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

January 3, 2020

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

RE: Closure Request
PLU CVX JV PC 003H
Remediation Permit Number 2RP-3153
Eddy County, New Mexico

Dear Mr. Billings:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following Closure Request detailing site assessment, soil sampling, and excavation activities at the PLU CVX JV PC 003H (Site) in Unit P, Section 28, Township 24 South, Range 30 East, in Eddy County, New Mexico (Figure 1). The purpose of the site assessment, soil sampling, and excavation activities was to address impacts to soil after a release of crude oil and produced water at the Site.

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

RELEASE BACKGROUND

On July 20, 2015, a gasket on the free-water knock-out (FWKO) failed. Approximately 9 barrels (bbls) of crude oil and 19 bbls of produced water were released within the lined containment around the process equipment and sprayed onto the surface of the well pad surrounding the process equipment. All released fluids remained on the well pad. A vacuum truck recovered approximately 5 bbls of oil and 15 bbls of produced water from within the lined containment. The former operator reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 on July 24, 2015, and was assigned Remediation Permit (RP) Number 2RP-3153 (Attachment 1).

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

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

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 321214103525501, located approximately 7,984 feet northwest of the Site. The water well has a depth to groundwater of 339 feet, the total depth is not specified. Ground surface elevation at the water well location is 3,371 feet above mean sea level (AMSL), which is approximately 79 feet higher in elevation than the Site. The closest continuously flowing water or significant watercourse to the Site is an intermittent stream located approximately 152 feet northeast of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is located in a low-potential karst area.

CLOSURE CRITERIA

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

- Benzene: 10 milligrams per kilogram (mg/kg);
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg;
- Total petroleum hydrocarbons (TPH): 100 mg/kg; and
- Chloride: 600 mg/kg.

SITE ASSESSMENT, EXCAVATION, AND DELINEATION SOIL SAMPLING ACTIVITIES

On October 12, 2018, LTE personnel inspected the Site to evaluate the release extent. Five preliminary soil samples (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.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were shipped at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to

Xenco Laboratories (Xenco) in Midland, Texas, for analysis of BTEX following United States Environmental Protection Agency (USEPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following USEPA Method 8015M/D; and chloride following USEPA Method 300.0.

During January and June 2019, LTE personnel returned to the Site to oversee site assessment and excavation activities.

Boreholes were advanced via hand-auger and backhoe at 3 locations around the process equipment containment to further assess the lateral and vertical extent impacted soil. Boreholes BH01 through BH03 were advanced to depths ranging from 4 feet to 8 feet bgs. Delineation soil samples were collected from each borehole from depths ranging from 2 feet to 8 feet bgs. Soil from the boreholes 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 the boreholes were logged on lithologic/soil sampling logs, which are included in Attachment 2. The delineation soil sample locations are depicted on Figure 3.

Impacted soil was excavated from the release area as indicated by visual observations, field screening activities, and laboratory analytical results for the preliminary and delineation soil samples. To direct excavation activities, LTE screened soil for volatile aromatic hydrocarbons and chloride utilizing a calibrated photoionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. Impacted soil was excavated in two separate areas to depths ranging from 1.5 foot to 4.5 feet bgs. Following removal of impacted soil, LTE collected 5-point composite soil samples every 200 square feet from the sidewalls and floors of the excavations. The 5-point composite samples were collected by depositing five aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples SW01 through SW04 were collected from the sidewalls of the excavations from depths ranging from the ground surface to 4.5 feet bgs. Composite soil samples FS01 through FS04 were collected from the floors of the excavations from depths ranging from 1.5 foot to 4.5 feet bgs. The excavation extents and excavation soil sample locations are depicted on Figure 4.

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

The combined excavations measured approximately 810 square feet in area and were completed to depths ranging from 1.5 feet bgs to 4.5 feet bgs. A total of approximately 85 cubic yards of impacted soil were removed from the excavations. The impacted soil was transported and properly disposed of at the R360 Landfill located in Hobbs, New Mexico.

ANALYTICAL RESULTS

Laboratory analytical results indicated that BTEX, TPH, and chloride concentrations were compliant with the Closure Criteria in preliminary soil samples SS04 and SS05 and delineation soil samples BH01/BH01A, BH02/BH02A, BH03/BH03B. Laboratory analytical results indicated that TPH or chloride concentrations exceeded the Closure Criteria in preliminary soil samples SS01 through SS03, collected at 0.5 feet bgs, and delineation soil sample BH03A, collected at 4 feet bgs. Based on the laboratory analytical results for the preliminary and delineation soil samples, excavation of impacted soil was conducted.

