Solid

LCS Sample Id: 7682925-1-BKS

Prep Method: SW5030B

Date Prep: 07.26.19

LCSD Sample Id: 7682925-1-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	0.0966	97	0.110	110	70-130	13	35	mg/kg	07.28.19 21:34	
Toluene	<0.00200	0.100	0.0968	97	0.109	109	70-130	12	35	mg/kg	07.28.19 21:34	
Ethylbenzene	<0.00200	0.100	0.113	113	0.126	126	70-130	11	35	mg/kg	07.28.19 21:34	
m,p-Xylenes	<0.00400	0.200	0.230	115	0.257	129	70-130	11	35	mg/kg	07.28.19 21:34	
o-Xylene	<0.00200	0.100	0.108	108	0.124	124	70-130	14	35	mg/kg	07.28.19 21:34	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		95		100		70-130	%	07.28.19 21:34
4-Bromofluorobenzene	100		105		119		70-130	%	07.28.19 21:34

Analytical Method: BTEX by EPA 8021B

Seq Number: 3096940

Parent Sample Id: 631781-040

Matrix: Soil

MS Sample Id: 631781-040 S

Prep Method: SW5030B

Date Prep: 07.26.19

MSD Sample Id: 631781-040 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	0.0875	87	0.0789	79	70-130	10	35	mg/kg	07.29.19 15:39	
Toluene	<0.00202	0.101	0.0768	76	0.0687	69	70-130	11	35	mg/kg	07.29.19 15:39	X
Ethylbenzene	<0.00202	0.101	0.0740	73	0.0661	66	70-130	11	35	mg/kg	07.29.19 15:39	X
m,p-Xylenes	<0.00102	0.202	0.144	71	0.129	65	70-130	11	35	mg/kg	07.29.19 15:39	X
o-Xylene	<0.00202	0.101	0.0729	72	0.0654	65	70-130	11	35	mg/kg	07.29.19 15:39	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		106		70-130	%	07.29.19 15:39
4-Bromofluorobenzene	107		101		70-130	%	07.29.19 15:39

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

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

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

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



LT Environmental, Inc.

PLU CVX Big Sinks #17H

Analytical Method: BTEX by EPA 8021B

Seq Number: 3096944

Parent Sample Id: 631892-005

Matrix: Soil

MS Sample Id: 631892-005 S

Prep Method: SW5030B

Date Prep: 07.26.19

MSD Sample Id: 631892-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00198	0.0992	0.111	112	0.114	114	70-130	3	35	mg/kg	07.28.19 22:14	
Toluene	<0.00198	0.0992	0.107	108	0.112	112	70-130	5	35	mg/kg	07.28.19 22:14	
Ethylbenzene	<0.00198	0.0992	0.125	126	0.127	127	70-130	2	35	mg/kg	07.28.19 22:14	
m,p-Xylenes	<0.00397	0.198	0.255	129	0.260	129	70-130	2	35	mg/kg	07.28.19 22:14	
o-Xylene	<0.00198	0.0992	0.122	123	0.126	126	70-130	3	35	mg/kg	07.28.19 22:14	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		106		70-130	%	07.28.19 22:14
4-Bromofluorobenzene	127		122		70-130	%	07.28.19 22:14

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: 1631892

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 609-3334
 Midland, TX (432) 704-5440 El Paso, TX (915) 686-3443 Lubbock, TX (806) 764-1298 Casabad, NM (432) 704-6440
 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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Page 1 of 2

Project Manager:	Don Meier	Bill to: (if different)	Kyle Little
Company Name:	LT Environmental, Inc.	Company Name:	YTD
Address:	5300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland TX 79705	City, State ZIP:	Casabad, NM 88120
Phone:	432.236.3849	Email:	slg@xenco.com

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting Level: I ☐ Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADAPT ☐ Other:

Project Name:	PLU CUX Big Sinks #17H	Turn Around	
Project Number:	200-500-3024	Routine	☒
Project Location:		Rush:	
Sampler's Name:	James Co	Due Date:	
PO #:		Quote #:	

SAMPLE RECEIPT	Temp Blank:	Temp No	Wet Ice:	Yes	No
Temperature (°C):	1.0				
Received Inact:	Yes	No	Thermometer ID		
Cooler Custody Seals:	Yes	No	Correction Factor:	-0.2	
Sample Custody Seals:	Yes	No	Total Containers:	10	

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers
--------	-----------------------	--------	--------------	--------------	-------	----------------------

PH01	S	7.22.19	1310	1'	1	TPH (EPA 8092)
PH01A			1320	2'		BTEX (EPA 804)
PH01B			1335	2'		Chlorides (EPA 300)
PH01C			1345	4'		
PH02			1400	1'		
PH02A			1410	2'		
PH02B			1415	3'		
PH02C			1420	4'		
PH02D			1430	1'		
PH03A			1435	2'		

Total 200.7 / 6010 200.8 / 6020: BRCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Ss Ag SiO2 Na Sr Ti Sn U V Zn
 Circle Method(s) and Metal(s) to be analyzed: TCLP / SPLP 6010: BRCRA 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, the affiliate 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>	7/24/19 9:17			



Chain of Custody

Work Order No: 631892

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) 794-1298 Crandall, NM (432) 704-5440
 Phoenix, AZ (480) 355-0500 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000 West Palm Beach, FL (561) 659-6701

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Page 2 of 2

Project Manager:	Don Harris	Bill to: (if different)	Kyle Little
Company Name:	LT Environmental Inc.	Company Name:	K70
Address:	3300 North 4 Street	Address:	3109 S Green Street
City, State ZIP:	Arling TX 79105	City, State ZIP:	Culbuck NM 88120
Phone:	432.276.3844	Email:	glad@xenco.com

ANALYSIS REQUEST

Program: UST/PST	☐ PRP	☐ Brownfields	☐ RRC	☐ Superfund
State of Project:				
Reporting Level I	☐ Level II	☐ Level III	☐ PST/UST	☐ TRRP
Deliverables: EDD	☐	ADAPT	☐	Other:

Project Name:	PEC CUX B, 7, 5mb #17H	Turn Around	
Project Number:	28P-3024	Routine	☒
Project Location:		Rush:	
Sampler's Name:	Spencer Co	Due Date:	
PO #:		Quote #:	

SAMPLE RECEIPT		Temp Blank:	Yes ☒ No ☐	Thermometer ID		Wet Ice:	Yes ☒ No ☐
Temperature (°C):	1.4	Received Intact:	Yes ☒ No ☐	Correction Factor:	-0.2	Total Containers:	0
Cooler Custody Seals:	Yes ☒ No ☐						
Sample Custody Seals:	Yes ☒ No ☐						

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Preservative Codes	Sample Comments
PH033		S	7-22-19	1445	3'	1		
PH03C				1435	4'	X		
PH04				1305	1'			
PH04A				1515	2'			
PH04B				1520	3'			
PH04C				1525	4'			

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 Pb Mn Mo Ni Se Ag Ti U
 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>	7/24/19 9:17			



Inter-Office Shipment

Page 1 of 3

IOS Number **44862**

Date/Time: 07/24/19 10:51

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.: 775826350686

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
631892-001	S	PH01	07/22/19 13:10	SW8021B	BTEX by EPA 8021B	07/30/19	08/05/19	JKR	BR4FBZ BZ BZME EBZ X	
631892-001	S	PH01	07/22/19 13:10	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/05/19	JKR	GRO-DRO PHCC10C28 PF	
631892-001	S	PH01	07/22/19 13:10	E300_CL	Chloride by EPA 300	07/30/19	01/18/20	JKR	CL	
631892-002	S	PH01A	07/22/19 13:20	E300_CL	Chloride by EPA 300	07/30/19	01/18/20	JKR	CL	
631892-002	S	PH01A	07/22/19 13:20	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/05/19	JKR	GRO-DRO PHCC10C28 PF	
631892-002	S	PH01A	07/22/19 13:20	SW8021B	BTEX by EPA 8021B	07/30/19	08/05/19	JKR	BR4FBZ BZ BZME EBZ X	
631892-003	S	PH01B	07/22/19 13:35	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/05/19	JKR	GRO-DRO PHCC10C28 PF	
631892-003	S	PH01B	07/22/19 13:35	SW8021B	BTEX by EPA 8021B	07/30/19	08/05/19	JKR	BR4FBZ BZ BZME EBZ X	
631892-003	S	PH01B	07/22/19 13:35	E300_CL	Chloride by EPA 300	07/30/19	01/18/20	JKR	CL	
631892-004	S	PH01C	07/22/19 13:45	SW8021B	BTEX by EPA 8021B	07/30/19	08/05/19	JKR	BR4FBZ BZ BZME EBZ X	
631892-004	S	PH01C	07/22/19 13:45	E300_CL	Chloride by EPA 300	07/30/19	01/18/20	JKR	CL	
631892-004	S	PH01C	07/22/19 13:45	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/05/19	JKR	GRO-DRO PHCC10C28 PF	
631892-005	S	PH02	07/22/19 14:00	E300_CL	Chloride by EPA 300	07/30/19	01/18/20	JKR	CL	
631892-005	S	PH02	07/22/19 14:00	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/05/19	JKR	GRO-DRO PHCC10C28 PF	
631892-005	S	PH02	07/22/19 14:00	SW8021B	BTEX by EPA 8021B	07/30/19	08/05/19	JKR	BR4FBZ BZ BZME EBZ X	
631892-006	S	PH02A	07/22/19 14:10	E300_CL	Chloride by EPA 300	07/30/19	01/18/20	JKR	CL	
631892-006	S	PH02A	07/22/19 14:10	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/05/19	JKR	GRO-DRO PHCC10C28 PF	
631892-006	S	PH02A	07/22/19 14:10	SW8021B	BTEX by EPA 8021B	07/30/19	08/05/19	JKR	BR4FBZ BZ BZME EBZ X	
631892-007	S	PH02B	07/22/19 14:15	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/05/19	JKR	GRO-DRO PHCC10C28 PF	
631892-007	S	PH02B	07/22/19 14:15	SW8021B	BTEX by EPA 8021B	07/30/19	08/05/19	JKR	BR4FBZ BZ BZME EBZ X	
631892-007	S	PH02B	07/22/19 14:15	E300_CL	Chloride by EPA 300	07/30/19	01/18/20	JKR	CL	
631892-008	S	PH02C	07/22/19 14:20	SW8021B	BTEX by EPA 8021B	07/30/19	08/05/19	JKR	BR4FBZ BZ BZME EBZ X	
631892-008	S	PH02C	07/22/19 14:20	E300_CL	Chloride by EPA 300	07/30/19	01/18/20	JKR	CL	
631892-008	S	PH02C	07/22/19 14:20	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/05/19	JKR	GRO-DRO PHCC10C28 PF	
631892-009	S	PH03	07/22/19 14:30	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/05/19	JKR	GRO-DRO PHCC10C28 PF	



Inter-Office Shipment

Page 2 of 3

IOS Number **44862**

Date/Time: 07/24/19 10:51

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.: 775826350686

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
631892-009	S	PH03	07/22/19 14:30	E300_CL	Chloride by EPA 300	07/30/19	01/18/20	JKR	CL	
631892-009	S	PH03	07/22/19 14:30	SW8021B	BTEX by EPA 8021B	07/30/19	08/05/19	JKR	BR4FBZ BZ BZME EBZ X	
631892-010	S	PH03A	07/22/19 14:35	E300_CL	Chloride by EPA 300	07/30/19	01/18/20	JKR	CL	
631892-010	S	PH03A	07/22/19 14:35	SW8021B	BTEX by EPA 8021B	07/30/19	08/05/19	JKR	BR4FBZ BZ BZME EBZ X	
631892-010	S	PH03A	07/22/19 14:35	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/05/19	JKR	GRO-DRO PHCC10C28 PF	
631892-011	S	PH03B	07/22/19 14:45	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/05/19	JKR	GRO-DRO PHCC10C28 PF	
631892-011	S	PH03B	07/22/19 14:45	E300_CL	Chloride by EPA 300	07/30/19	01/18/20	JKR	CL	
631892-011	S	PH03B	07/22/19 14:45	SW8021B	BTEX by EPA 8021B	07/30/19	08/05/19	JKR	BR4FBZ BZ BZME EBZ X	
631892-012	S	PH03C	07/22/19 14:55	SW8021B	BTEX by EPA 8021B	07/30/19	08/05/19	JKR	BR4FBZ BZ BZME EBZ X	
631892-012	S	PH03C	07/22/19 14:55	E300_CL	Chloride by EPA 300	07/30/19	01/18/20	JKR	CL	
631892-012	S	PH03C	07/22/19 14:55	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/05/19	JKR	GRO-DRO PHCC10C28 PF	
631892-013	S	PH04	07/22/19 15:05	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/05/19	JKR	GRO-DRO PHCC10C28 PF	
631892-013	S	PH04	07/22/19 15:05	SW8021B	BTEX by EPA 8021B	07/30/19	08/05/19	JKR	BR4FBZ BZ BZME EBZ X	
631892-013	S	PH04	07/22/19 15:05	E300_CL	Chloride by EPA 300	07/30/19	01/18/20	JKR	CL	
631892-014	S	PH04A	07/22/19 15:15	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/05/19	JKR	GRO-DRO PHCC10C28 PF	
631892-014	S	PH04A	07/22/19 15:15	E300_CL	Chloride by EPA 300	07/30/19	01/18/20	JKR	CL	
631892-014	S	PH04A	07/22/19 15:15	SW8021B	BTEX by EPA 8021B	07/30/19	08/05/19	JKR	BR4FBZ BZ BZME EBZ X	
631892-015	S	PH04B	07/22/19 15:20	E300_CL	Chloride by EPA 300	07/30/19	01/18/20	JKR	CL	
631892-015	S	PH04B	07/22/19 15:20	SW8021B	BTEX by EPA 8021B	07/30/19	08/05/19	JKR	BR4FBZ BZ BZME EBZ X	
631892-015	S	PH04B	07/22/19 15:20	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/05/19	JKR	GRO-DRO PHCC10C28 PF	
631892-016	S	PH04C	07/22/19 15:25	E300_CL	Chloride by EPA 300	07/30/19	01/18/20	JKR	CL	
631892-016	S	PH04C	07/22/19 15:25	SW8021B	BTEX by EPA 8021B	07/30/19	08/05/19	JKR	BR4FBZ BZ BZME EBZ X	
631892-016	S	PH04C	07/22/19 15:25	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/05/19	JKR	GRO-DRO PHCC10C28 PF	

Inter Office Shipment or Sample Comments:

Relinquished By:

Received By:

Released to Imaging: 7/1/2022 4:09:16 PM



Inter-Office Shipment

Page 3 of 3

IOS Number 44862

Date/Time: 07/24/19 10:51

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.: 775826350686

E-Mail: jessica.kramer@xenco.com

Inter Office Shipment or Sample Comments:

Date Relinquished:

A handwritten signature in black ink, appearing to read 'Elizabeth McClellan', written over a light gray rectangular background.

Elizabeth McClellan

07/24/2019

Date Received:

A handwritten signature in black ink, appearing to read 'Brianna Teel', written over a light gray rectangular background.

Cooler Temperature:

Brianna Teel

07/25/2019 11:31

0.4



XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 44862

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sent By: Elizabeth McClellan

Date Sent: 07/24/2019 10:51 AM

Received By: Brianna Teel

Date Received: 07/25/2019 11:31 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	.4
#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: 07/25/2019



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 07/24/2019 09:17:00 AM

Work Order #: 631892

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-07

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.6
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	No
#5 Custody Seals intact on sample bottles?	No
#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)?	Yes
#18 Water VOC samples have zero headspace?	N/A

Subbed to Xenco Midland.

* 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: 07/24/2019

Checklist reviewed by:

Jessica Kramer

Date: 07/29/2019

Analytical Report 631951

for
LT Environmental, Inc.

Project Manager: Dan Moir

PLU JV CVX #017H

2RP-3024

05-AUG-19

Collected By: Client



**1089 N Canal Street
Carlsbad, NM 88220**

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

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

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)

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

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

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

Xenco-Atlanta (LELAP Lab ID #04176)

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



05-AUG-19

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **631951**

PLU JV CVX #017H

Project Address: Delaware Basin

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) 631951. 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. 631951 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'. The signature is written in a cursive, flowing style.

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 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH05	S	07-23-19 07:55	1 ft	631951-001
PH05A	S	07-23-19 08:10	2 ft	631951-002
PH05B	S	07-23-19 08:20	3 ft	631951-003
PH05C	S	07-23-19 08:40	4 ft	631951-004
PH06	S	07-23-19 08:55	1 ft	631951-005
PH06A	S	07-23-19 09:10	2 ft	631951-006
PH06B	S	07-23-19 09:25	3 ft	631951-007
PH06C	S	07-23-19 09:40	4 ft	631951-008
PH07	S	07-23-19 09:55	1 ft	631951-009
PH07A	S	07-23-19 10:05	2 ft	631951-010
PH07B	S	07-23-19 10:20	3 ft	631951-011
PH07C	S	07-23-19 10:35	4 ft	631951-012
PH08	S	07-23-19 10:50	1 ft	631951-013
PH08A	S	07-23-19 11:05	2 ft	631951-014
PH08B	S	07-23-19 11:20	3 ft	631951-015
PH08C	S	07-23-19 11:35	4 ft	631951-016
PH09	S	07-23-19 11:50	1 ft	631951-017
PH09A	S	07-23-19 12:00	2 ft	631951-018
PH09B	S	07-23-19 12:15	3 ft	631951-019
PH09C	S	07-23-19 12:30	4 ft	631951-020
PH10	S	07-23-19 13:05	1 ft	631951-021
PH10A	S	07-23-19 13:20	2 ft	631951-022
PH10B	S	07-23-19 13:30	3 ft	631951-023
PH10C	S	07-23-19 13:40	4 ft	631951-024
PH11	S	07-23-19 13:55	1 ft	631951-025
PH11A	S	07-23-19 14:05	2 ft	631951-026
PH11B	S	07-23-19 14:20	3 ft	631951-027
PH11C	S	07-23-19 14:35	4 ft	631951-028
PH12	S	07-23-19 14:50	1 ft	631951-029
PH12A	S	07-23-19 15:05	2 ft	631951-030
PH12B	S	07-23-19 15:15	3 ft	631951-031
PH12C	S	07-23-19 15:25	4 ft	631951-032
PH13	S	07-23-19 15:40	1 ft	631951-033
PH13A	S	07-23-19 15:55	2 ft	631951-034
PH13B	S	07-23-19 16:10	3 ft	631951-035
PH13C	S	07-23-19 16:25	4 ft	631951-036
PH14	S	07-23-19 16:40	1 ft	631951-037
PH14A	S	07-23-19 16:50	2 ft	631951-038
PH14B	S	07-23-19 17:00	3 ft	631951-039
PH14C	S	07-23-19 17:10	4 ft	631951-040

Version: 1.0%

**CASE NARRATIVE****Client Name: LT Environmental, Inc.****Project Name: PLU JV CVX #017H**Project ID: 2RP-3024
Work Order Number(s): 631951Report Date: 05-AUG-19
Date Received: 07/24/2019**Sample receipt non conformances and comments:**

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3096941 BTEX by EPA 8021B

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

Surrogate 4-Bromofluorobenzene recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 631951-021.