Laboratory analytical results for excavation soil samples SW01 through SW04 and FS01 through FS04 indicated that BTEX, TPH, and chloride concentrations were compliant with the Closure Criteria. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Attachment 4.

CLOSURE REQUEST

Impacted soil was excavated from the Site to address the July 20, 2015, release of oil and produced water at the Site. Laboratory analytical results for the excavation soil samples collected from the final excavation extents indicated that BTEX, TPH, and chloride concentrations were compliant with the Closure Criteria. Based on the excavation soil sample analytical results, no further remediation was required.

Initial response efforts, natural attenuation, and excavation of impacted soil have mitigated impacts at this Site. XTO requests no further action for RP Number 2RP-3153. XTO will backfill the excavation with material purchased locally and recontour the Site to match pre-existing site conditions. An updated NMOCD Form C-141 is included in Attachment 1.

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

Sincerely,

LT ENVIRONMENTAL, INC.

Aimee Cole
Project Environmental Scientist

Ashley L. Ager, P.G.
Senior Geologist

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

Attachments:

Figure 1	Site Location Map
Figure 2	Preliminary Soil Sample Locations
Figure 3	Excavation Soil Sample Locations
Figure 4	Delineation Soil Sample Locations
Table 1	Soil Analytical Results
Attachment 1	Initial/Final NMOCD Form C-141 (2RP-3153)
Attachment 2	Lithologic / Soil Sample Logs
Attachment 3	Photographic Log
Attachment 4	Laboratory Analytical Reports

FIGURES

IMAGE COURTESY OF ESRI/USGS

LEGEND

SITE LOCATION

0 2,000 4,000

Feet

N

NEW MEXICO

NOTE: REMEDIATION PERMIT NUMBER 2RP-3153

FIGURE 1
SITE LOCATION MAP
PLU CVX JV PC 003H
UNIT P SEC 28 T24S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012918092_PLU CVX JV PC NO 003\012918092_FIG01_SL_2018_3153.mxd

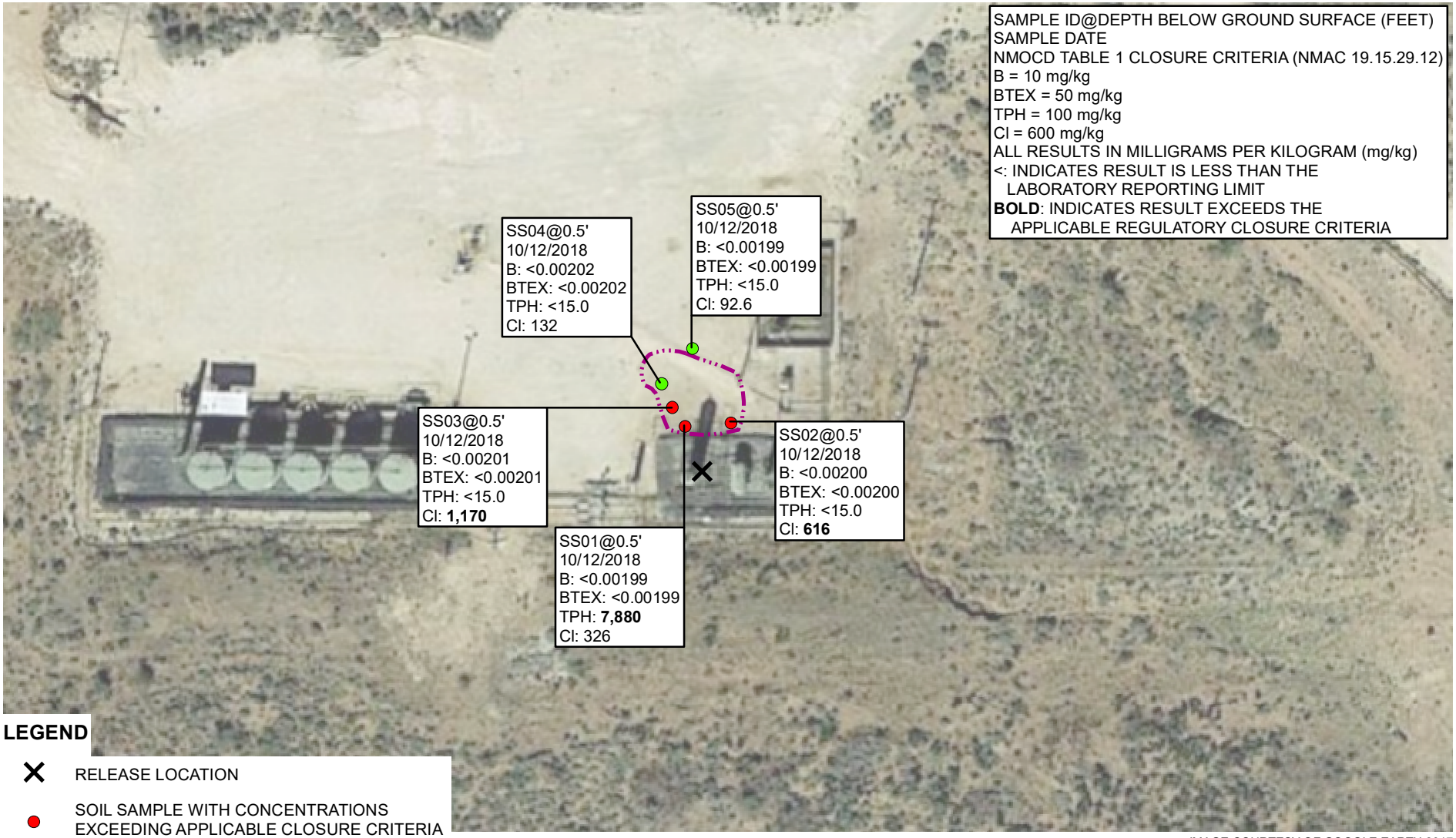