Batch: LBA-3096943 BTEX by EPA 8021B

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

Batch: LBA-3097180 BTEX by EPA 8021B

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

Lab Sample ID 631951-033 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: 631951-033, -034, -035, -036, -037, -038, -039, -040.

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 631951

LT Environmental, Inc., Arvada, CO

Project Name: PLU JV CVX #017H

Project Id: 2RP-3024

Contact: Dan Moir

Project Location: Delaware Basin

Date Received in Lab: Wed Jul-24-19 12:30 pm

Report Date: 05-AUG-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	631951-001	631951-002	631951-003	631951-004	631951-005	631951-006
	<i>Field Id:</i>	PH05	PH05A	PH05B	PH05C	PH06	PH06A
	<i>Depth:</i>	1- ft	2- ft	3- ft	4- ft	1- ft	2- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jul-23-19 07:55	Jul-23-19 08:10	Jul-23-19 08:20	Jul-23-19 08:40	Jul-23-19 08:55	Jul-23-19 09:10
BTEX by EPA 8021B SUB: T104704400-18-16	<i>Extracted:</i>	Jul-26-19 17:11	Jul-26-19 17:11	Jul-26-19 17:11	Jul-26-19 17:11	Jul-26-19 17:11	Jul-26-19 17:11
	<i>Analyzed:</i>	Jul-29-19 21:28	Jul-29-19 21:48	Jul-29-19 23:08	Jul-29-19 23:28	Jul-29-19 23:48	Jul-30-19 00:08
	<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	<0.00198 0.00198	<0.00198 0.00198	<0.00198 0.00198	<0.00198 0.00198	<0.00198 0.00198
Toluene		<0.00199 0.00199	<0.00198 0.00198	<0.00198 0.00198	<0.00198 0.00198	<0.00198 0.00198	<0.00198 0.00198
Ethylbenzene		<0.00199 0.00199	<0.00198 0.00198	<0.00198 0.00198	<0.00198 0.00198	<0.00198 0.00198	<0.00198 0.00198
m,p-Xylenes		<0.00398 0.00398	<0.00396 0.00396	<0.00396 0.00396	<0.00396 0.00396	<0.00396 0.00396	<0.00396 0.00396
o-Xylene		<0.00199 0.00199	<0.00198 0.00198	<0.00198 0.00198	<0.00198 0.00198	<0.00198 0.00198	<0.00198 0.00198
Total Xylenes		<0.00199 0.00199	<0.00198 0.00198	<0.00198 0.00198	<0.00198 0.00198	<0.00198 0.00198	<0.00198 0.00198
Total BTEX		<0.00199 0.00199	<0.00198 0.00198	<0.00198 0.00198	<0.00198 0.00198	<0.00198 0.00198	<0.00198 0.00198
Chloride by EPA 300 SUB: T104704400-18-16	<i>Extracted:</i>	Jul-26-19 09:10	Jul-26-19 09:10	Jul-26-19 09:10	Jul-26-19 09:10	Jul-26-19 09:10	Jul-26-19 09:10
	<i>Analyzed:</i>	Jul-26-19 10:55	Jul-26-19 11:01	Jul-26-19 11:13	Jul-26-19 11:32	Jul-26-19 11:38	Jul-26-19 11:57
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		11.5 4.99	<4.96 4.96	<4.97 4.97	5.22 5.02	<5.03 5.03	<5.04 5.04
TPH by SW8015 Mod SUB: T104704215-19-29	<i>Extracted:</i>	Jul-30-19 17:41	Jul-30-19 17:44	Jul-30-19 17:47	Jul-30-19 17:50	Jul-30-19 17:53	Jul-30-19 17:56
	<i>Analyzed:</i>	Jul-31-19 00:16	Jul-31-19 00:34	Jul-31-19 00:53	Jul-31-19 01:31	Jul-31-19 01:50	Jul-31-19 02:09
	<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)		<49.8 49.8	<49.8 49.8	<49.7 49.7	<50.1 50.1	<49.8 49.8	<49.9 49.9
Diesel Range Organics (DRO)		<49.8 49.8	<49.8 49.8	<49.7 49.7	<50.1 50.1	<49.8 49.8	<49.9 49.9
Motor Oil Range Hydrocarbons (MRO)		<49.8 49.8	<49.8 49.8	<49.7 49.7	<50.1 50.1	<49.8 49.8	<49.9 49.9
Total TPH		<49.8 49.8	<49.8 49.8	<49.7 49.7	<50.1 50.1	<49.8 49.8	<49.9 49.9
Total GRO-DRO		<49.8 49.8	<49.8 49.8	<49.7 49.7	<50.1 50.1	<49.8 49.8	<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.

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Jessica Kramer
Project Assistant



Certificate of Analysis Summary 631951

LT Environmental, Inc., Arvada, CO

Project Name: PLU JV CVX #017H

Project Id: 2RP-3024

Contact: Dan Moir

Project Location: Delaware Basin

Date Received in Lab: Wed Jul-24-19 12:30 pm

Report Date: 05-AUG-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	631951-007	631951-008	631951-009	631951-010	631951-011	631951-012
	<i>Field Id:</i>	PH06B	PH06C	PH07	PH07A	PH07B	PH07C
	<i>Depth:</i>	3- ft	4- ft	1- ft	2- ft	3- ft	4- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jul-23-19 09:25	Jul-23-19 09:40	Jul-23-19 09:55	Jul-23-19 10:05	Jul-23-19 10:20	Jul-23-19 10:35
BTEX by EPA 8021B SUB: T104704400-18-16	<i>Extracted:</i>	Jul-26-19 17:11	Jul-26-19 17:11	Jul-26-19 17:11	Jul-26-19 17:11	Jul-26-19 17:11	Jul-26-19 17:11
	<i>Analyzed:</i>	Jul-30-19 00:29	Jul-30-19 00:49	Jul-30-19 01:09	Jul-30-19 01:29	Jul-30-19 01:49	Jul-30-19 02:09
	<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	<0.00199 0.00199	<0.00198 0.00198	<0.00199 0.00199	<0.00199 0.00199
Toluene		<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198	<0.00199 0.00199	<0.00199 0.00199
Ethylbenzene		<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198	<0.00199 0.00199	<0.00199 0.00199
m,p-Xylenes		<0.00398 0.00398	<0.00399 0.00399	<0.00398 0.00398	<0.00397 0.00397	<0.00398 0.00398	<0.00398 0.00398
o-Xylene		<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198	<0.00199 0.00199	<0.00199 0.00199
Total Xylenes		<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198	<0.00199 0.00199	<0.00199 0.00199
Total BTEX		<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198	<0.00199 0.00199	<0.00199 0.00199
Chloride by EPA 300 SUB: T104704400-18-16	<i>Extracted:</i>	Jul-26-19 09:10	Jul-26-19 09:10	Jul-26-19 09:10	Jul-26-19 09:10	Jul-26-19 09:10	Jul-26-19 09:10
	<i>Analyzed:</i>	Jul-26-19 12:03	Jul-26-19 12:10	Jul-26-19 12:16	Jul-26-19 12:22	Jul-26-19 12:29	Jul-26-19 12:35
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		<4.99 4.99	<4.97 4.97	<4.98 4.98	<4.97 4.97	<4.96 4.96	<4.96 4.96
TPH by SW8015 Mod SUB: T104704215-19-29	<i>Extracted:</i>	Jul-30-19 17:59	Jul-30-19 18:02	Jul-30-19 18:05	Jul-30-19 18:08	Jul-30-19 18:11	Jul-30-19 18:14
	<i>Analyzed:</i>	Jul-31-19 02:28	Jul-31-19 02:47	Jul-31-19 03:06	Jul-31-19 03:24	Jul-31-19 03:43	Jul-31-19 04:02
	<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)		<49.7 49.7	<49.5 49.5	<50.0 50.0	<50.1 50.1	<50.0 50.0	<50.1 50.1
Diesel Range Organics (DRO)		<49.7 49.7	<49.5 49.5	<50.0 50.0	<50.1 50.1	<50.0 50.0	<50.1 50.1
Motor Oil Range Hydrocarbons (MRO)		<49.7 49.7	<49.5 49.5	<50.0 50.0	<50.1 50.1	<50.0 50.0	<50.1 50.1
Total TPH		<49.7 49.7	<49.5 49.5	<50.0 50.0	<50.1 50.1	<50.0 50.0	<50.1 50.1
Total GRO-DRO		<49.7 49.7	<49.5 49.5	<50.0 50.0	<50.1 50.1	<50.0 50.0	<50.1 50.1

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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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 631951

LT Environmental, Inc., Arvada, CO

Project Name: PLU JV CVX #017H

Project Id: 2RP-3024

Contact: Dan Moir

Project Location: Delaware Basin

Date Received in Lab: Wed Jul-24-19 12:30 pm

Report Date: 05-AUG-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	631951-013	631951-014	631951-015	631951-016	631951-017	631951-018
	<i>Field Id:</i>	PH08	PH08A	PH08B	PH08C	PH09	PH09A
	<i>Depth:</i>	1- ft	2- ft	3- ft	4- ft	1- ft	2- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jul-23-19 10:50	Jul-23-19 11:05	Jul-23-19 11:20	Jul-23-19 11:35	Jul-23-19 11:50	Jul-23-19 12:00
BTEX by EPA 8021B SUB: T104704400-18-16	<i>Extracted:</i>	Jul-29-19 11:00	Jul-29-19 11:00	Jul-29-19 11:00	Jul-29-19 11:00	Jul-29-19 11:00	Jul-29-19 11:00
	<i>Analyzed:</i>	Jul-30-19 03:58	Jul-30-19 04:18	Jul-30-19 04:38	Jul-30-19 04:58	Jul-30-19 05:18	Jul-30-19 05:38
	<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	<0.00198 0.00198	<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200
Toluene		<0.00202 0.00202	<0.00198 0.00198	<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200
Ethylbenzene		<0.00202 0.00202	<0.00198 0.00198	<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200
m,p-Xylenes		<0.00404 0.00404	<0.00397 0.00397	<0.00402 0.00402	<0.00399 0.00399	<0.00398 0.00398	<0.00401 0.00401
o-Xylene		<0.00202 0.00202	<0.00198 0.00198	<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200
Total Xylenes		<0.00202 0.00202	<0.00198 0.00198	<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200
Total BTEX		<0.00202 0.00202	<0.00198 0.00198	<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200
Chloride by EPA 300 SUB: T104704400-18-16	<i>Extracted:</i>	Jul-27-19 12:00	Jul-27-19 12:00	Jul-27-19 12:00	Jul-27-19 12:00	Jul-27-19 12:00	Jul-27-19 12:00
	<i>Analyzed:</i>	Jul-27-19 16:02	Jul-27-19 16:18	Jul-27-19 16:23	Jul-27-19 16:29	Jul-27-19 16:34	Jul-27-19 16:50
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		<5.05 5.05	<5.03 5.03	<4.99 4.99	<4.97 4.97	<5.02 5.02	<5.02 5.02
TPH by SW8015 Mod SUB: T104704215-19-29	<i>Extracted:</i>	Jul-30-19 18:17	Jul-30-19 18:20	Jul-30-19 18:23	Jul-30-19 18:26	Jul-30-19 18:29	Jul-30-19 18:32
	<i>Analyzed:</i>	Jul-31-19 04:20	Jul-31-19 01:31	Jul-31-19 01:50	Jul-31-19 02:09	Jul-31-19 02:28	Jul-31-19 02:47
	<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)		<50.1 50.1	<49.8 49.8	<50.1 50.1	<50.0 50.0	<50.0 50.0	<50.0 50.0
Diesel Range Organics (DRO)		<50.1 50.1	<49.8 49.8	<50.1 50.1	<50.0 50.0	<50.0 50.0	<50.0 50.0
Motor Oil Range Hydrocarbons (MRO)		<50.1 50.1	<49.8 49.8	<50.1 50.1	<50.0 50.0	<50.0 50.0	<50.0 50.0
Total TPH		<50.1 50.1	<49.8 49.8	<50.1 50.1	<50.0 50.0	<50.0 50.0	<50.0 50.0
Total GRO-DRO		<50.1 50.1	<49.8 49.8	<50.1 50.1	<50.0 50.0	<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.

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Version: 1.9%

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 631951

LT Environmental, Inc., Arvada, CO

Project Name: PLU JV CVX #017H

Project Id: 2RP-3024

Contact: Dan Moir

Project Location: Delaware Basin

Date Received in Lab: Wed Jul-24-19 12:30 pm

Report Date: 05-AUG-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	631951-019	631951-020	631951-021	631951-022	631951-023	631951-024
	<i>Field Id:</i>	PH09B	PH09C	PH10	PH10A	PH10B	PH10C
	<i>Depth:</i>	3- ft	4- ft	1- ft	2- ft	3- ft	4- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jul-23-19 12:15	Jul-23-19 12:30	Jul-23-19 13:05	Jul-23-19 13:20	Jul-23-19 13:30	Jul-23-19 13:40
BTEX by EPA 8021B SUB: T104704400-18-16	<i>Extracted:</i>	Jul-29-19 11:00	Jul-29-19 11:00	Jul-29-19 11:00	Jul-29-19 11:00	Jul-29-19 11:00	Jul-29-19 11:00
	<i>Analyzed:</i>	Jul-30-19 05:58	Jul-30-19 06:19	Jul-30-19 06:39	Jul-30-19 10:17	Jul-30-19 11:35	Jul-30-19 11:56
	<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	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00201 0.00201
Toluene		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00201 0.00201
Ethylbenzene		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00201 0.00201
m,p-Xylenes		<0.00400 0.00400	<0.00398 0.00398	<0.00400 0.00400	<0.00402 0.00402	<0.00399 0.00399	<0.00402 0.00402
o-Xylene		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00201 0.00201
Total Xylenes		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00201 0.00201
Total BTEX		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00201 0.00201
Chloride by EPA 300 SUB: T104704400-18-16	<i>Extracted:</i>	Jul-27-19 12:00	Jul-27-19 12:00	Jul-27-19 12:00	Jul-27-19 12:00	Jul-27-19 12:00	Jul-27-19 12:00
	<i>Analyzed:</i>	Jul-27-19 16:55	Jul-27-19 17:00	Jul-27-19 17:06	Jul-27-19 17:11	Jul-27-19 17:16	Jul-27-19 17:32
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		<5.02 5.02	<5.05 5.05	<4.99 4.99	<4.96 4.96	<4.96 4.96	<4.97 4.97
TPH by SW8015 Mod SUB: T104704215-19-29	<i>Extracted:</i>	Jul-30-19 18:44	Jul-30-19 18:47	Jul-30-19 18:56	Jul-30-19 18:59	Jul-30-19 19:02	Jul-30-19 19:05
	<i>Analyzed:</i>	Aug-01-19 03:15	Aug-01-19 03:34	Aug-01-19 04:30	Aug-01-19 04:49	Aug-01-19 05:08	Aug-01-19 05:46
	<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	<49.8 49.8	<49.8 49.8	<50.2 50.2	<50.2 50.2
Diesel Range Organics (DRO)		<50.0 50.0	<50.0 50.0	<49.8 49.8	<49.8 49.8	<50.2 50.2	<50.2 50.2
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<50.0 50.0	<49.8 49.8	<49.8 49.8	<50.2 50.2	<50.2 50.2
Total TPH		<50.0 50.0	<50.0 50.0	<49.8 49.8	<49.8 49.8	<50.2 50.2	<50.2 50.2
Total GRO-DRO		<50.0 50.0	<50.0 50.0	<49.8 49.8	<49.8 49.8	<50.2 50.2	<50.2 50.2

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Jessica Kramer
Project Assistant



Certificate of Analysis Summary 631951

LT Environmental, Inc., Arvada, CO

Project Name: PLU JV CVX #017H

Project Id: 2RP-3024

Contact: Dan Moir

Project Location: Delaware Basin

Date Received in Lab: Wed Jul-24-19 12:30 pm

Report Date: 05-AUG-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	631951-025	631951-026	631951-027	631951-028	631951-029	631951-030
	<i>Field Id:</i>	PH11	PH11A	PH11B	PH11C	PH12	PH12A
	<i>Depth:</i>	1- ft	2- ft	3- ft	4- ft	1- ft	2- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jul-23-19 13:55	Jul-23-19 14:05	Jul-23-19 14:20	Jul-23-19 14:35	Jul-23-19 14:50	Jul-23-19 15:05
BTEX by EPA 8021B SUB: T104704400-18-16	<i>Extracted:</i>	Jul-29-19 11:00	Jul-29-19 11:00	Jul-29-19 11:00	Jul-29-19 11:00	Jul-29-19 11:00	Jul-29-19 11:00
	<i>Analyzed:</i>	Jul-30-19 12:16	Jul-30-19 12:36	Jul-30-19 12:56	Jul-30-19 13:16	Jul-30-19 13:36	Jul-30-19 13:57
	<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	<0.00199 0.00199	<0.00201 0.00201	<0.00202 0.00202	<0.00202 0.00202	<0.00200 0.00200
Toluene		<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201	<0.00202 0.00202	<0.00202 0.00202	<0.00200 0.00200
Ethylbenzene		<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201	<0.00202 0.00202	<0.00202 0.00202	<0.00200 0.00200
m,p-Xylenes		<0.00401 0.00401	<0.00398 0.00398	<0.00402 0.00402	<0.00403 0.00403	<0.00403 0.00403	<0.00400 0.00400
o-Xylene		<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201	<0.00202 0.00202	<0.00202 0.00202	<0.00200 0.00200
Total Xylenes		<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201	<0.00202 0.00202	<0.00202 0.00202	<0.00200 0.00200
Total BTEX		<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201	<0.00202 0.00202	<0.00202 0.00202	<0.00200 0.00200
Chloride by EPA 300 SUB: T104704400-18-16	<i>Extracted:</i>	Jul-27-19 12:00	Jul-27-19 12:00	Jul-27-19 12:00	Jul-27-19 12:00	Jul-27-19 12:00	Jul-27-19 12:00
	<i>Analyzed:</i>	Jul-27-19 17:37	Jul-27-19 17:53	Jul-27-19 17:59	Jul-27-19 18:04	Jul-27-19 18:09	Jul-27-19 18:15
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		<4.99 4.99	<5.01 5.01	<5.05 5.05	<5.03 5.03	<4.98 4.98	<4.97 4.97
TPH by SW8015 Mod SUB: T104704215-19-29	<i>Extracted:</i>	Jul-30-19 19:08	Jul-30-19 19:11	Jul-30-19 19:14	Jul-30-19 19:17	Jul-30-19 19:20	Jul-30-19 19:23
	<i>Analyzed:</i>	Aug-01-19 06:05	Aug-01-19 06:24	Aug-01-19 06:42	Aug-01-19 07:01	Aug-01-19 07:19	Aug-01-19 07:37
	<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)		<49.9 49.9	<50.0 50.0	<49.8 49.8	<49.9 49.9	<49.8 49.8	<50.0 50.0
Diesel Range Organics (DRO)		<49.9 49.9	<50.0 50.0	<49.8 49.8	<49.9 49.9	<49.8 49.8	<50.0 50.0
Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9	<50.0 50.0	<49.8 49.8	<49.9 49.9	<49.8 49.8	<50.0 50.0
Total TPH		<49.9 49.9	<50.0 50.0	<49.8 49.8	<49.9 49.9	<49.8 49.8	<50.0 50.0
Total GRO-DRO		<49.9 49.9	<50.0 50.0	<49.8 49.8	<49.9 49.9	<49.8 49.8	<50.0 50.0

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Jessica Kramer
Project Assistant



Certificate of Analysis Summary 631951

LT Environmental, Inc., Arvada, CO

Project Name: PLU JV CVX #017H

Project Id: 2RP-3024

Contact: Dan Moir

Project Location: Delaware Basin

Date Received in Lab: Wed Jul-24-19 12:30 pm

Report Date: 05-AUG-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	631951-031	631951-032	631951-033	631951-034	631951-035	631951-036
	<i>Field Id:</i>	PH12B	PH12C	PH13	PH13A	PH13B	PH13C
	<i>Depth:</i>	3- ft	4- ft	1- ft	2- ft	3- ft	4- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jul-23-19 15:15	Jul-23-19 15:25	Jul-23-19 15:40	Jul-23-19 15:55	Jul-23-19 16:10	Jul-23-19 16:25
BTEX by EPA 8021B SUB: T104704400-18-16	<i>Extracted:</i>	Jul-29-19 11:00	Jul-29-19 11:00	Jul-29-19 11:25	Jul-29-19 11:25	Jul-29-19 11:25	Jul-29-19 11:25
	<i>Analyzed:</i>	Jul-30-19 14:17	Jul-30-19 14:37	Jul-31-19 09:54	Jul-31-19 10:14	Jul-31-19 10:34	Jul-31-19 10:54
	<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	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201
Toluene		<0.00198 0.00198	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201
Ethylbenzene		<0.00198 0.00198	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201
m,p-Xylenes		<0.00397 0.00397	<0.00402 0.00402	<0.00401 0.00401	<0.00400 0.00400	<0.00400 0.00400	<0.00402 0.00402
o-Xylene		<0.00198 0.00198	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201
Total Xylenes		<0.00198 0.00198	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201
Total BTEX		<0.00198 0.00198	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201
Chloride by EPA 300 SUB: T104704400-18-16	<i>Extracted:</i>	Jul-27-19 12:00	Jul-27-19 12:00	Jul-27-19 12:30	Jul-27-19 12:30	Jul-27-19 12:30	Jul-27-19 12:30
	<i>Analyzed:</i>	Jul-27-19 18:20	Jul-27-19 18:25	Jul-27-19 16:32	Jul-27-19 16:49	Jul-27-19 16:54	Jul-27-19 16:59
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		<4.95 4.95	<4.95 4.95	<4.97 4.97	<5.02 5.02	<5.05 5.05	<4.99 4.99
TPH by SW8015 Mod SUB: T104704215-19-29	<i>Extracted:</i>	Jul-30-19 19:26	Jul-30-19 19:29	Jul-30-19 19:32	Jul-30-19 19:35	Jul-30-19 19:38	Jul-30-19 19:41
	<i>Analyzed:</i>	Aug-01-19 07:56	Aug-01-19 08:14	Aug-01-19 08:32	Aug-01-19 12:22	Aug-01-19 12:41	Aug-01-19 13:00
	<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	<50.1 50.1	<50.0 50.0	<50.0 50.0	<50.0 50.0	<50.0 50.0
Diesel Range Organics (DRO)		<50.0 50.0	<50.1 50.1	<50.0 50.0	<50.0 50.0	<50.0 50.0	<50.0 50.0
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<50.1 50.1	<50.0 50.0	<50.0 50.0	<50.0 50.0	<50.0 50.0
Total TPH		<50.0 50.0	<50.1 50.1	<50.0 50.0	<50.0 50.0	<50.0 50.0	<50.0 50.0
Total GRO-DRO		<50.0 50.0	<50.1 50.1	<50.0 50.0	<50.0 50.0	<50.0 50.0	<50.0 50.0

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Jessica Kramer
Project Assistant



Certificate of Analysis Summary 631951

LT Environmental, Inc., Arvada, CO

Project Name: PLU JV CVX #017H

Project Id: 2RP-3024
Contact: Dan Moir
Project Location: Delaware Basin

Date Received in Lab: Wed Jul-24-19 12:30 pm
Report Date: 05-AUG-19
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	631951-037	631951-038	631951-039	631951-040		
	<i>Field Id:</i>	PH14	PH14A	PH14B	PH14C		
	<i>Depth:</i>	1- ft	2- ft	3- ft	4- ft		
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	Jul-23-19 16:40	Jul-23-19 16:50	Jul-23-19 17:00	Jul-23-19 17:10		
BTEX by EPA 8021B SUB: T104704400-18-16	<i>Extracted:</i>	Jul-29-19 11:25	Jul-29-19 11:25	Jul-29-19 11:25	Jul-29-19 11:25		
	<i>Analyzed:</i>	Jul-31-19 11:14	Jul-31-19 11:35	Jul-31-19 11:55	Aug-01-19 12:15		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Benzene		<0.00201 0.00201	<0.00201 0.00201	<0.00198 0.00198	<0.00199 0.00199		
Toluene		<0.00201 0.00201	<0.00201 0.00201	<0.00198 0.00198	<0.00199 0.00199		
Ethylbenzene		<0.00201 0.00201	<0.00201 0.00201	<0.00198 0.00198	<0.00199 0.00199		
m,p-Xylenes		<0.00402 0.00402	<0.00402 0.00402	<0.00397 0.00397	<0.00398 0.00398		
o-Xylene		<0.00201 0.00201	<0.00201 0.00201	<0.00198 0.00198	<0.00199 0.00199		
Total Xylenes		<0.00201 0.00201	<0.00201 0.00201	<0.00198 0.00198	<0.00199 0.00199		
Total BTEX		<0.00201 0.00201	<0.00201 0.00201	<0.00198 0.00198	<0.00199 0.00199		
Chloride by EPA 300 SUB: T104704400-18-16	<i>Extracted:</i>	Jul-27-19 12:30	Jul-27-19 12:30	Jul-27-19 12:30	Jul-27-19 12:30		
	<i>Analyzed:</i>	Jul-27-19 17:05	Jul-27-19 17:21	Jul-27-19 17:27	Jul-27-19 17:48		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		<5.03 5.03	5.94 5.01	7.01 5.01	<4.97 4.97		
TPH by SW8015 Mod SUB: T104704215-19-29	<i>Extracted:</i>	Jul-30-19 19:44	Jul-30-19 19:47	Jul-31-19 15:09	Jul-31-19 15:12		
	<i>Analyzed:</i>	Aug-01-19 13:19	Aug-01-19 13:37	Jul-31-19 23:48	Aug-01-19 00:06		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Gasoline Range Hydrocarbons (GRO)		<50.1 50.1	<50.1 50.1	<50.1 50.1	<49.8 49.8		
Diesel Range Organics (DRO)		<50.1 50.1	<50.1 50.1	<50.1 50.1	<49.8 49.8		
Motor Oil Range Hydrocarbons (MRO)		<50.1 50.1	<50.1 50.1	<50.1 50.1	<49.8 49.8		
Total TPH		<50.1 50.1	<50.1 50.1	<50.1 50.1	<49.8 49.8		
Total GRO-DRO		<50.1 50.1	<50.1 50.1	<50.1 50.1	<49.8 49.8		

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Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Jessica Kramer
Project Assistant



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH05**
Lab Sample Id: 631951-001

Matrix: Soil
Date Collected: 07.23.19 07.55

Date Received: 07.24.19 12.30
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096662

Date Prep: 07.26.19 09.10

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	11.5	4.99	mg/kg	07.26.19 10.55		1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3097085

Date Prep: 07.30.19 17.41

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	07.31.19 00.16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	07.31.19 00.16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	07.31.19 00.16	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	07.31.19 00.16	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	07.31.19 00.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	07.31.19 00.16	
o-Terphenyl	84-15-1	88	%	70-135	07.31.19 00.16	



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH05**
Lab Sample Id: 631951-001

Matrix: Soil
Date Collected: 07.23.19 07.55

Date Received: 07.24.19 12.30
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096943

Prep Method: SW5030B

% Moisture:

Date Prep: 07.26.19 17.11

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.29.19 21.28	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.29.19 21.28	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.29.19 21.28	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.29.19 21.28	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.29.19 21.28	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.29.19 21.28	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.29.19 21.28	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	105	%	70-130	07.29.19 21.28		
4-Bromofluorobenzene	460-00-4	113	%	70-130	07.29.19 21.28		



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH05A**
Lab Sample Id: 631951-002

Matrix: Soil
Date Collected: 07.23.19 08.10

Date Received: 07.24.19 12.30
Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096662

Date Prep: 07.26.19 09.10

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	<4.96	4.96	mg/kg	07.26.19 11.01	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3097085

Date Prep: 07.30.19 17.44

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	07.31.19 00.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	07.31.19 00.34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	07.31.19 00.34	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	07.31.19 00.34	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	07.31.19 00.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	07.31.19 00.34	
o-Terphenyl	84-15-1	91	%	70-135	07.31.19 00.34	



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH05A**
Lab Sample Id: 631951-002

Matrix: Soil
Date Collected: 07.23.19 08.10

Date Received: 07.24.19 12.30
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096943

Date Prep: 07.26.19 17.11

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	<0.00198	0.00198	mg/kg	07.29.19 21.48	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.29.19 21.48	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.29.19 21.48	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	07.29.19 21.48	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.29.19 21.48	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	07.29.19 21.48	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.29.19 21.48	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	99	%	70-130	07.29.19 21.48		
1,4-Difluorobenzene	540-36-3	101	%	70-130	07.29.19 21.48		



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH05B**
Lab Sample Id: 631951-003

Matrix: Soil
Date Collected: 07.23.19 08.20

Date Received: 07.24.19 12.30
Sample Depth: 3 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096662

Date Prep: 07.26.19 09.10

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	<4.97	4.97	mg/kg	07.26.19 11.13	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3097085

Date Prep: 07.30.19 17.47

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.7	49.7	mg/kg	07.31.19 00.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.7	49.7	mg/kg	07.31.19 00.53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.7	49.7	mg/kg	07.31.19 00.53	U	1
Total TPH	PHC635	<49.7	49.7	mg/kg	07.31.19 00.53	U	1
Total GRO-DRO	PHC628	<49.7	49.7	mg/kg	07.31.19 00.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	07.31.19 00.53	
o-Terphenyl	84-15-1	94	%	70-135	07.31.19 00.53	



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH05B**
Lab Sample Id: 631951-003

Matrix: Soil
Date Collected: 07.23.19 08.20

Date Received: 07.24.19 12.30
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096943

Prep Method: SW5030B

% Moisture:

Date Prep: 07.26.19 17.11

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	07.29.19 23.08	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.29.19 23.08	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.29.19 23.08	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	07.29.19 23.08	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.29.19 23.08	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	07.29.19 23.08	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.29.19 23.08	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	100	%	70-130	07.29.19 23.08		
4-Bromofluorobenzene	460-00-4	95	%	70-130	07.29.19 23.08		



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH05C** Matrix: Soil Date Received: 07.24.19 12.30
 Lab Sample Id: 631951-004 Date Collected: 07.23.19 08.40 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 07.26.19 09.10 Basis: Wet Weight
 Seq Number: 3096662 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	5.22	5.02	mg/kg	07.26.19 11.32		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ISU % Moisture:
 Analyst: ISU Date Prep: 07.30.19 17.50 Basis: Wet Weight
 Seq Number: 3097085 SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	07.31.19 01.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	07.31.19 01.31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	07.31.19 01.31	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	07.31.19 01.31	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	07.31.19 01.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	07.31.19 01.31	
o-Terphenyl	84-15-1	101	%	70-135	07.31.19 01.31	



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH05C**
 Lab Sample Id: 631951-004

Matrix: Soil
 Date Collected: 07.23.19 08.40

Date Received: 07.24.19 12.30
 Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALG

% Moisture:

Analyst: AMB

Date Prep: 07.26.19 17.11

Basis: Wet Weight

Seq Number: 3096943

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	07.29.19 23.28	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.29.19 23.28	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.29.19 23.28	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	07.29.19 23.28	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.29.19 23.28	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	07.29.19 23.28	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.29.19 23.28	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	105	%	70-130	07.29.19 23.28		
4-Bromofluorobenzene	460-00-4	108	%	70-130	07.29.19 23.28		



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH06**
Lab Sample Id: 631951-005

Matrix: Soil
Date Collected: 07.23.19 08.55

Date Received: 07.24.19 12.30
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096662

Date Prep: 07.26.19 09.10

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	<5.03	5.03	mg/kg	07.26.19 11.38	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3097085

Date Prep: 07.30.19 17.53

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	07.31.19 01.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	07.31.19 01.50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	07.31.19 01.50	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	07.31.19 01.50	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	07.31.19 01.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	07.31.19 01.50	
o-Terphenyl	84-15-1	99	%	70-135	07.31.19 01.50	



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH06**
Lab Sample Id: 631951-005

Matrix: Soil
Date Collected: 07.23.19 08.55

Date Received: 07.24.19 12.30
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096943

Prep Method: SW5030B

% Moisture:

Date Prep: 07.26.19 17.11

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	07.29.19 23.48	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.29.19 23.48	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.29.19 23.48	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	07.29.19 23.48	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.29.19 23.48	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	07.29.19 23.48	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.29.19 23.48	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	07.29.19 23.48		
4-Bromofluorobenzene	460-00-4	110	%	70-130	07.29.19 23.48		



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH06A**
 Lab Sample Id: 631951-006

Matrix: Soil
 Date Collected: 07.23.19 09.10

Date Received: 07.24.19 12.30
 Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096662

Date Prep: 07.26.19 09.10

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	<5.04	5.04	mg/kg	07.26.19 11.57	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3097085

Date Prep: 07.30.19 17.56

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	07.31.19 02.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	07.31.19 02.09	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	07.31.19 02.09	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	07.31.19 02.09	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	07.31.19 02.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	07.31.19 02.09	
o-Terphenyl	84-15-1	101	%	70-135	07.31.19 02.09	



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH06A**
Lab Sample Id: 631951-006

Matrix: Soil
Date Collected: 07.23.19 09.10

Date Received: 07.24.19 12.30
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096943

Date Prep: 07.26.19 17.11

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	<0.00198	0.00198	mg/kg	07.30.19 00.08	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.30.19 00.08	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.30.19 00.08	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	07.30.19 00.08	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.30.19 00.08	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	07.30.19 00.08	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.30.19 00.08	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	108	%	70-130	07.30.19 00.08		
1,4-Difluorobenzene	540-36-3	105	%	70-130	07.30.19 00.08		



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH06B**
 Lab Sample Id: 631951-007

Matrix: Soil
 Date Collected: 07.23.19 09.25

Date Received: 07.24.19 12.30
 Sample Depth: 3 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096662

Date Prep: 07.26.19 09.10

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	<4.99	4.99	mg/kg	07.26.19 12.03	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3097085

Date Prep: 07.30.19 17.59

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.7	49.7	mg/kg	07.31.19 02.28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.7	49.7	mg/kg	07.31.19 02.28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.7	49.7	mg/kg	07.31.19 02.28	U	1
Total TPH	PHC635	<49.7	49.7	mg/kg	07.31.19 02.28	U	1
Total GRO-DRO	PHC628	<49.7	49.7	mg/kg	07.31.19 02.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	07.31.19 02.28	
o-Terphenyl	84-15-1	97	%	70-135	07.31.19 02.28	