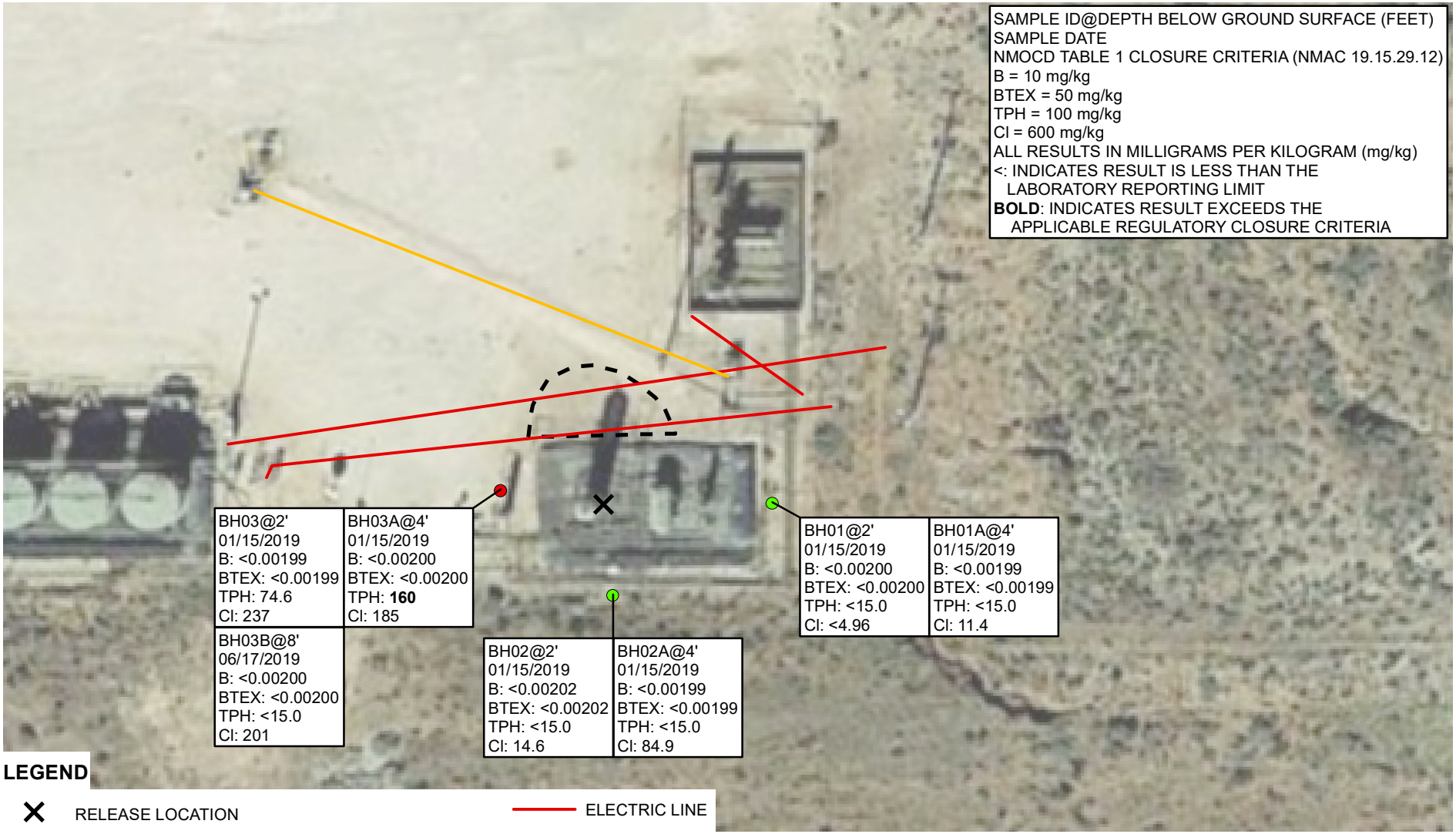