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH06B**
Lab Sample Id: 631951-007

Matrix: Soil
Date Collected: 07.23.19 09.25

Date Received: 07.24.19 12.30
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096943

Date Prep: 07.26.19 17.11

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	<0.00199	0.00199	mg/kg	07.30.19 00.29	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.30.19 00.29	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.30.19 00.29	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.30.19 00.29	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.30.19 00.29	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.30.19 00.29	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.30.19 00.29	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	101	%	70-130	07.30.19 00.29		
4-Bromofluorobenzene	460-00-4	106	%	70-130	07.30.19 00.29		



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH06C**
Lab Sample Id: 631951-008

Matrix: Soil
Date Collected: 07.23.19 09.40

Date Received: 07.24.19 12.30
Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096662

Date Prep: 07.26.19 09.10

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	<4.97	4.97	mg/kg	07.26.19 12.10	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3097085

Date Prep: 07.30.19 18.02

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.5	49.5	mg/kg	07.31.19 02.47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.5	49.5	mg/kg	07.31.19 02.47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.5	49.5	mg/kg	07.31.19 02.47	U	1
Total TPH	PHC635	<49.5	49.5	mg/kg	07.31.19 02.47	U	1
Total GRO-DRO	PHC628	<49.5	49.5	mg/kg	07.31.19 02.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	07.31.19 02.47	
o-Terphenyl	84-15-1	103	%	70-135	07.31.19 02.47	



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH06C**
Lab Sample Id: 631951-008

Matrix: Soil
Date Collected: 07.23.19 09.40

Date Received: 07.24.19 12.30
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096943

Date Prep: 07.26.19 17.11

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	07.30.19 00.49	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.30.19 00.49	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.30.19 00.49	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.30.19 00.49	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.30.19 00.49	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.30.19 00.49	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.30.19 00.49	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	101	%	70-130	07.30.19 00.49		
1,4-Difluorobenzene	540-36-3	100	%	70-130	07.30.19 00.49		



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH07**
 Lab Sample Id: 631951-009

Matrix: Soil
 Date Collected: 07.23.19 09.55

Date Received: 07.24.19 12.30
 Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096662

Date Prep: 07.26.19 09.10

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	<4.98	4.98	mg/kg	07.26.19 12.16	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3097085

Date Prep: 07.30.19 18.05

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.31.19 03.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.31.19 03.06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.31.19 03.06	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.31.19 03.06	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	07.31.19 03.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	07.31.19 03.06	
o-Terphenyl	84-15-1	109	%	70-135	07.31.19 03.06	



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH07**
Lab Sample Id: 631951-009

Matrix: Soil
Date Collected: 07.23.19 09.55

Date Received: 07.24.19 12.30
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096943

Prep Method: SW5030B

% Moisture:

Date Prep: 07.26.19 17.11

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.30.19 01.09	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.30.19 01.09	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.30.19 01.09	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.30.19 01.09	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.30.19 01.09	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.30.19 01.09	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.30.19 01.09	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	101	%	70-130	07.30.19 01.09		
1,4-Difluorobenzene	540-36-3	105	%	70-130	07.30.19 01.09		



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH07A**
 Lab Sample Id: 631951-010

Matrix: Soil
 Date Collected: 07.23.19 10.05

Date Received: 07.24.19 12.30
 Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096662

Date Prep: 07.26.19 09.10

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	<4.97	4.97	mg/kg	07.26.19 12.22	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3097085

Date Prep: 07.30.19 18.08

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	07.31.19 03.24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	07.31.19 03.24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	07.31.19 03.24	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	07.31.19 03.24	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	07.31.19 03.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	07.31.19 03.24	
o-Terphenyl	84-15-1	109	%	70-135	07.31.19 03.24	



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH07A**
Lab Sample Id: 631951-010

Matrix: Soil
Date Collected: 07.23.19 10.05

Date Received: 07.24.19 12.30
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096943

Date Prep: 07.26.19 17.11

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	<0.00198	0.00198	mg/kg	07.30.19 01.29	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.30.19 01.29	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.30.19 01.29	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	07.30.19 01.29	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.30.19 01.29	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	07.30.19 01.29	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.30.19 01.29	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	103	%	70-130	07.30.19 01.29		
1,4-Difluorobenzene	540-36-3	102	%	70-130	07.30.19 01.29		



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH07B**
 Lab Sample Id: 631951-011

Matrix: Soil
 Date Collected: 07.23.19 10.20

Date Received: 07.24.19 12.30
 Sample Depth: 3 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096662

Date Prep: 07.26.19 09.10

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	<4.96	4.96	mg/kg	07.26.19 12.29	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3097085

Date Prep: 07.30.19 18.11

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.31.19 03.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.31.19 03.43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.31.19 03.43	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.31.19 03.43	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	07.31.19 03.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	07.31.19 03.43	
o-Terphenyl	84-15-1	110	%	70-135	07.31.19 03.43	



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH07B**
Lab Sample Id: 631951-011

Matrix: Soil
Date Collected: 07.23.19 10.20

Date Received: 07.24.19 12.30
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096943

Date Prep: 07.26.19 17.11

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	<0.00199	0.00199	mg/kg	07.30.19 01.49	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.30.19 01.49	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.30.19 01.49	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.30.19 01.49	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.30.19 01.49	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.30.19 01.49	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.30.19 01.49	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	109	%	70-130	07.30.19 01.49		
4-Bromofluorobenzene	460-00-4	107	%	70-130	07.30.19 01.49		



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH07C**
Lab Sample Id: 631951-012

Matrix: Soil
Date Collected: 07.23.19 10.35

Date Received: 07.24.19 12.30
Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096662

Date Prep: 07.26.19 09.10

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	<4.96	4.96	mg/kg	07.26.19 12.35	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3097085

Date Prep: 07.30.19 18.14

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	07.31.19 04.02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	07.31.19 04.02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	07.31.19 04.02	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	07.31.19 04.02	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	07.31.19 04.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	07.31.19 04.02	
o-Terphenyl	84-15-1	112	%	70-135	07.31.19 04.02	



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH07C**
 Lab Sample Id: 631951-012

Matrix: Soil
 Date Collected: 07.23.19 10.35

Date Received: 07.24.19 12.30
 Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALG

% Moisture:

Analyst: AMB

Date Prep: 07.26.19 17.11

Basis: Wet Weight

Seq Number: 3096943

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.30.19 02.09	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.30.19 02.09	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.30.19 02.09	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.30.19 02.09	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.30.19 02.09	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.30.19 02.09	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.30.19 02.09	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	07.30.19 02.09		
4-Bromofluorobenzene	460-00-4	104	%	70-130	07.30.19 02.09		



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH08**
Lab Sample Id: 631951-013

Matrix: Soil
Date Collected: 07.23.19 10.50

Date Received: 07.24.19 12.30
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096744

Date Prep: 07.27.19 12.00

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	<5.05	5.05	mg/kg	07.27.19 16.02	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3097085

Date Prep: 07.30.19 18.17

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	07.31.19 04.20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	07.31.19 04.20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	07.31.19 04.20	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	07.31.19 04.20	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	07.31.19 04.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	07.31.19 04.20	
o-Terphenyl	84-15-1	111	%	70-135	07.31.19 04.20	



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH08**
Lab Sample Id: 631951-013

Matrix: Soil
Date Collected: 07.23.19 10.50

Date Received: 07.24.19 12.30
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096941

Prep Method: SW5030B

% Moisture:

Date Prep: 07.29.19 11.00

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.30.19 03.58	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.30.19 03.58	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.30.19 03.58	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	07.30.19 03.58	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.30.19 03.58	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.30.19 03.58	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.30.19 03.58	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	111	%	70-130	07.30.19 03.58		
1,4-Difluorobenzene	540-36-3	105	%	70-130	07.30.19 03.58		



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH08A**
Lab Sample Id: 631951-014

Matrix: Soil
Date Collected: 07.23.19 11.05

Date Received: 07.24.19 12.30
Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096744

Date Prep: 07.27.19 12.00

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	<5.03	5.03	mg/kg	07.27.19 16.18	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3097085

Date Prep: 07.30.19 18.20

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	07.31.19 01.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	07.31.19 01.31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	07.31.19 01.31	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	07.31.19 01.31	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	07.31.19 01.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	07.31.19 01.31	
o-Terphenyl	84-15-1	93	%	70-135	07.31.19 01.31	



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH08A**
Lab Sample Id: 631951-014

Matrix: Soil
Date Collected: 07.23.19 11.05

Date Received: 07.24.19 12.30
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096941

Date Prep: 07.29.19 11.00

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	<0.00198	0.00198	mg/kg	07.30.19 04.18	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.30.19 04.18	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.30.19 04.18	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	07.30.19 04.18	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.30.19 04.18	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	07.30.19 04.18	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.30.19 04.18	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	117	%	70-130	07.30.19 04.18		
1,4-Difluorobenzene	540-36-3	98	%	70-130	07.30.19 04.18		



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH08B**
Lab Sample Id: 631951-015

Matrix: Soil
Date Collected: 07.23.19 11.20

Date Received: 07.24.19 12.30
Sample Depth: 3 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096744

Date Prep: 07.27.19 12.00

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	<4.99	4.99	mg/kg	07.27.19 16.23	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3097085

Date Prep: 07.30.19 18.23

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	07.31.19 01.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	07.31.19 01.50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	07.31.19 01.50	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	07.31.19 01.50	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	07.31.19 01.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	07.31.19 01.50	
o-Terphenyl	84-15-1	93	%	70-135	07.31.19 01.50	



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH08B**
Lab Sample Id: 631951-015

Matrix: Soil
Date Collected: 07.23.19 11.20

Date Received: 07.24.19 12.30
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096941

Date Prep: 07.29.19 11.00

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	<0.00201	0.00201	mg/kg	07.30.19 04.38	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.30.19 04.38	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.30.19 04.38	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.30.19 04.38	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.30.19 04.38	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.30.19 04.38	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.30.19 04.38	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	103	%	70-130	07.30.19 04.38		
4-Bromofluorobenzene	460-00-4	109	%	70-130	07.30.19 04.38		



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH08C**
Lab Sample Id: 631951-016

Matrix: Soil
Date Collected: 07.23.19 11.35

Date Received: 07.24.19 12.30
Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096744

Date Prep: 07.27.19 12.00

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	<4.97	4.97	mg/kg	07.27.19 16.29	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3097085

Date Prep: 07.30.19 18.26

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.31.19 02.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.31.19 02.09	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.31.19 02.09	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.31.19 02.09	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	07.31.19 02.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	07.31.19 02.09	
o-Terphenyl	84-15-1	94	%	70-135	07.31.19 02.09	



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH08C**
Lab Sample Id: 631951-016

Matrix: Soil
Date Collected: 07.23.19 11.35

Date Received: 07.24.19 12.30
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096941

Date Prep: 07.29.19 11.00

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	07.30.19 04.58	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.30.19 04.58	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.30.19 04.58	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.30.19 04.58	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.30.19 04.58	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.30.19 04.58	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.30.19 04.58	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	112	%	70-130	07.30.19 04.58		
1,4-Difluorobenzene	540-36-3	99	%	70-130	07.30.19 04.58		



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH09**
Lab Sample Id: 631951-017

Matrix: Soil
Date Collected: 07.23.19 11.50

Date Received: 07.24.19 12.30
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096744

Date Prep: 07.27.19 12.00

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	<5.02	5.02	mg/kg	07.27.19 16.34	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3097085

Date Prep: 07.30.19 18.29

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.31.19 02.28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.31.19 02.28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.31.19 02.28	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.31.19 02.28	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	07.31.19 02.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	07.31.19 02.28	
o-Terphenyl	84-15-1	90	%	70-135	07.31.19 02.28	



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH09**
Lab Sample Id: 631951-017

Matrix: Soil
Date Collected: 07.23.19 11.50

Date Received: 07.24.19 12.30
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096941

Prep Method: SW5030B

% Moisture:

Date Prep: 07.29.19 11.00

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.30.19 05.18	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.30.19 05.18	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.30.19 05.18	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.30.19 05.18	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.30.19 05.18	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.30.19 05.18	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.30.19 05.18	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	106	%	70-130	07.30.19 05.18		
4-Bromofluorobenzene	460-00-4	124	%	70-130	07.30.19 05.18		



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH09A**
Lab Sample Id: 631951-018

Matrix: Soil
Date Collected: 07.23.19 12.00

Date Received: 07.24.19 12.30
Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096744

Date Prep: 07.27.19 12.00

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	<5.02	5.02	mg/kg	07.27.19 16.50	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3097085

Date Prep: 07.30.19 18.32

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.31.19 02.47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.31.19 02.47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.31.19 02.47	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.31.19 02.47	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	07.31.19 02.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	07.31.19 02.47	
o-Terphenyl	84-15-1	92	%	70-135	07.31.19 02.47	



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH09A**
Lab Sample Id: 631951-018

Matrix: Soil
Date Collected: 07.23.19 12.00

Date Received: 07.24.19 12.30
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096941

Date Prep: 07.29.19 11.00

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	07.30.19 05.38	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.30.19 05.38	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.30.19 05.38	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.30.19 05.38	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.30.19 05.38	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.30.19 05.38	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.30.19 05.38	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	103	%	70-130	07.30.19 05.38		
4-Bromofluorobenzene	460-00-4	110	%	70-130	07.30.19 05.38		



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH09B**
 Lab Sample Id: 631951-019

Matrix: Soil
 Date Collected: 07.23.19 12.15

Date Received: 07.24.19 12.30
 Sample Depth: 3 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096744

Date Prep: 07.27.19 12.00

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	<5.02	5.02	mg/kg	07.27.19 16.55	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3097311

Date Prep: 07.30.19 18.44

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.01.19 03.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.01.19 03.15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.01.19 03.15	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.01.19 03.15	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	08.01.19 03.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	08.01.19 03.15	
o-Terphenyl	84-15-1	100	%	70-135	08.01.19 03.15	



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH09B**
 Lab Sample Id: 631951-019

Matrix: Soil
 Date Collected: 07.23.19 12.15

Date Received: 07.24.19 12.30
 Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALG

% Moisture:

Analyst: AMB

Date Prep: 07.29.19 11.00

Basis: Wet Weight

Seq Number: 3096941

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.30.19 05.58	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.30.19 05.58	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.30.19 05.58	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	07.30.19 05.58	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.30.19 05.58	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.30.19 05.58	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.30.19 05.58	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	116	%	70-130	07.30.19 05.58		
1,4-Difluorobenzene	540-36-3	103	%	70-130	07.30.19 05.58		



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: PH09C	Matrix: Soil	Date Received: 07.24.19 12.30
Lab Sample Id: 631951-020	Date Collected: 07.23.19 12.30	Sample Depth: 4 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: SPC		% Moisture:
Analyst: SPC	Date Prep: 07.27.19 12.00	Basis: Wet Weight
Seq Number: 3096744		SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.05	5.05	mg/kg	07.27.19 17.00	U	1

Analytical Method: TPH by SW8015 Mod		Prep Method: TX1005P
Tech: ISU		% Moisture:
Analyst: ISU	Date Prep: 07.30.19 18.47	Basis: Wet Weight
Seq Number: 3097311		SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.01.19 03.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.01.19 03.34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.01.19 03.34	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.01.19 03.34	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	08.01.19 03.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	08.01.19 03.34	
o-Terphenyl	84-15-1	97	%	70-135	08.01.19 03.34	



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH09C**
Lab Sample Id: 631951-020

Matrix: Soil
Date Collected: 07.23.19 12.30

Date Received: 07.24.19 12.30
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096941

Prep Method: SW5030B

% Moisture:

Date Prep: 07.29.19 11.00

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.30.19 06.19	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.30.19 06.19	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.30.19 06.19	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.30.19 06.19	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.30.19 06.19	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.30.19 06.19	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.30.19 06.19	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	123	%	70-130	07.30.19 06.19		
1,4-Difluorobenzene	540-36-3	105	%	70-130	07.30.19 06.19		



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH10**
 Lab Sample Id: 631951-021

Matrix: Soil
 Date Collected: 07.23.19 13.05

Date Received: 07.24.19 12.30
 Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096744

Date Prep: 07.27.19 12.00

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	<4.99	4.99	mg/kg	07.27.19 17.06	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3097311

Date Prep: 07.30.19 18.56

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.01.19 04.30	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.01.19 04.30	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.01.19 04.30	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.01.19 04.30	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	08.01.19 04.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	08.01.19 04.30	
o-Terphenyl	84-15-1	100	%	70-135	08.01.19 04.30	



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH10**
Lab Sample Id: 631951-021

Matrix: Soil
Date Collected: 07.23.19 13.05

Date Received: 07.24.19 12.30
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096941

Prep Method: SW5030B

% Moisture:

Date Prep: 07.29.19 11.00

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	07.30.19 06.39	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.30.19 06.39	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.30.19 06.39	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	07.30.19 06.39	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.30.19 06.39	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.30.19 06.39	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.30.19 06.39	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	0	%	70-130	07.30.19 06.39	**	
1,4-Difluorobenzene	540-36-3	103	%	70-130	07.30.19 06.39		



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH10A**
Lab Sample Id: 631951-022

Matrix: Soil
Date Collected: 07.23.19 13.20

Date Received: 07.24.19 12.30
Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096744

Date Prep: 07.27.19 12.00

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	<4.96	4.96	mg/kg	07.27.19 17.11	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3097311

Date Prep: 07.30.19 18.59

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.01.19 04.49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.01.19 04.49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.01.19 04.49	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.01.19 04.49	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	08.01.19 04.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	08.01.19 04.49	
o-Terphenyl	84-15-1	105	%	70-135	08.01.19 04.49	



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH10A**
Lab Sample Id: 631951-022

Matrix: Soil
Date Collected: 07.23.19 13.20

Date Received: 07.24.19 12.30
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096941

Prep Method: SW5030B

% Moisture:

Date Prep: 07.29.19 11.00

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	07.30.19 10.17	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.30.19 10.17	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.30.19 10.17	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.30.19 10.17	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.30.19 10.17	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.30.19 10.17	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.30.19 10.17	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	105	%	70-130	07.30.19 10.17		
4-Bromofluorobenzene	460-00-4	114	%	70-130	07.30.19 10.17		



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH10B**
 Lab Sample Id: 631951-023

Matrix: Soil
 Date Collected: 07.23.19 13.30

Date Received: 07.24.19 12.30
 Sample Depth: 3 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096744

Date Prep: 07.27.19 12.00

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	<4.96	4.96	mg/kg	07.27.19 17.16	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3097311

Date Prep: 07.30.19 19.02

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	08.01.19 05.08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	08.01.19 05.08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	08.01.19 05.08	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	08.01.19 05.08	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	08.01.19 05.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	08.01.19 05.08	
o-Terphenyl	84-15-1	109	%	70-135	08.01.19 05.08	



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH10B**
Lab Sample Id: 631951-023

Matrix: Soil
Date Collected: 07.23.19 13.30

Date Received: 07.24.19 12.30
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096941

Date Prep: 07.29.19 11.00

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	07.30.19 11.35	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.30.19 11.35	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.30.19 11.35	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.30.19 11.35	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.30.19 11.35	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.30.19 11.35	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.30.19 11.35	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	100	%	70-130	07.30.19 11.35		
1,4-Difluorobenzene	540-36-3	104	%	70-130	07.30.19 11.35		



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH10C**
 Lab Sample Id: 631951-024

Matrix: Soil
 Date Collected: 07.23.19 13.40

Date Received: 07.24.19 12.30
 Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096744

Date Prep: 07.27.19 12.00

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	<4.97	4.97	mg/kg	07.27.19 17.32	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3097311

Date Prep: 07.30.19 19.05

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	08.01.19 05.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	08.01.19 05.46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	08.01.19 05.46	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	08.01.19 05.46	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	08.01.19 05.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	08.01.19 05.46	
o-Terphenyl	84-15-1	101	%	70-135	08.01.19 05.46	



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH10C**
Lab Sample Id: 631951-024

Matrix: Soil
Date Collected: 07.23.19 13.40

Date Received: 07.24.19 12.30
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096941

Date Prep: 07.29.19 11.00

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	<0.00201	0.00201	mg/kg	07.30.19 11.56	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.30.19 11.56	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.30.19 11.56	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.30.19 11.56	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.30.19 11.56	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.30.19 11.56	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.30.19 11.56	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	110	%	70-130	07.30.19 11.56		
1,4-Difluorobenzene	540-36-3	105	%	70-130	07.30.19 11.56		



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH11**
Lab Sample Id: 631951-025

Matrix: Soil
Date Collected: 07.23.19 13.55

Date Received: 07.24.19 12.30
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096744

Date Prep: 07.27.19 12.00

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	<4.99	4.99	mg/kg	07.27.19 17.37	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3097311

Date Prep: 07.30.19 19.08

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.01.19 06.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.01.19 06.05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.01.19 06.05	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.01.19 06.05	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	08.01.19 06.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	08.01.19 06.05	
o-Terphenyl	84-15-1	105	%	70-135	08.01.19 06.05	



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH11**
Lab Sample Id: 631951-025

Matrix: Soil
Date Collected: 07.23.19 13.55

Date Received: 07.24.19 12.30
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096941

Prep Method: SW5030B

% Moisture:

Date Prep: 07.29.19 11.00

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	07.30.19 12.16	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.30.19 12.16	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.30.19 12.16	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.30.19 12.16	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.30.19 12.16	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.30.19 12.16	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.30.19 12.16	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	110	%	70-130	07.30.19 12.16		
1,4-Difluorobenzene	540-36-3	107	%	70-130	07.30.19 12.16		



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH11A** Matrix: Soil Date Received: 07.24.19 12.30
 Lab Sample Id: 631951-026 Date Collected: 07.23.19 14.05 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: SPC % Moisture:
 Analyst: SPC Date Prep: 07.27.19 12.00 Basis: Wet Weight
 Seq Number: 3096744 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.01	5.01	mg/kg	07.27.19 17.53	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ISU % Moisture:
 Analyst: ISU Date Prep: 07.30.19 19.11 Basis: Wet Weight
 Seq Number: 3097311 SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.01.19 06.24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.01.19 06.24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.01.19 06.24	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.01.19 06.24	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	08.01.19 06.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	08.01.19 06.24	
o-Terphenyl	84-15-1	101	%	70-135	08.01.19 06.24	



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH11A**
Lab Sample Id: 631951-026

Matrix: Soil
Date Collected: 07.23.19 14.05

Date Received: 07.24.19 12.30
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096941

Date Prep: 07.29.19 11.00

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	<0.00199	0.00199	mg/kg	07.30.19 12.36	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.30.19 12.36	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.30.19 12.36	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.30.19 12.36	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.30.19 12.36	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.30.19 12.36	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.30.19 12.36	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	105	%	70-130	07.30.19 12.36		
1,4-Difluorobenzene	540-36-3	105	%	70-130	07.30.19 12.36		



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH11B**
Lab Sample Id: 631951-027

Matrix: Soil
Date Collected: 07.23.19 14.20

Date Received: 07.24.19 12.30
Sample Depth: 3 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096744

Date Prep: 07.27.19 12.00

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	<5.05	5.05	mg/kg	07.27.19 17.59	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3097311

Date Prep: 07.30.19 19.14

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.01.19 06.42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.01.19 06.42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.01.19 06.42	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.01.19 06.42	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	08.01.19 06.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	08.01.19 06.42	
o-Terphenyl	84-15-1	109	%	70-135	08.01.19 06.42	



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH11B**
Lab Sample Id: 631951-027

Matrix: Soil
Date Collected: 07.23.19 14.20

Date Received: 07.24.19 12.30
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096941

Date Prep: 07.29.19 11.00

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	<0.00201	0.00201	mg/kg	07.30.19 12.56	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.30.19 12.56	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.30.19 12.56	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.30.19 12.56	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.30.19 12.56	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.30.19 12.56	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.30.19 12.56	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	114	%	70-130	07.30.19 12.56		
1,4-Difluorobenzene	540-36-3	108	%	70-130	07.30.19 12.56		



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH11C**
Lab Sample Id: 631951-028

Matrix: Soil
Date Collected: 07.23.19 14.35

Date Received: 07.24.19 12.30
Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096744

Date Prep: 07.27.19 12.00

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	<5.03	5.03	mg/kg	07.27.19 18.04	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3097311

Date Prep: 07.30.19 19.17

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.01.19 07.01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.01.19 07.01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.01.19 07.01	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.01.19 07.01	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	08.01.19 07.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	08.01.19 07.01	
o-Terphenyl	84-15-1	102	%	70-135	08.01.19 07.01	



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH11C**
Lab Sample Id: 631951-028

Matrix: Soil
Date Collected: 07.23.19 14.35

Date Received: 07.24.19 12.30
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096941

Prep Method: SW5030B

% Moisture:

Date Prep: 07.29.19 11.00

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.30.19 13.16	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.30.19 13.16	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.30.19 13.16	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	07.30.19 13.16	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.30.19 13.16	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.30.19 13.16	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.30.19 13.16	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	108	%	70-130	07.30.19 13.16		
4-Bromofluorobenzene	460-00-4	113	%	70-130	07.30.19 13.16		



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH12** Matrix: Soil Date Received: 07.24.19 12.30
 Lab Sample Id: 631951-029 Date Collected: 07.23.19 14.50 Sample Depth: 1 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: SPC % Moisture:
 Analyst: SPC Date Prep: 07.27.19 12.00 Basis: Wet Weight
 Seq Number: 3096744 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.98	4.98	mg/kg	07.27.19 18.09	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ISU % Moisture:
 Analyst: ISU Date Prep: 07.30.19 19.20 Basis: Wet Weight
 Seq Number: 3097311 SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.01.19 07.19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.01.19 07.19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.01.19 07.19	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.01.19 07.19	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	08.01.19 07.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	08.01.19 07.19	
o-Terphenyl	84-15-1	100	%	70-135	08.01.19 07.19	



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH12**
Lab Sample Id: 631951-029

Matrix: Soil
Date Collected: 07.23.19 14.50

Date Received: 07.24.19 12.30
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096941

Prep Method: SW5030B

% Moisture:

Date Prep: 07.29.19 11.00

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.30.19 13.36	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.30.19 13.36	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.30.19 13.36	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	07.30.19 13.36	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.30.19 13.36	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.30.19 13.36	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.30.19 13.36	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	105	%	70-130	07.30.19 13.36		
4-Bromofluorobenzene	460-00-4	106	%	70-130	07.30.19 13.36		



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH12A**
Lab Sample Id: 631951-030

Matrix: Soil
Date Collected: 07.23.19 15.05

Date Received: 07.24.19 12.30
Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096744

Date Prep: 07.27.19 12.00

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	<4.97	4.97	mg/kg	07.27.19 18.15	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3097311

Date Prep: 07.30.19 19.23

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.01.19 07.37	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.01.19 07.37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.01.19 07.37	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.01.19 07.37	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	08.01.19 07.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	08.01.19 07.37	
o-Terphenyl	84-15-1	97	%	70-135	08.01.19 07.37	



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH12A**
Lab Sample Id: 631951-030

Matrix: Soil
Date Collected: 07.23.19 15.05

Date Received: 07.24.19 12.30
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096941

Prep Method: SW5030B

% Moisture:

Date Prep: 07.29.19 11.00

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	07.30.19 13.57	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.30.19 13.57	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.30.19 13.57	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	07.30.19 13.57	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.30.19 13.57	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.30.19 13.57	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.30.19 13.57	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	114	%	70-130	07.30.19 13.57		
1,4-Difluorobenzene	540-36-3	109	%	70-130	07.30.19 13.57		



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH12B**
Lab Sample Id: 631951-031

Matrix: Soil
Date Collected: 07.23.19 15.15

Date Received: 07.24.19 12.30
Sample Depth: 3 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096744

Date Prep: 07.27.19 12.00

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	<4.95	4.95	mg/kg	07.27.19 18.20	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3097311

Date Prep: 07.30.19 19.26

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.01.19 07.56	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.01.19 07.56	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.01.19 07.56	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.01.19 07.56	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	08.01.19 07.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	08.01.19 07.56	
o-Terphenyl	84-15-1	102	%	70-135	08.01.19 07.56	



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH12B**
Lab Sample Id: 631951-031

Matrix: Soil
Date Collected: 07.23.19 15.15

Date Received: 07.24.19 12.30
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096941

Date Prep: 07.29.19 11.00

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	<0.00198	0.00198	mg/kg	07.30.19 14.17	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.30.19 14.17	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.30.19 14.17	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	07.30.19 14.17	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.30.19 14.17	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	07.30.19 14.17	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.30.19 14.17	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	109	%	70-130	07.30.19 14.17		
1,4-Difluorobenzene	540-36-3	108	%	70-130	07.30.19 14.17		



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH12C** Matrix: Soil Date Received: 07.24.19 12.30
 Lab Sample Id: 631951-032 Date Collected: 07.23.19 15.25 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: SPC % Moisture:
 Analyst: SPC Date Prep: 07.27.19 12.00 Basis: Wet Weight
 Seq Number: 3096744 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	07.27.19 18.25	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ISU % Moisture:
 Analyst: ISU Date Prep: 07.30.19 19.29 Basis: Wet Weight
 Seq Number: 3097311 SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	08.01.19 08.14	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	08.01.19 08.14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	08.01.19 08.14	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	08.01.19 08.14	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	08.01.19 08.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	08.01.19 08.14	
o-Terphenyl	84-15-1	103	%	70-135	08.01.19 08.14	



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH12C**
Lab Sample Id: 631951-032

Matrix: Soil
Date Collected: 07.23.19 15.25

Date Received: 07.24.19 12.30
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3096941

Prep Method: SW5030B

% Moisture:

Date Prep: 07.29.19 11.00

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	07.30.19 14.37	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.30.19 14.37	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.30.19 14.37	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.30.19 14.37	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.30.19 14.37	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.30.19 14.37	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.30.19 14.37	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	107	%	70-130	07.30.19 14.37		
4-Bromofluorobenzene	460-00-4	108	%	70-130	07.30.19 14.37		



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH13** Matrix: Soil Date Received: 07.24.19 12.30
 Lab Sample Id: 631951-033 Date Collected: 07.23.19 15.40 Sample Depth: 1 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: SPC % Moisture:
 Analyst: SPC Date Prep: 07.27.19 12.30 Basis: Wet Weight
 Seq Number: 3096746 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.97	4.97	mg/kg	07.27.19 16.32	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ISU % Moisture:
 Analyst: ISU Date Prep: 07.30.19 19.32 Basis: Wet Weight
 Seq Number: 3097311 SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.01.19 08.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.01.19 08.32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.01.19 08.32	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.01.19 08.32	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	08.01.19 08.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	08.01.19 08.32	
o-Terphenyl	84-15-1	103	%	70-135	08.01.19 08.32	



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH13**
Lab Sample Id: 631951-033

Matrix: Soil
Date Collected: 07.23.19 15.40

Date Received: 07.24.19 12.30
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3097180

Prep Method: SW5030B

% Moisture:

Date Prep: 07.29.19 11.25

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	07.31.19 09.54	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.31.19 09.54	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.31.19 09.54	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.31.19 09.54	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.31.19 09.54	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.31.19 09.54	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.31.19 09.54	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	96	%	70-130	07.31.19 09.54		
1,4-Difluorobenzene	540-36-3	108	%	70-130	07.31.19 09.54		



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH13A**
Lab Sample Id: 631951-034

Matrix: Soil
Date Collected: 07.23.19 15.55

Date Received: 07.24.19 12.30
Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096746

Date Prep: 07.27.19 12.30

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	<5.02	5.02	mg/kg	07.27.19 16.49	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3097311

Date Prep: 07.30.19 19.35

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.01.19 12.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.01.19 12.22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.01.19 12.22	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.01.19 12.22	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	08.01.19 12.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	08.01.19 12.22	
o-Terphenyl	84-15-1	98	%	70-135	08.01.19 12.22	



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH13A**
Lab Sample Id: 631951-034

Matrix: Soil
Date Collected: 07.23.19 15.55

Date Received: 07.24.19 12.30
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3097180

Prep Method: SW5030B

% Moisture:

Date Prep: 07.29.19 11.25

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	07.31.19 10.14	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.31.19 10.14	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.31.19 10.14	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	07.31.19 10.14	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.31.19 10.14	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.31.19 10.14	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.31.19 10.14	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	103	%	70-130	07.31.19 10.14		
1,4-Difluorobenzene	540-36-3	105	%	70-130	07.31.19 10.14		



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH13B**
 Lab Sample Id: 631951-035

Matrix: Soil
 Date Collected: 07.23.19 16.10

Date Received: 07.24.19 12.30
 Sample Depth: 3 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096746

Date Prep: 07.27.19 12.30

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	<5.05	5.05	mg/kg	07.27.19 16.54	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3097311

Date Prep: 07.30.19 19.38

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.01.19 12.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.01.19 12.41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.01.19 12.41	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.01.19 12.41	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	08.01.19 12.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	82	%	70-135	08.01.19 12.41	
o-Terphenyl	84-15-1	86	%	70-135	08.01.19 12.41	



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH13B**
Lab Sample Id: 631951-035

Matrix: Soil
Date Collected: 07.23.19 16.10

Date Received: 07.24.19 12.30
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3097180

Prep Method: SW5030B

% Moisture:

Date Prep: 07.29.19 11.25

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	07.31.19 10.34	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.31.19 10.34	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.31.19 10.34	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	07.31.19 10.34	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.31.19 10.34	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.31.19 10.34	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.31.19 10.34	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	106	%	70-130	07.31.19 10.34		
1,4-Difluorobenzene	540-36-3	104	%	70-130	07.31.19 10.34		



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH13C**
Lab Sample Id: 631951-036

Matrix: Soil
Date Collected: 07.23.19 16.25

Date Received: 07.24.19 12.30
Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096746

Date Prep: 07.27.19 12.30

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	<4.99	4.99	mg/kg	07.27.19 16.59	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3097311

Date Prep: 07.30.19 19.41

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.01.19 13.00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.01.19 13.00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.01.19 13.00	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.01.19 13.00	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	08.01.19 13.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-135	08.01.19 13.00	
o-Terphenyl	84-15-1	90	%	70-135	08.01.19 13.00	



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH13C**
Lab Sample Id: 631951-036

Matrix: Soil
Date Collected: 07.23.19 16.25

Date Received: 07.24.19 12.30
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3097180

Prep Method: SW5030B

% Moisture:

Date Prep: 07.29.19 11.25

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	07.31.19 10.54	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.31.19 10.54	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.31.19 10.54	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.31.19 10.54	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.31.19 10.54	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.31.19 10.54	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.31.19 10.54	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	105	%	70-130	07.31.19 10.54		
4-Bromofluorobenzene	460-00-4	109	%	70-130	07.31.19 10.54		



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH14**
Lab Sample Id: 631951-037

Matrix: Soil
Date Collected: 07.23.19 16.40

Date Received: 07.24.19 12.30
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096746

Date Prep: 07.27.19 12.30

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	<5.03	5.03	mg/kg	07.27.19 17.05	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3097311

Date Prep: 07.30.19 19.44

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	08.01.19 13.19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	08.01.19 13.19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	08.01.19 13.19	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	08.01.19 13.19	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	08.01.19 13.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	79	%	70-135	08.01.19 13.19	
o-Terphenyl	84-15-1	83	%	70-135	08.01.19 13.19	



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH14**
Lab Sample Id: 631951-037

Matrix: Soil
Date Collected: 07.23.19 16.40

Date Received: 07.24.19 12.30
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3097180

Prep Method: SW5030B

% Moisture:

Date Prep: 07.29.19 11.25

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	07.31.19 11.14	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.31.19 11.14	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.31.19 11.14	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.31.19 11.14	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.31.19 11.14	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.31.19 11.14	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.31.19 11.14	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	109	%	70-130	07.31.19 11.14		
4-Bromofluorobenzene	460-00-4	107	%	70-130	07.31.19 11.14		



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH14A**
 Lab Sample Id: 631951-038

Matrix: Soil
 Date Collected: 07.23.19 16.50

Date Received: 07.24.19 12.30
 Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096746

Date Prep: 07.27.19 12.30

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	5.94	5.01	mg/kg	07.27.19 17.21		1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3097311

Date Prep: 07.30.19 19.47

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	08.01.19 13.37	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	08.01.19 13.37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	08.01.19 13.37	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	08.01.19 13.37	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	08.01.19 13.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	08.01.19 13.37	
o-Terphenyl	84-15-1	98	%	70-135	08.01.19 13.37	



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH14A**
 Lab Sample Id: 631951-038

Matrix: Soil
 Date Collected: 07.23.19 16.50

Date Received: 07.24.19 12.30
 Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALG

% Moisture:

Analyst: AMB

Date Prep: 07.29.19 11.25

Basis: Wet Weight

Seq Number: 3097180

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.31.19 11.35	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.31.19 11.35	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.31.19 11.35	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.31.19 11.35	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.31.19 11.35	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.31.19 11.35	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.31.19 11.35	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	102	%	70-130	07.31.19 11.35		
1,4-Difluorobenzene	540-36-3	102	%	70-130	07.31.19 11.35		



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH14B**
 Lab Sample Id: 631951-039

Matrix: Soil
 Date Collected: 07.23.19 17.00

Date Received: 07.24.19 12.30
 Sample Depth: 3 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096746

Date Prep: 07.27.19 12.30

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	7.01	5.01	mg/kg	07.27.19 17.27		1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3097314

Date Prep: 07.31.19 15.09

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	07.31.19 23.48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	07.31.19 23.48	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	07.31.19 23.48	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	07.31.19 23.48	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	07.31.19 23.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	07.31.19 23.48	
o-Terphenyl	84-15-1	113	%	70-135	07.31.19 23.48	



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH14B**
Lab Sample Id: 631951-039

Matrix: Soil
Date Collected: 07.23.19 17.00

Date Received: 07.24.19 12.30
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3097180

Prep Method: SW5030B

% Moisture:

Date Prep: 07.29.19 11.25

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	07.31.19 11.55	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.31.19 11.55	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.31.19 11.55	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	07.31.19 11.55	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.31.19 11.55	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	07.31.19 11.55	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.31.19 11.55	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	105	%	70-130	07.31.19 11.55		
4-Bromofluorobenzene	460-00-4	100	%	70-130	07.31.19 11.55		



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH14C**
Lab Sample Id: 631951-040

Matrix: Soil
Date Collected: 07.23.19 17.10

Date Received: 07.24.19 12.30
Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096746

Date Prep: 07.27.19 12.30

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	<4.97	4.97	mg/kg	07.27.19 17.48	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3097314

Date Prep: 07.31.19 15.12

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.01.19 00.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.01.19 00.06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.01.19 00.06	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.01.19 00.06	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	08.01.19 00.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	08.01.19 00.06	
o-Terphenyl	84-15-1	114	%	70-135	08.01.19 00.06	



Certificate of Analytical Results 631951

LT Environmental, Inc., Arvada, CO

PLU JV CVX #017H

Sample Id: **PH14C**
Lab Sample Id: 631951-040

Matrix: Soil
Date Collected: 07.23.19 17.10

Date Received: 07.24.19 12.30
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: AMB

Seq Number: 3097180

Prep Method: SW5030B

% Moisture:

Date Prep: 07.29.19 11.25

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.01.19 12.15	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.01.19 12.15	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.01.19 12.15	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.01.19 12.15	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.01.19 12.15	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.01.19 12.15	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.01.19 12.15	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	103	%	70-130	08.01.19 12.15		
4-Bromofluorobenzene	460-00-4	96	%	70-130	08.01.19 12.15		



Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



LT Environmental, Inc.

PLU JV CVX #017H

Analytical Method: Chloride by EPA 300

Seq Number: 3096662

MB Sample Id: 7682887-1-BLK

Matrix: Solid

LCS Sample Id: 7682887-1-BKS

Prep Method: E300P

Date Prep: 07.26.19

LCSD Sample Id: 7682887-1-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	238	95	237	95	90-110	0	20	mg/kg	07.26.19 09:26	

Analytical Method: Chloride by EPA 300

Seq Number: 3096744

MB Sample Id: 7682944-1-BLK

Matrix: Solid

LCS Sample Id: 7682944-1-BKS

Prep Method: E300P

Date Prep: 07.27.19

LCSD Sample Id: 7682944-1-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	260	104	255	102	90-110	2	20	mg/kg	07.27.19 15:51	

Analytical Method: Chloride by EPA 300

Seq Number: 3096746

MB Sample Id: 7682945-1-BLK

Matrix: Solid

LCS Sample Id: 7682945-1-BKS

Prep Method: E300P

Date Prep: 07.27.19

LCSD Sample Id: 7682945-1-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	266	106	265	106	90-110	0	20	mg/kg	07.27.19 16:22	

Analytical Method: Chloride by EPA 300

Seq Number: 3096662

Parent Sample Id: 631892-009

Matrix: Soil

MS Sample Id: 631892-009 S

Prep Method: E300P

Date Prep: 07.26.19

MSD Sample Id: 631892-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	40.5	252	286	97	287	98	90-110	0	20	mg/kg	07.26.19 09:45	

Analytical Method: Chloride by EPA 300

Seq Number: 3096662

Parent Sample Id: 631951-003

Matrix: Soil

MS Sample Id: 631951-003 S

Prep Method: E300P

Date Prep: 07.26.19

MSD Sample Id: 631951-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2.14	249	242	96	242	96	90-110	0	20	mg/kg	07.26.19 11:19	

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

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

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 JV CVX #017H

Analytical Method: Chloride by EPA 300

Seq Number: 3096744

Parent Sample Id: 631951-013

Matrix: Soil

MS Sample Id: 631951-013 S

Prep Method: E300P

Date Prep: 07.27.19

MSD Sample Id: 631951-013 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.867	253	266	105	262	104	90-110	2	20	mg/kg	07.27.19 16:07	

Analytical Method: Chloride by EPA 300

Seq Number: 3096744

Parent Sample Id: 631951-023

Matrix: Soil

MS Sample Id: 631951-023 S

Prep Method: E300P

Date Prep: 07.27.19

MSD Sample Id: 631951-023 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1.29	248	262	105	258	104	90-110	2	20	mg/kg	07.27.19 17:22	

Analytical Method: Chloride by EPA 300

Seq Number: 3096746

Parent Sample Id: 631951-033

Matrix: Soil

MS Sample Id: 631951-033 S

Prep Method: E300P

Date Prep: 07.27.19

MSD Sample Id: 631951-033 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	4.89	249	271	107	272	107	90-110	0	20	mg/kg	07.27.19 16:38	

Analytical Method: Chloride by EPA 300

Seq Number: 3096746

Parent Sample Id: 631951-040

Matrix: Soil

MS Sample Id: 631951-040 S

Prep Method: E300P

Date Prep: 07.27.19

MSD Sample Id: 631951-040 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2.16	249	282	112	278	111	90-110	1	20	mg/kg	07.27.19 17:54	X

Analytical Method: TPH by SW8015 Mod

Seq Number: 3097085

MB Sample Id: 7683132-1-BLK

Matrix: Solid

LCS Sample Id: 7683132-1-BKS

Prep Method: TX1005P

Date Prep: 07.30.19

LCSD Sample Id: 7683132-1-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	1110	111	1110	111	70-135	0	35	mg/kg	07.30.19 22:24	
Diesel Range Organics (DRO)	<50.0	1000	990	99	986	99	70-135	0	35	mg/kg	07.30.19 22:24	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	94		100		99		70-135	%	07.30.19 22:24
o-Terphenyl	95		91		90		70-135	%	07.30.19 22:24

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

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

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 JV CVX #017H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3097311

MB Sample Id: 7683139-1-BLK

Matrix: Solid

LCS Sample Id: 7683139-1-BKS

Prep Method: TX1005P

Date Prep: 07.30.19

LCSD Sample Id: 7683139-1-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	1050	105	1020	102	70-135	3	35	mg/kg	08.01.19 02:38	
Diesel Range Organics (DRO)	<50.0	1000	1110	111	1090	109	70-135	2	35	mg/kg	08.01.19 02:38	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date			
1-Chlorooctane	94		104		101		70-135	%	08.01.19 02:38			
o-Terphenyl	102		104		101		70-135	%	08.01.19 02:38			

Analytical Method: TPH by SW8015 Mod

Seq Number: 3097314

MB Sample Id: 7683241-1-BLK

Matrix: Solid

LCS Sample Id: 7683241-1-BKS

Prep Method: TX1005P

Date Prep: 07.31.19

LCSD Sample Id: 7683241-1-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	1060	106	1080	108	70-135	2	35	mg/kg	07.31.19 23:11	
Diesel Range Organics (DRO)	<50.0	1000	1140	114	1180	118	70-135	3	35	mg/kg	07.31.19 23:11	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date			
1-Chlorooctane	102		111		112		70-135	%	07.31.19 23:11			
o-Terphenyl	122		115		116		70-135	%	07.31.19 23:11			

Analytical Method: TPH by SW8015 Mod

Seq Number: 3097085

Parent Sample Id: 631877-001

Matrix: Soil

MS Sample Id: 631877-001 S

Prep Method: TX1005P

Date Prep: 07.30.19

MSD Sample Id: 631877-001 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)	<50.6	1010	1060	105	1120	111	70-135	6	35	mg/kg	07.30.19 23:20	
Diesel Range Organics (DRO)	11.5	1010	931	91	982	96	70-135	5	35	mg/kg	07.30.19 23:20	
Surrogate			MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date			
1-Chlorooctane			92		98		70-135	%	07.30.19 23:20			
o-Terphenyl			75		80		70-135	%	07.30.19 23:20			

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 JV CVX #017H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3097311

Parent Sample Id: 631951-020

Matrix: Soil

MS Sample Id: 631951-020 S

Prep Method: TX1005P

Date Prep: 07.30.19

MSD Sample Id: 631951-020 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)	<49.8	996	1030	103	1020	102	70-135	1	35	mg/kg	08.01.19 03:53	
Diesel Range Organics (DRO)	<49.8	996	1090	109	1080	108	70-135	1	35	mg/kg	08.01.19 03:53	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	103		100		70-135	%	08.01.19 03:53
o-Terphenyl	101		97		70-135	%	08.01.19 03:53

Analytical Method: TPH by SW8015 Mod

Seq Number: 3097314

Parent Sample Id: 631951-040

Matrix: Soil

MS Sample Id: 631951-040 S

Prep Method: TX1005P

Date Prep: 07.31.19

MSD Sample Id: 631951-040 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)	<50.0	1000	1070	107	1020	102	70-135	5	35	mg/kg	08.01.19 00:25	
Diesel Range Organics (DRO)	<50.0	1000	1160	116	1120	112	70-135	4	35	mg/kg	08.01.19 00:25	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	106		104		70-135	%	08.01.19 00:25
o-Terphenyl	105		104		70-135	%	08.01.19 00:25

Analytical Method: BTEX by EPA 8021B

Seq Number: 3096943

MB Sample Id: 7682927-1-BLK

Matrix: Solid

LCS Sample Id: 7682927-1-BKS

Prep Method: SW5030B

Date Prep: 07.26.19

LCSD Sample Id: 7682927-1-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	0.0966	97	0.112	112	70-130	15	35	mg/kg	07.29.19 16:39	
Toluene	<0.00200	0.100	0.0944	94	0.107	107	70-130	13	35	mg/kg	07.29.19 16:39	
Ethylbenzene	<0.00200	0.100	0.107	107	0.121	121	70-130	12	35	mg/kg	07.29.19 16:39	
m,p-Xylenes	<0.00400	0.200	0.213	107	0.246	123	70-130	14	35	mg/kg	07.29.19 16:39	
o-Xylene	<0.00200	0.100	0.103	103	0.122	122	70-130	17	35	mg/kg	07.29.19 16:39	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		99		105		70-130	%	07.29.19 16:39
4-Bromofluorobenzene	94		105		122		70-130	%	07.29.19 16:39

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 JV CVX #017H

Analytical Method: BTEX by EPA 8021B

Seq Number: 3096941

MB Sample Id: 7683030-1-BLK

Matrix: Solid

LCS Sample Id: 7683030-1-BKS

Prep Method: SW5030B

Date Prep: 07.29.19

LCSD Sample Id: 7683030-1-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	0.0986	99	0.0867	87	70-130	13	35	mg/kg	07.30.19 01:58	
Toluene	<0.000456	0.100	0.0914	91	0.0815	82	70-130	11	35	mg/kg	07.30.19 01:58	
Ethylbenzene	<0.00200	0.100	0.0912	91	0.0815	82	70-130	11	35	mg/kg	07.30.19 01:58	
m,p-Xylenes	<0.00101	0.200	0.184	92	0.166	83	70-130	10	35	mg/kg	07.30.19 01:58	
o-Xylene	<0.000344	0.100	0.0967	97	0.0887	89	70-130	9	35	mg/kg	07.30.19 01:58	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		103		103		70-130	%	07.30.19 01:58
4-Bromofluorobenzene	111		108		110		70-130	%	07.30.19 01:58

Analytical Method: BTEX by EPA 8021B

Seq Number: 3097180

MB Sample Id: 7683031-1-BLK

Matrix: Solid

LCS Sample Id: 7683031-1-BKS

Prep Method: SW5030B

Date Prep: 07.29.19

LCSD Sample Id: 7683031-1-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	0.102	102	0.0987	99	70-130	3	35	mg/kg	07.31.19 07:52	
Toluene	<0.00200	0.100	0.100	100	0.0947	95	70-130	5	35	mg/kg	07.31.19 07:52	
Ethylbenzene	<0.00200	0.100	0.114	114	0.108	108	70-130	5	35	mg/kg	07.31.19 07:52	
m,p-Xylenes	<0.00400	0.200	0.230	115	0.220	110	70-130	4	35	mg/kg	07.31.19 07:52	
o-Xylene	<0.00200	0.100	0.111	111	0.107	107	70-130	4	35	mg/kg	07.31.19 07:52	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		102		104		70-130	%	07.31.19 07:52
4-Bromofluorobenzene	96		110		116		70-130	%	07.31.19 07:52

Analytical Method: BTEX by EPA 8021B

Seq Number: 3096943

Parent Sample Id: 631904-009

Matrix: Soil

MS Sample Id: 631904-009 S

Prep Method: SW5030B

Date Prep: 07.26.19

MSD Sample Id: 631904-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.105	105	0.0988	99	70-130	6	35	mg/kg	07.29.19 17:22	
Toluene	<0.00200	0.100	0.0969	97	0.0905	91	70-130	7	35	mg/kg	07.29.19 17:22	
Ethylbenzene	<0.00200	0.100	0.107	107	0.0997	100	70-130	7	35	mg/kg	07.29.19 17:22	
m,p-Xylenes	<0.00401	0.200	0.213	107	0.198	99	70-130	7	35	mg/kg	07.29.19 17:22	
o-Xylene	<0.00200	0.100	0.107	107	0.0985	99	70-130	8	35	mg/kg	07.29.19 17:22	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		104		70-130	%	07.29.19 17:22
4-Bromofluorobenzene	127		122		70-130	%	07.29.19 17:22

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



LT Environmental, Inc.