FIGURE 2
SOIL SAMPLE LOCATIONS
PLU CVX JV PC 003H
UNIT P SEC 28 T24S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012918092_PLU CVX JV PC NO 003\2RP-3153\012918092_FIG02_SITE_2018_3153.mxd



B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
TPH: TOTAL PETROLEUM HYDROCARBONS
Cl: CHLORIDE
NMAC: NEW MEXICO ADMINISTRATIVE CODE
NMOCD: NEW MEXICO OIL CONSERVATION DIVISION
NOTE: REMEDIATION PERMIT NUMBER 2RP-3153

FIGURE 3
DELINEATION SOIL SAMPLE LOCATIONS
PLU CVX JV PC 003H
UNIT P SEC 28 T24S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012918092_PLU CVX JV PC NO 003\2RP-3153\012918092_FIG03_DELINEATION_3153.mxd

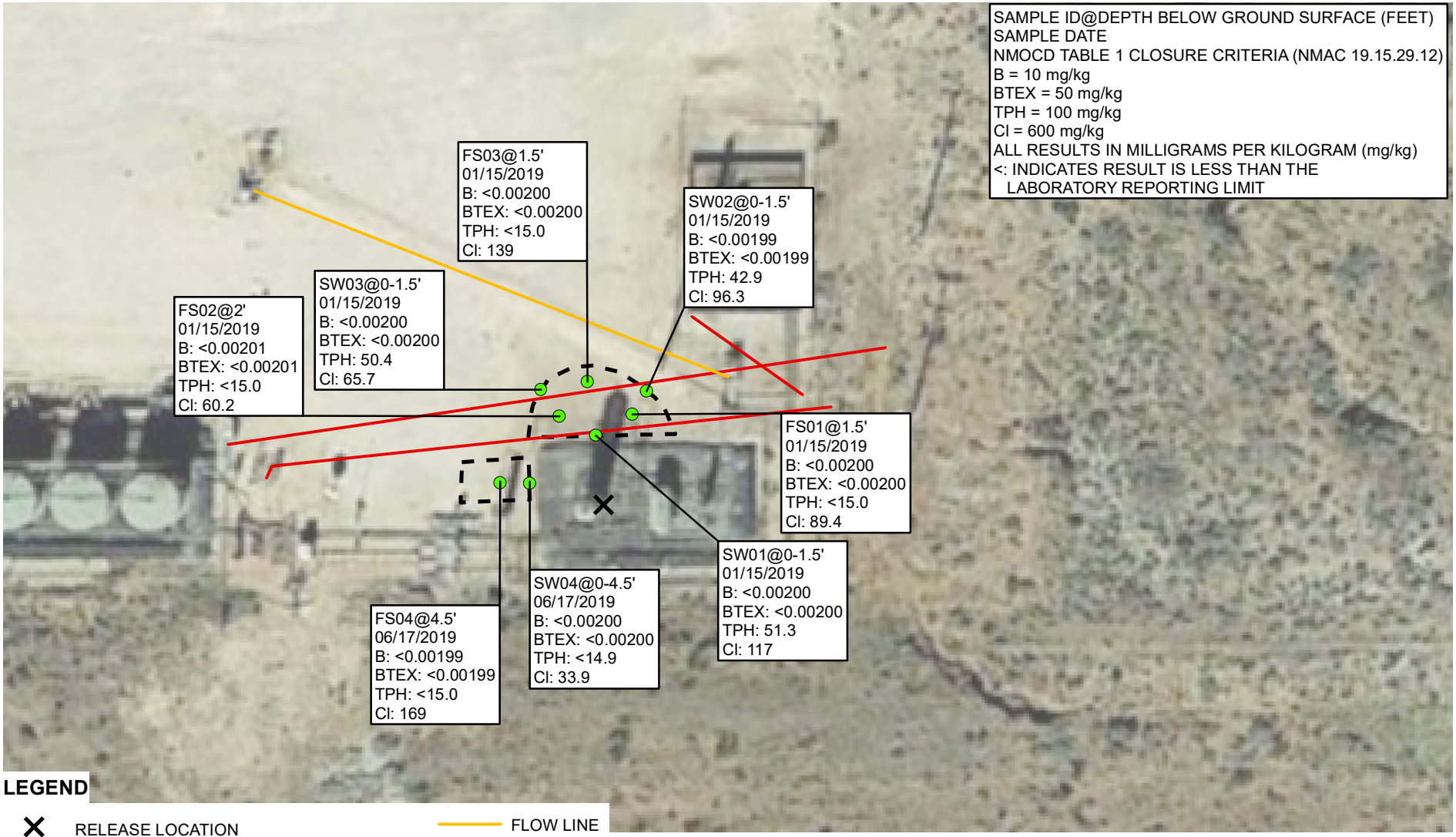


IMAGE COURTESY OF GOOGLE EARTH 2017

LEGEND

- RELEASE LOCATION
- EXCAVATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- ELECTRIC LINE
- FLOW LINE
- EXCAVATION EXTENT

B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
TPH: TOTAL PETROLEUM HYDROCARBONS
Cl: CHLORIDE
NMAC: NEW MEXICO ADMINISTRATIVE CODE
NMOCD: NEW MEXICO OIL CONSERVATION DIVISION
NOTE: REMEDIATION PERMIT NUMBER 2RP-3153

0 40 80
Feet

N

FIGURE 4
EXCAVATION SOIL SAMPLE LOCATIONS
PLU CVX JV PC 003H
UNIT P SEC 28 T24S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012918092_PLU CVX JV PC NO 003\2RP-3153\012918092_FIG04_EXCAVATION_3153.mxd

TABLES

TABLE 1
SOIL ANALYTICAL RESULTS

POKER LAKE UNIT CVX JV PC 003H
REMEDIATION PERMIT NUMBER 2RP-3153
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
SS01	0.5	10/12/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	91.1	7,520	271	7,611	**7,880**	326
SS02	0.5	10/12/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	**616**
SS03	0.5	10/12/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	**1,170**
SS04	0.5	10/12/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	132
SS05	0.5	10/12/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	92.6
BH01	2	01/15/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<4.96
BH01A	4	01/15/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	11.4
BH02	2	01/15/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	14.6
BH02A	4	01/15/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	84.9
BH03	2	01/15/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	74.6	<15.0	74.6	74.6	237
BH03A	4	01/15/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	126	34.3	126	**160**	185
BH03B	8	06/17/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	201
SW01	0 - 1.5	01/15/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	51.3	<15.0	51.3	51.3	117
SW02	0 - 1.5	01/15/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	42.9	<15.0	42.9	42.9	96.3
SW03	0 - 1.5	01/15/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	50.4	<14.9	50.4	50.4	65.7
SW04	0-4.5	06/17/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	33.9
FS01	1.5	01/15/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	89.4
FS02	2	01/15/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	60.2
FS03	1.5	01/15/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	139
FS04	4.5	06/17/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	169
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	NE	**100**	**600**