PLU JV CVX #017H

Analytical Method: BTEX by EPA 8021B

Seq Number: 3096941

Parent Sample Id: 631951-013

Matrix: Soil

MS Sample Id: 631951-013 S

Prep Method: SW5030B

Date Prep: 07.29.19

MSD Sample Id: 631951-013 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.0899	90	0.0834	83	70-130	8	35	mg/kg	07.30.19 02:38	
Toluene	<0.00199	0.0994	0.0848	85	0.0801	80	70-130	6	35	mg/kg	07.30.19 02:38	
Ethylbenzene	<0.00199	0.0994	0.0852	86	0.0809	81	70-130	5	35	mg/kg	07.30.19 02:38	
m,p-Xylenes	<0.00101	0.199	0.172	86	0.165	83	70-130	4	35	mg/kg	07.30.19 02:38	
o-Xylene	<0.00199	0.0994	0.0894	90	0.0868	87	70-130	3	35	mg/kg	07.30.19 02:38	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		102		70-130	%	07.30.19 02:38
4-Bromofluorobenzene	107		112		70-130	%	07.30.19 02:38

Analytical Method: BTEX by EPA 8021B

Seq Number: 3097180

Parent Sample Id: 631951-033

Matrix: Soil

MS Sample Id: 631951-033 S

Prep Method: SW5030B

Date Prep: 07.29.19

MSD Sample Id: 631951-033 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	0.0604	60	0.0817	81	70-130	30	35	mg/kg	07.31.19 08:33	X
Toluene	<0.00200	0.100	0.0581	58	0.0789	78	70-130	30	35	mg/kg	07.31.19 08:33	X
Ethylbenzene	<0.00200	0.100	0.0637	64	0.0857	85	70-130	29	35	mg/kg	07.31.19 08:33	X
m,p-Xylenes	<0.00400	0.200	0.128	64	0.173	86	70-130	30	35	mg/kg	07.31.19 08:33	X
o-Xylene	<0.00200	0.100	0.0671	67	0.0907	90	70-130	30	35	mg/kg	07.31.19 08:33	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		104		70-130	%	07.31.19 08:33
4-Bromofluorobenzene	114		113		70-130	%	07.31.19 08:33

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

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

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



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Work Order No: 60/451

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Chain of Custody

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrall
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 East Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	slc@lternv.com, dmoir@lternv.com

Work Order Comments			
Program: UST/ST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐			
State of Project:			
Reporting Level II	☐ Level III	☐ ST/UST	☐ RRP ☐ Level IV ☐
Deliverables: EDD	☐	ADAPT	☐ Other: ☐

Project Name:	PLU JV CUK #017H	Turn Around	ANALYSIS REQUEST	Work Order Notes
Project Number:	2 R P - 5024	Routine ☒ Rush:		
P.O. Number:				
Sampler's Name:	Spencer Lo	Due Date:		
SAMPLE RECEIPT				
Temperature (°C):	3.4	Temp Blank: ☒ Yes ☐ No	Well Ice: ☒ Yes ☐ No	
Received Intact:	☒ Yes ☐ No	Thermometer ID		
Cooler Custody Seals:	Yes ☒ No ☐ N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes ☒ No ☐ N/A	Total Containers:	10	
Number of Containers				
(EPA 8015)				
(EPA 0=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 A/ Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO ₂ Na Sr Ti Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed		
TCLP / SPLP	6010: 8RCRA	Sb As Ba Be B Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U
		1631 / 245.1 / 7470 / 7471 : Hg

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		7-29-19 12:30			



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Chain of Custody

Work Order No:

431951

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Project Manager:	Dan Moir	Bill to: (if different)	Kyle Litrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 East Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	slc@xenco.com, dmoir@xenco.com

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

ANALYSIS REQUEST

Work Order Notes

Project Name:	PLU JV CVX #2174	Turn Around	Routine
Project Number:	28P-3024	Rush:	
P.O. Number:		Due Date:	
Sampler's Name:	Spencer LO		

SAMPLE RECEIPT	Temp Blank:	Yes	No	Wet Ice:	Yes	No
Temperature (°C):	2.4	Thermometer ID				
Received Intact:	Yes	No	Correction Factor:	T-NM-07		
Cooler Custody Seals:	Yes	No	N/A	Total Containers:	10	
Sample Custody Seals:	Yes	No	N/A			

12 PM

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number	TPH (E	BTEX	Chloride												Sample Comments
PH07B	S	7.23.19	10:20	3'	1															
PH07C			10:35	4'																
PH08			10:50	1'																
PH08A			11:05	2'																
PH08B			11:20	3'																
PH08C			11:35	4'																
PH08D			11:50	1'																
PH08E			12:00	2'																
PH08F			12:15	3'																
PH08G			12:30	4'																

Total 200.7 / 6010 200.8 / 6020:

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

8RCRA 13PPM Texas 11 A 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

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		7/24/19 12:30			



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 Midland, TX (432-704-5440) El Paso, TX (915)585-3443 Lubbock, TX (806)794-1298
 Hobbs, NM (575-392-7550) Phoenix, AZ (480-355-0900) Atlanta, GA (770-448-8800) Tampa, FL (813-620-2000)

Chain of Custody

Work Order No: 1031951

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Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 East Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	slc@xenco.com, dmoir@xenco.com

Program: UST/PT	☐ RRP	☐ Brownfields	☐ XRC	☐ Superfund
State of Project:				
Reporting Level II	☐ Level III	☐ ST/UST	☐ RRP	☐ Level IV
Deliverables: EDD	☐ ADAPT	Other:		

Project Name:	PLU JV CVX #07H	Turn Around	
Project Number:	28 P-3024	Rush:	☒
P.O. Number:		Due Date:	
Sampler's Name:	Spencer Lo		

SAMPLE RECEIPT	Temp Blank:	☒ Yes	No	Wet Ice:	☒ Yes	No
Temperature (°C):	3.4	Thermometer ID				
Received Intact:	☒ Yes	Correction Factor:	7-NA-03			
Cooler Custody Seals:	Yes	Total Containers:	10			
Sample Custody Seals:	Yes					

02 PM

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number	TPH (%)	BTEX	Chloride	Sample Comments
PH10	S	7-23-19	1305	1'	1				
PH10A			1320	2'					
PH08			1330	3'					
PH10C			1340	4'					
PH11			1355	1'					
PH11A			1405	2'					
PH11B			1420	3'					
PH11C			1435	4'					
PH12			1450	1'					
PH12A			1505	2'					

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 A 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

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Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		7/24/19 12:30			



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

Chain of Custody

Work Order No:

6231951

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Page 4 of 4

Project Manager:	Dan Moir	Bill to: (if different):	Kyle Litrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 East Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	slc@xenco.com, dmoir@xenco.com

Work Order Comments Program: UST/PST ☐ RRP ☐ Brownfields ☐ RC ☐ Superfund ☐ State of Project: Reporting Level II ☐ Level III ☐ ST/UST ☐ RRP ☐ Level IV ☐ Deliverables: EDD ☐ ADAPT ☐ Other:	
--	--

Project Name:	PLU JV CUK #017H	Turn Around	
Project Number:	2RP-3024	Routine	☒
P.O. Number:		Rush:	
Sampler's Name:	Spencer LO	Due Date:	

SAMPLE RECEIPT		Temp Blank:	☒ Yes ☐ No	Wet Ice:	☒ Yes ☐ No
Temperature (°C):	3.4	Thermometer ID	T-NM-07		
Received In tact:	☒ Yes ☐ No	Correction Factor:	-0.2		
Cooler Custody Seals:	☒ Yes ☐ No	Total Containers:	10		
Sample Custody Seals:	☒ Yes ☐ No				

12 PM

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number	TPH (EPA 8015)	BTEX (EPA 8015)	Chloride (EPA 8015)	Sample Comments																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
PH12a	S	7.23.19	1515	3'	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

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>	7/24/19 1230			



Inter-Office Shipment

Page 1 of 5

IOS Number **44885**

Date/Time: 07/24/19 14:14

Created by: Martha Castro

Please send report to: Jessica Kramer

Lab# From: **Carlsbad**

Delivery Priority:

Address: 1089 N Canal Street

Lab# To: **Midland**

Air Bill No.: 775826350686

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
631951-001	S	PH05	07/23/19 07:55	E300_CL	Chloride by EPA 300	07/30/19	01/19/20	JKR	CL	
631951-001	S	PH05	07/23/19 07:55	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/06/19	JKR	GRO-DRO PHCC10C28 PF	
631951-001	S	PH05	07/23/19 07:55	SW8021B	BTEX by EPA 8021B	07/30/19	08/06/19	JKR	BR4FBZ BZ BZME EBZ X	
631951-002	S	PH05A	07/23/19 08:10	SW8021B	BTEX by EPA 8021B	07/30/19	08/06/19	JKR	BR4FBZ BZ BZME EBZ X	
631951-002	S	PH05A	07/23/19 08:10	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/06/19	JKR	GRO-DRO PHCC10C28 PF	
631951-002	S	PH05A	07/23/19 08:10	E300_CL	Chloride by EPA 300	07/30/19	01/19/20	JKR	CL	
631951-003	S	PH05B	07/23/19 08:20	SW8021B	BTEX by EPA 8021B	07/30/19	08/06/19	JKR	BR4FBZ BZ BZME EBZ X	
631951-003	S	PH05B	07/23/19 08:20	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/06/19	JKR	GRO-DRO PHCC10C28 PF	
631951-003	S	PH05B	07/23/19 08:20	E300_CL	Chloride by EPA 300	07/30/19	01/19/20	JKR	CL	
631951-004	S	PH05C	07/23/19 08:40	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/06/19	JKR	GRO-DRO PHCC10C28 PF	
631951-004	S	PH05C	07/23/19 08:40	E300_CL	Chloride by EPA 300	07/30/19	01/19/20	JKR	CL	
631951-004	S	PH05C	07/23/19 08:40	SW8021B	BTEX by EPA 8021B	07/30/19	08/06/19	JKR	BR4FBZ BZ BZME EBZ X	
631951-005	S	PH06	07/23/19 08:55	SW8021B	BTEX by EPA 8021B	07/30/19	08/06/19	JKR	BR4FBZ BZ BZME EBZ X	
631951-005	S	PH06	07/23/19 08:55	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/06/19	JKR	GRO-DRO PHCC10C28 PF	
631951-005	S	PH06	07/23/19 08:55	E300_CL	Chloride by EPA 300	07/30/19	01/19/20	JKR	CL	
631951-006	S	PH06A	07/23/19 09:10	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/06/19	JKR	GRO-DRO PHCC10C28 PF	
631951-006	S	PH06A	07/23/19 09:10	SW8021B	BTEX by EPA 8021B	07/30/19	08/06/19	JKR	BR4FBZ BZ BZME EBZ X	
631951-006	S	PH06A	07/23/19 09:10	E300_CL	Chloride by EPA 300	07/30/19	01/19/20	JKR	CL	
631951-007	S	PH06B	07/23/19 09:25	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/06/19	JKR	GRO-DRO PHCC10C28 PF	
631951-007	S	PH06B	07/23/19 09:25	SW8021B	BTEX by EPA 8021B	07/30/19	08/06/19	JKR	BR4FBZ BZ BZME EBZ X	
631951-007	S	PH06B	07/23/19 09:25	E300_CL	Chloride by EPA 300	07/30/19	01/19/20	JKR	CL	
631951-008	S	PH06C	07/23/19 09:40	SW8021B	BTEX by EPA 8021B	07/30/19	08/06/19	JKR	BR4FBZ BZ BZME EBZ X	
631951-008	S	PH06C	07/23/19 09:40	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/06/19	JKR	GRO-DRO PHCC10C28 PF	
631951-008	S	PH06C	07/23/19 09:40	E300_CL	Chloride by EPA 300	07/30/19	01/19/20	JKR	CL	
631951-009	S	PH07	07/23/19 09:55	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/06/19	JKR	GRO-DRO PHCC10C28 PF	



Inter-Office Shipment

Page 2 of 5

IOS Number **44885**

Date/Time: 07/24/19 14:14

Created by: Martha Castro

Please send report to: Jessica Kramer

Lab# From: **Carlsbad**

Delivery Priority:

Address: 1089 N Canal Street

Lab# To: **Midland**

Air Bill No.: 775826350686

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
631951-009	S	PH07	07/23/19 09:55	SW8021B	BTEX by EPA 8021B	07/30/19	08/06/19	JKR	BR4FBZ BZ BZME EBZ X	
631951-009	S	PH07	07/23/19 09:55	E300_CL	Chloride by EPA 300	07/30/19	01/19/20	JKR	CL	
631951-010	S	PH07A	07/23/19 10:05	SW8021B	BTEX by EPA 8021B	07/30/19	08/06/19	JKR	BR4FBZ BZ BZME EBZ X	
631951-010	S	PH07A	07/23/19 10:05	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/06/19	JKR	GRO-DRO PHCC10C28 PF	
631951-010	S	PH07A	07/23/19 10:05	E300_CL	Chloride by EPA 300	07/30/19	01/19/20	JKR	CL	
631951-011	S	PH07B	07/23/19 10:20	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/06/19	JKR	GRO-DRO PHCC10C28 PF	
631951-011	S	PH07B	07/23/19 10:20	SW8021B	BTEX by EPA 8021B	07/30/19	08/06/19	JKR	BR4FBZ BZ BZME EBZ X	
631951-011	S	PH07B	07/23/19 10:20	E300_CL	Chloride by EPA 300	07/30/19	01/19/20	JKR	CL	
631951-012	S	PH07C	07/23/19 10:35	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/06/19	JKR	GRO-DRO PHCC10C28 PF	
631951-012	S	PH07C	07/23/19 10:35	SW8021B	BTEX by EPA 8021B	07/30/19	08/06/19	JKR	BR4FBZ BZ BZME EBZ X	
631951-012	S	PH07C	07/23/19 10:35	E300_CL	Chloride by EPA 300	07/30/19	01/19/20	JKR	CL	
631951-013	S	PH08	07/23/19 10:50	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/06/19	JKR	GRO-DRO PHCC10C28 PF	
631951-013	S	PH08	07/23/19 10:50	SW8021B	BTEX by EPA 8021B	07/30/19	08/06/19	JKR	BR4FBZ BZ BZME EBZ X	
631951-013	S	PH08	07/23/19 10:50	E300_CL	Chloride by EPA 300	07/30/19	01/19/20	JKR	CL	
631951-014	S	PH08A	07/23/19 11:05	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/06/19	JKR	GRO-DRO PHCC10C28 PF	
631951-014	S	PH08A	07/23/19 11:05	SW8021B	BTEX by EPA 8021B	07/30/19	08/06/19	JKR	BR4FBZ BZ BZME EBZ X	
631951-014	S	PH08A	07/23/19 11:05	E300_CL	Chloride by EPA 300	07/30/19	01/19/20	JKR	CL	
631951-015	S	PH08B	07/23/19 11:20	E300_CL	Chloride by EPA 300	07/30/19	01/19/20	JKR	CL	
631951-015	S	PH08B	07/23/19 11:20	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/06/19	JKR	GRO-DRO PHCC10C28 PF	
631951-015	S	PH08B	07/23/19 11:20	SW8021B	BTEX by EPA 8021B	07/30/19	08/06/19	JKR	BR4FBZ BZ BZME EBZ X	
631951-016	S	PH08C	07/23/19 11:35	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/06/19	JKR	GRO-DRO PHCC10C28 PF	
631951-016	S	PH08C	07/23/19 11:35	SW8021B	BTEX by EPA 8021B	07/30/19	08/06/19	JKR	BR4FBZ BZ BZME EBZ X	
631951-016	S	PH08C	07/23/19 11:35	E300_CL	Chloride by EPA 300	07/30/19	01/19/20	JKR	CL	
631951-017	S	PH09	07/23/19 11:50	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/06/19	JKR	GRO-DRO PHCC10C28 PF	
631951-017	S	PH09	07/23/19 11:50	SW8021B	BTEX by EPA 8021B	07/30/19	08/06/19	JKR	BR4FBZ BZ BZME EBZ X	

Inter Office Shipment or Sample Comments:



Inter-Office Shipment

Page 3 of 5

IOS Number **44885**

Date/Time: 07/24/19 14:14

Created by: Martha Castro

Please send report to: Jessica Kramer

Lab# From: **Carlsbad**

Delivery Priority:

Address: 1089 N Canal Street

Lab# To: **Midland**

Air Bill No.: 775826350686

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
631951-017	S	PH09	07/23/19 11:50	E300_CL	Chloride by EPA 300	07/30/19	01/19/20	JKR	CL	
631951-018	S	PH09A	07/23/19 12:00	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/06/19	JKR	GRO-DRO PHCC10C28 PF	
631951-018	S	PH09A	07/23/19 12:00	E300_CL	Chloride by EPA 300	07/30/19	01/19/20	JKR	CL	
631951-018	S	PH09A	07/23/19 12:00	SW8021B	BTEX by EPA 8021B	07/30/19	08/06/19	JKR	BR4FBZ BZ BZME EBZ X	
631951-019	S	PH09B	07/23/19 12:15	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/06/19	JKR	GRO-DRO PHCC10C28 PF	
631951-019	S	PH09B	07/23/19 12:15	SW8021B	BTEX by EPA 8021B	07/30/19	08/06/19	JKR	BR4FBZ BZ BZME EBZ X	
631951-019	S	PH09B	07/23/19 12:15	E300_CL	Chloride by EPA 300	07/30/19	01/19/20	JKR	CL	
631951-020	S	PH09C	07/23/19 12:30	SW8021B	BTEX by EPA 8021B	07/30/19	08/06/19	JKR	BR4FBZ BZ BZME EBZ X	
631951-020	S	PH09C	07/23/19 12:30	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/06/19	JKR	GRO-DRO PHCC10C28 PF	
631951-020	S	PH09C	07/23/19 12:30	E300_CL	Chloride by EPA 300	07/30/19	01/19/20	JKR	CL	
631951-021	S	PH10	07/23/19 13:05	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/06/19	JKR	GRO-DRO PHCC10C28 PF	
631951-021	S	PH10	07/23/19 13:05	E300_CL	Chloride by EPA 300	07/30/19	01/19/20	JKR	CL	
631951-021	S	PH10	07/23/19 13:05	SW8021B	BTEX by EPA 8021B	07/30/19	08/06/19	JKR	BR4FBZ BZ BZME EBZ X	
631951-022	S	PH10A	07/23/19 13:20	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/06/19	JKR	GRO-DRO PHCC10C28 PF	
631951-022	S	PH10A	07/23/19 13:20	SW8021B	BTEX by EPA 8021B	07/30/19	08/06/19	JKR	BR4FBZ BZ BZME EBZ X	
631951-022	S	PH10A	07/23/19 13:20	E300_CL	Chloride by EPA 300	07/30/19	01/19/20	JKR	CL	
631951-023	S	PH10B	07/23/19 13:30	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/06/19	JKR	GRO-DRO PHCC10C28 PF	
631951-023	S	PH10B	07/23/19 13:30	SW8021B	BTEX by EPA 8021B	07/30/19	08/06/19	JKR	BR4FBZ BZ BZME EBZ X	
631951-023	S	PH10B	07/23/19 13:30	E300_CL	Chloride by EPA 300	07/30/19	01/19/20	JKR	CL	
631951-024	S	PH10C	07/23/19 13:40	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/06/19	JKR	GRO-DRO PHCC10C28 PF	
631951-024	S	PH10C	07/23/19 13:40	SW8021B	BTEX by EPA 8021B	07/30/19	08/06/19	JKR	BR4FBZ BZ BZME EBZ X	
631951-024	S	PH10C	07/23/19 13:40	E300_CL	Chloride by EPA 300	07/30/19	01/19/20	JKR	CL	
631951-025	S	PH11	07/23/19 13:55	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/06/19	JKR	GRO-DRO PHCC10C28 PF	
631951-025	S	PH11	07/23/19 13:55	SW8021B	BTEX by EPA 8021B	07/30/19	08/06/19	JKR	BR4FBZ BZ BZME EBZ X	
631951-025	S	PH11	07/23/19 13:55	E300_CL	Chloride by EPA 300	07/30/19	01/19/20	JKR	CL	

Inter Office Shipment or Sample Comments:

Relinquished By:

Received By:

Released to Imaging: 7/1/2022 4:09:16 PM



Inter-Office Shipment

Page 4 of 5

IOS Number **44885**

Date/Time: 07/24/19 14:14

Created by: Martha Castro

Please send report to: Jessica Kramer

Lab# From: **Carlsbad**

Delivery Priority:

Address: 1089 N Canal Street

Lab# To: **Midland**

Air Bill No.: 775826350686

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
631951-026	S	PH11A	07/23/19 14:05	SW8021B	BTEX by EPA 8021B	07/30/19	08/06/19	JKR	BR4FBZ BZ BZME EBZ X	
631951-026	S	PH11A	07/23/19 14:05	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/06/19	JKR	GRO-DRO PHCC10C28 PF	
631951-026	S	PH11A	07/23/19 14:05	E300_CL	Chloride by EPA 300	07/30/19	01/19/20	JKR	CL	
631951-027	S	PH11B	07/23/19 14:20	SW8021B	BTEX by EPA 8021B	07/30/19	08/06/19	JKR	BR4FBZ BZ BZME EBZ X	
631951-027	S	PH11B	07/23/19 14:20	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/06/19	JKR	GRO-DRO PHCC10C28 PF	
631951-027	S	PH11B	07/23/19 14:20	E300_CL	Chloride by EPA 300	07/30/19	01/19/20	JKR	CL	
631951-028	S	PH11C	07/23/19 14:35	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/06/19	JKR	GRO-DRO PHCC10C28 PF	
631951-028	S	PH11C	07/23/19 14:35	SW8021B	BTEX by EPA 8021B	07/30/19	08/06/19	JKR	BR4FBZ BZ BZME EBZ X	
631951-028	S	PH11C	07/23/19 14:35	E300_CL	Chloride by EPA 300	07/30/19	01/19/20	JKR	CL	
631951-029	S	PH12	07/23/19 14:50	SW8021B	BTEX by EPA 8021B	07/30/19	08/06/19	JKR	BR4FBZ BZ BZME EBZ X	
631951-029	S	PH12	07/23/19 14:50	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/06/19	JKR	GRO-DRO PHCC10C28 PF	
631951-029	S	PH12	07/23/19 14:50	E300_CL	Chloride by EPA 300	07/30/19	01/19/20	JKR	CL	
631951-030	S	PH12A	07/23/19 15:05	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/06/19	JKR	GRO-DRO PHCC10C28 PF	
631951-030	S	PH12A	07/23/19 15:05	SW8021B	BTEX by EPA 8021B	07/30/19	08/06/19	JKR	BR4FBZ BZ BZME EBZ X	
631951-030	S	PH12A	07/23/19 15:05	E300_CL	Chloride by EPA 300	07/30/19	01/19/20	JKR	CL	
631951-031	S	PH12B	07/23/19 15:15	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/06/19	JKR	GRO-DRO PHCC10C28 PF	
631951-031	S	PH12B	07/23/19 15:15	SW8021B	BTEX by EPA 8021B	07/30/19	08/06/19	JKR	BR4FBZ BZ BZME EBZ X	
631951-031	S	PH12B	07/23/19 15:15	E300_CL	Chloride by EPA 300	07/30/19	01/19/20	JKR	CL	
631951-032	S	PH12C	07/23/19 15:25	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/06/19	JKR	GRO-DRO PHCC10C28 PF	
631951-032	S	PH12C	07/23/19 15:25	SW8021B	BTEX by EPA 8021B	07/30/19	08/06/19	JKR	BR4FBZ BZ BZME EBZ X	
631951-032	S	PH12C	07/23/19 15:25	E300_CL	Chloride by EPA 300	07/30/19	01/19/20	JKR	CL	
631951-033	S	PH13	07/23/19 15:40	E300_CL	Chloride by EPA 300	07/30/19	01/19/20	JKR	CL	
631951-033	S	PH13	07/23/19 15:40	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/06/19	JKR	GRO-DRO PHCC10C28 PF	
631951-033	S	PH13	07/23/19 15:40	SW8021B	BTEX by EPA 8021B	07/30/19	08/06/19	JKR	BR4FBZ BZ BZME EBZ X	
631951-034	S	PH13A	07/23/19 15:55	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/06/19	JKR	GRO-DRO PHCC10C28 PF	

Inter Office Shipment or Sample Comments:

Date Relinquished:

Date Received:

Released to Imaging: 7/1/2022 4:09:16 PM



Inter-Office Shipment

Page 5 of 5

IOS Number **44885**

Date/Time: 07/24/19 14:14

Created by: Martha Castro

Please send report to: Jessica Kramer

Lab# From: **Carlsbad**

Delivery Priority:

Address: 1089 N Canal Street

Lab# To: **Midland**

Air Bill No.: 775826350686

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
631951-034	S	PH13A	07/23/19 15:55	SW8021B	BTEX by EPA 8021B	07/30/19	08/06/19	JKR	BR4FBZ BZ BZME EBZ X	
631951-034	S	PH13A	07/23/19 15:55	E300_CL	Chloride by EPA 300	07/30/19	01/19/20	JKR	CL	
631951-035	S	PH13B	07/23/19 16:10	E300_CL	Chloride by EPA 300	07/30/19	01/19/20	JKR	CL	
631951-035	S	PH13B	07/23/19 16:10	SW8021B	BTEX by EPA 8021B	07/30/19	08/06/19	JKR	BR4FBZ BZ BZME EBZ X	
631951-035	S	PH13B	07/23/19 16:10	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/06/19	JKR	GRO-DRO PHCC10C28 PF	
631951-036	S	PH13C	07/23/19 16:25	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/06/19	JKR	GRO-DRO PHCC10C28 PF	
631951-036	S	PH13C	07/23/19 16:25	SW8021B	BTEX by EPA 8021B	07/30/19	08/06/19	JKR	BR4FBZ BZ BZME EBZ X	
631951-036	S	PH13C	07/23/19 16:25	E300_CL	Chloride by EPA 300	07/30/19	01/19/20	JKR	CL	
631951-037	S	PH14	07/23/19 16:40	E300_CL	Chloride by EPA 300	07/30/19	01/19/20	JKR	CL	
631951-037	S	PH14	07/23/19 16:40	SW8021B	BTEX by EPA 8021B	07/30/19	08/06/19	JKR	BR4FBZ BZ BZME EBZ X	
631951-037	S	PH14	07/23/19 16:40	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/06/19	JKR	GRO-DRO PHCC10C28 PF	
631951-038	S	PH14A	07/23/19 16:50	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/06/19	JKR	GRO-DRO PHCC10C28 PF	
631951-038	S	PH14A	07/23/19 16:50	SW8021B	BTEX by EPA 8021B	07/30/19	08/06/19	JKR	BR4FBZ BZ BZME EBZ X	
631951-038	S	PH14A	07/23/19 16:50	E300_CL	Chloride by EPA 300	07/30/19	01/19/20	JKR	CL	
631951-039	S	PH14B	07/23/19 17:00	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/06/19	JKR	GRO-DRO PHCC10C28 PF	
631951-039	S	PH14B	07/23/19 17:00	SW8021B	BTEX by EPA 8021B	07/30/19	08/06/19	JKR	BR4FBZ BZ BZME EBZ X	
631951-039	S	PH14B	07/23/19 17:00	E300_CL	Chloride by EPA 300	07/30/19	01/19/20	JKR	CL	
631951-040	S	PH14C	07/23/19 17:10	E300_CL	Chloride by EPA 300	07/30/19	01/19/20	JKR	CL	
631951-040	S	PH14C	07/23/19 17:10	SW8021B	BTEX by EPA 8021B	07/30/19	08/06/19	JKR	BR4FBZ BZ BZME EBZ X	
631951-040	S	PH14C	07/23/19 17:10	SW8015MOD_NM	TPH by SW8015 Mod	07/30/19	08/06/19	JKR	GRO-DRO PHCC10C28 PF	

Inter Office Shipment or Sample Comments:

Martha Castro

07/24/2019

Cooler Temperature:

Brianna Teel

07/25/2019 11:31

0.4

Inter-Office Shipment

IOS Number : **45110**

Date/Time: 07.29.2019 14:04 Created by: Jessica Kramer
 Lab# From: **Carlsbad** Delivery Priority:
 Lab# To: **Houston** Air Bill No.: 775861346682

Please send report to: Jessica Kramer
 Address: 1089 N Canal Street
 E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
631951-001	S	PH05	07.23.2019 07:55	SW8015MOD_NM	TPH by SW8015 Mod	07.30.2019	08.06.2019	JKR	GRO-DRO PHCC10C28	
631951-002	S	PH05A	07.23.2019 08:10	SW8015MOD_NM	TPH by SW8015 Mod	07.30.2019	08.06.2019	JKR	GRO-DRO PHCC10C28	
631951-003	S	PH05B	07.23.2019 08:20	SW8015MOD_NM	TPH by SW8015 Mod	07.30.2019	08.06.2019	JKR	GRO-DRO PHCC10C28	
631951-004	S	PH05C	07.23.2019 08:40	SW8015MOD_NM	TPH by SW8015 Mod	07.30.2019	08.06.2019	JKR	GRO-DRO PHCC10C28	
631951-005	S	PH06	07.23.2019 08:55	SW8015MOD_NM	TPH by SW8015 Mod	07.30.2019	08.06.2019	JKR	GRO-DRO PHCC10C28	
631951-006	S	PH06A	07.23.2019 09:10	SW8015MOD_NM	TPH by SW8015 Mod	07.30.2019	08.06.2019	JKR	GRO-DRO PHCC10C28	
631951-007	S	PH06B	07.23.2019 09:25	SW8015MOD_NM	TPH by SW8015 Mod	07.30.2019	08.06.2019	JKR	GRO-DRO PHCC10C28	
631951-008	S	PH06C	07.23.2019 09:40	SW8015MOD_NM	TPH by SW8015 Mod	07.30.2019	08.06.2019	JKR	GRO-DRO PHCC10C28	
631951-009	S	PH07	07.23.2019 09:55	SW8015MOD_NM	TPH by SW8015 Mod	07.30.2019	08.06.2019	JKR	GRO-DRO PHCC10C28	
631951-010	S	PH07A	07.23.2019 10:05	SW8015MOD_NM	TPH by SW8015 Mod	07.30.2019	08.06.2019	JKR	GRO-DRO PHCC10C28	
631951-011	S	PH07B	07.23.2019 10:20	SW8015MOD_NM	TPH by SW8015 Mod	07.30.2019	08.06.2019	JKR	GRO-DRO PHCC10C28	
631951-012	S	PH07C	07.23.2019 10:35	SW8015MOD_NM	TPH by SW8015 Mod	07.30.2019	08.06.2019	JKR	GRO-DRO PHCC10C28	
631951-013	S	PH08	07.23.2019 10:50	SW8015MOD_NM	TPH by SW8015 Mod	07.30.2019	08.06.2019	JKR	GRO-DRO PHCC10C28	
631951-014	S	PH08A	07.23.2019 11:05	SW8015MOD_NM	TPH by SW8015 Mod	07.30.2019	08.06.2019	JKR	GRO-DRO PHCC10C28	
631951-015	S	PH08B	07.23.2019 11:20	SW8015MOD_NM	TPH by SW8015 Mod	07.30.2019	08.06.2019	JKR	GRO-DRO PHCC10C28	
631951-016	S	PH08C	07.23.2019 11:35	SW8015MOD_NM	TPH by SW8015 Mod	07.30.2019	08.06.2019	JKR	GRO-DRO PHCC10C28	
631951-017	S	PH09	07.23.2019 11:50	SW8015MOD_NM	TPH by SW8015 Mod	07.30.2019	08.06.2019	JKR	GRO-DRO PHCC10C28	
631951-018	S	PH09A	07.23.2019 12:00	SW8015MOD_NM	TPH by SW8015 Mod	07.30.2019	08.06.2019	JKR	GRO-DRO PHCC10C28	
631951-019	S	PH09B	07.23.2019 12:15	SW8015MOD_NM	TPH by SW8015 Mod	07.30.2019	08.06.2019	JKR	GRO-DRO PHCC10C28	
631951-020	S	PH09C	07.23.2019 12:30	SW8015MOD_NM	TPH by SW8015 Mod	07.30.2019	08.06.2019	JKR	GRO-DRO PHCC10C28	
631951-021	S	PH10	07.23.2019 13:05	SW8015MOD_NM	TPH by SW8015 Mod	07.30.2019	08.06.2019	JKR	GRO-DRO PHCC10C28	
631951-022	S	PH10A	07.23.2019 13:20	SW8015MOD_NM	TPH by SW8015 Mod	07.30.2019	08.06.2019	JKR	GRO-DRO PHCC10C28	
631951-023	S	PH10B	07.23.2019 13:30	SW8015MOD_NM	TPH by SW8015 Mod	07.30.2019	08.06.2019	JKR	GRO-DRO PHCC10C28	
631951-024	S	PH10C	07.23.2019 13:40	SW8015MOD_NM	TPH by SW8015 Mod	07.30.2019	08.06.2019	JKR	GRO-DRO PHCC10C28	
631951-025	S	PH11	07.23.2019 13:55	SW8015MOD_NM	TPH by SW8015 Mod	07.30.2019	08.06.2019	JKR	GRO-DRO PHCC10C28	

Inter-Office Shipment

IOS Number : **45110**

Date/Time: 07.29.2019 14:04 Created by: Jessica Kramer
 Lab# From: **Carlsbad** Delivery Priority:
 Lab# To: **Houston** Air Bill No.: 775861346682

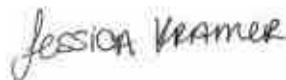
Please send report to: Jessica Kramer
 Address: 1089 N Canal Street
 E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
631951-026	S	PH11A	07.23.2019 14:05	SW8015MOD_NM	TPH by SW8015 Mod	07.30.2019	08.06.2019	JKR	GRO-DRO PHCC10C28	
631951-027	S	PH11B	07.23.2019 14:20	SW8015MOD_NM	TPH by SW8015 Mod	07.30.2019	08.06.2019	JKR	GRO-DRO PHCC10C28	
631951-028	S	PH11C	07.23.2019 14:35	SW8015MOD_NM	TPH by SW8015 Mod	07.30.2019	08.06.2019	JKR	GRO-DRO PHCC10C28	
631951-029	S	PH12	07.23.2019 14:50	SW8015MOD_NM	TPH by SW8015 Mod	07.30.2019	08.06.2019	JKR	GRO-DRO PHCC10C28	
631951-030	S	PH12A	07.23.2019 15:05	SW8015MOD_NM	TPH by SW8015 Mod	07.30.2019	08.06.2019	JKR	GRO-DRO PHCC10C28	
631951-031	S	PH12B	07.23.2019 15:15	SW8015MOD_NM	TPH by SW8015 Mod	07.30.2019	08.06.2019	JKR	GRO-DRO PHCC10C28	
631951-032	S	PH12C	07.23.2019 15:25	SW8015MOD_NM	TPH by SW8015 Mod	07.30.2019	08.06.2019	JKR	GRO-DRO PHCC10C28	
631951-033	S	PH13	07.23.2019 15:40	SW8015MOD_NM	TPH by SW8015 Mod	07.30.2019	08.06.2019	JKR	GRO-DRO PHCC10C28	
631951-034	S	PH13A	07.23.2019 15:55	SW8015MOD_NM	TPH by SW8015 Mod	07.30.2019	08.06.2019	JKR	GRO-DRO PHCC10C28	
631951-035	S	PH13B	07.23.2019 16:10	SW8015MOD_NM	TPH by SW8015 Mod	07.30.2019	08.06.2019	JKR	GRO-DRO PHCC10C28	
631951-036	S	PH13C	07.23.2019 16:25	SW8015MOD_NM	TPH by SW8015 Mod	07.30.2019	08.06.2019	JKR	GRO-DRO PHCC10C28	
631951-037	S	PH14	07.23.2019 16:40	SW8015MOD_NM	TPH by SW8015 Mod	07.30.2019	08.06.2019	JKR	GRO-DRO PHCC10C28	
631951-038	S	PH14A	07.23.2019 16:50	SW8015MOD_NM	TPH by SW8015 Mod	07.30.2019	08.06.2019	JKR	GRO-DRO PHCC10C28	
631951-039	S	PH14B	07.23.2019 17:00	SW8015MOD_NM	TPH by SW8015 Mod	07.30.2019	08.06.2019	JKR	GRO-DRO PHCC10C28	
631951-040	S	PH14C	07.23.2019 17:10	SW8015MOD_NM	TPH by SW8015 Mod	07.30.2019	08.06.2019	JKR	GRO-DRO PHCC10C28	

Inter Office Shipment or Sample Comments:

Coming from Midland

Relinquished By:



Jessica Kramer

Date Relinquished: 07.29.2019

Received By:



Travis Simmons

Date Received: 07.30.2019 15:30

Cooler Temperature: 2.5



XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 44885

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sent By: Martha Castro

Date Sent: 07/24/2019 02:14 PM

Received By: Brianna Teel

Date Received: 07/25/2019 11:31 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	.4
#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: 07/25/2019



XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 45110

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : HOU-068

Sent By: Jessica Kramer

Date Sent: 07.29.2019 02.04 PM

Received By: Travis Simmons

Date Received: 07.30.2019 03.30 PM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	2.5
#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:

Coming from Midland

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ Contacted by : _____ Date: _____

Checklist reviewed by:

Travis Simmons

Date: 07.30.2019



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 07/24/2019 12:30:00 PM

Work Order #: 631951

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)?	3.4
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	No
#5 Custody Seals intact on sample bottles?	No
#6 *Custody Seals Signed and dated?	No
#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
#18 Water VOC samples have zero headspace?	N/A

Subbed to Xenco Mdiland

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Martha Castro

Date: 07/24/2019

Checklist reviewed by:

Jessica Kramer

Date: 07/29/2019

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 4992

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 4992
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jharimon	Depth to groundwater is not adequately determined however the data allows for the closure of this incident by the OCD. Please note that, when the well or facility is plugged or abandoned, the final remediation and reclamation shall take place in accordance with 19.15.29.12 and 19.15.29.13 NMAC once the site is no longer being used for oil and gas operations.	7/1/2022