Notes:

bgs - below ground surface

BTEX - benzene, toluene, ethylbenzene, and total xylenes

DRO - diesel range organics

GRO - gasoline range organics

mg/kg - milligrams per kilogram

ORO - motor oil range organics

NMAC - New Mexico Administrative Code

NMOCD - New Mexico Oil Conservation Division

TPH - total petroleum hydrocarbons

Bold - indicates result exceeds the applicable regulatory standard

< - indicates result is below laboratory reporting limits

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

NE - not established

ATTACHMENT 1: INITIAL/FINAL NMOCD FORM C-141 (2RP-3153)

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 August 8, 2011

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

Release Notification and Corrective Action

nAB1520553647 2RP-737

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: BOPCO, L.P.	Contact: Bradley Blevins
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 575-887-7329
Facility Name: PLU CVX JV PC 003H (AKA PLU PC 28)	Facility Type: Exploration and Production

Surface Owner: Federal	Mineral Owner:	API No.3001536830

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
P	28	24S	30E	350		850		Eddy

Latitude: 32.182164 **Longitude:** 103.879997

NATURE OF RELEASE

Type of Release: Oil and Produced water	Volume of Release: 9 barrels oil, 19 barrels PW	Volume Recovered: 5 barrels oil, 15 barrels PW
Source of Release: Gasket of FWKO failed	Date and Hour of Occurrence: 7-20-15 @ 12:30pm	Date and Hour of Discovery 7-20-15 @ 12:56pm
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher, Heather Via email	
By Whom? Bradley Blevins	Date and Hour: 7-20-15 @ 4:31pm	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

NM OIL CONSERVATIO
ARTESIA DISTRICT
JUL 24 2015
RECEIVED

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
Gasket on FWKO failed and released oil and water to the lined containment and also sprayed the location surrounding the production equipment.

Describe Area Affected and Cleanup Action Taken.*
A vacuum truck and steam cleaner was called to location, the vacuum truck recovered 15 barrels of produced water and 5 barrels of oil from inside the lined containment. No fluid was recovered from the spray area on location.

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: Bradley Blevins

Printed Name: Bradley Blevins

Title: Assistant Remediation Foreman

E-mail Address: bblevins@basspet.com

Date: 7-24-15 Phone: 432-214-3704

OIL CONSERVATION DIVISION

Approved by Environmental Specialist:

Approval Date: 7/24/15 Expiration Date: N/A

Conditions of Approval: Attached ☐

Remediation per O.C.D. Rules & Guidelines
SUBMIT REMEDIATION PROPOSAL NO LATER THAN: 8/27/15

2RP-3153

* Attach Additional Sheets If Necessary

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

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	
District RP	
Facility ID	2RP-3153
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-3153
Contact mailing address: 522 W. Mermod, Suite 704 Carlsbad, NM 88220	

Location of Release Source

Latitude N 32.182164 Longitude W -103.879997
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: PLU CVX JV PC 003H	Site Type: Production Well Facility
Date Release Discovered: 7/20/2015	API# *(if applicable):* 30-015-36830

Unit Letter	Section	Township	Range	County
P	28	24S	30E	Eddy

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

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls): 9	Volume Recovered (bbls): 5
☒ Produced Water	Volume Released (bbls): 19	Volume Recovered (bbls): 15
	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 gasket on the FWKO failed. Crude oil and produced were released within lined containment and sprayed the location surrounding the production equipment.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	2RP-3153
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 was released.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Immediate notice was given by Bradley Blevins to Mike Bratcher via email on July 20, 2015 at 4:31 PM.	

Initial Response

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

☒ The source of the release has been stopped.

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

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

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

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

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

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 1-2-2020

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

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	2RP-3153
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	2RP-3153
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: 1-2-2020

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

OCD Only

Received by: Date:

Form C-141
Page 6

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	2RP-3153
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: 1-2-2020

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:	Date:
BH01	1-15-19
Project Name: PLU CUXJVPC #3	RP Number: 2RP-3153
Logged By: BenBelill	Method: Hand Auger
Lat/Long:	Field Screening:
Hole Diameter: 4"	Total Depth: 4'

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
M	<112	5.9	N	BH01	0–3	2'	SAND	Moist, brown-red, poorly graded m.-f. SAND, trace silt, (SP-SM) (Alluvium)
M	<112	5.4	N	BH01A	4	4'	SAND	Moist, brown-red, poorly graded, m.-f. SAND, trace clay, (SP-SC) (Alluvium)
					5–12			↑ Auger Refusal @ 4', Caliche

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

Identifier: BH02	Date: 1-15-19
Project Name: PLU CVX JV PC#3	RP Number: 2RP-3153
Logged By: Ben Belill	Method: Hand Auger
Lat/Long:	Field Screening:
Hole Diameter: 4"	Total Depth: 4'

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
M					0		SAND	Moist, brown-red, poorly graded m.-f. SAND, trace silt, (SP-SM) (Alluvium)
					1			
	<112	5.3	N	BH02	2	2'		
					3			
M							SAND	Moist, brown-red, poorly graded m.-f. SAND, trace clay, (SP-SC) (Alluvium)
	<112	5.5	N	BH02A	4	4'		
					5			T Auger Refusal @ 4', caliche
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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

Identifier:	Date:
BH03	1-15-19
Project Name:	**RP Number:**
PLU CUX JV PC #3	2RP-3153
Logged By: Ben Belill	**Method:** Hand Auger
Hole Diameter: 4"	**Total Depth:** 4'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening:

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D					0		caliche	Dry, light brown-tan, mod. consolidated caliche, fill.
M	320	5.2	N	BH03	1 2 3	2'	SAND	Moist, brown-red, poorly graded, m.-f. SAND, trace silt, (SP-SM)(Alluvium)
M	<112	0.0	N	BH03A	4	4'	SAND	Moist, brown-red, poorly graded, m.-f. SAND, trace clay, (SP-SC)(Alluvium)
					5 6 7 8 9 10 11 12			Auger Refusal @ 4', caliche

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

Identifier:	Date:
BH03	6/17/19
Project Name:	RP Number:
PLU CVX JV PC 008H	2RP-3153
Logged By: A Byers	Method: Track Hoe
Hole Diameter: 2.5' x 6'	Total Depth: 8'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long: 32.1822086, -103.8800632
Field Screening: PID / Cl⁻ test strips
Comments: 600% calc ppm Cl⁻

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0–4			excavated
D					5		SM	poorly graded brown silt sand (m.) no plasticity
D	595.2	Ø	NO		6	6'	caliche	tan, sandy with gravel, no odor or stain, poorly sorted
D	345.6	Ø	NO	BH03B	8	8'		
					9–12			END BH

ATTACHMENT 3: PHOTOGRAPHIC LOG

PHOTOGRAPHIC LOG

Photograph 1: Northwest facing view of lined process equipment containment.

Photograph 2: West facing view of excavation north of process equipment.

Photograph 3: East facing view of excavation north of process equipment.

Photograph 4: North facing view of excavation west of process equipment.

PLU CVX JV PC 003H Battery (2RP-3153)
Eddy County, New Mexico
Photographs Taken: January 2019 - June 2019

ATTACHMENT 4: LABORATORY ANALYTICAL REPORTS

Analytical Report 602463

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU CVX JV PC 003H

23-OCT-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

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

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

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

23-OCT-18

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

Reference: XENCO Report No(s): **602463**
PLU CVX JV PC 003H
Project Address: Carlsbad, NM

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 602463. 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. 602463 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 602463

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC 003H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	10-12-18 14:45	6 In	602463-001
SS02	S	10-12-18 14:55	6 In	602463-002
SS03	S	10-12-18 15:00	6 In	602463-003
SS04	S	10-12-18 15:10	6 In	602463-004
SS05	S	10-12-18 15:20	6 In	602463-005

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU CVX JV PC 003H

Project ID:
Work Order Number(s): *602463*

Report Date: *23-OCT-18*
Date Received: *10/16/2018*

Sample receipt non conformances and comments:

PER CLIENTS EMAIL REQUEST, CORRECTED SAMPLE NAME JKR 10/23/18 NEW VERSION GENERATED

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3066898 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 602463-002.

Batch: LBA-3067142 Inorganic Anions by EPA 300
Lab Sample ID 602463-003 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 602463-003.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Certificate of Analysis Summary 602463

LT Environmental, Inc., Arvada, CO

Project Name: PLU CVX JV PC 003H

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

Date Received in Lab: Tue Oct-16-18 01:15 pm
Report Date: 23-OCT-18
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	602463-001		602463-002		602463-003		602463-004		602463-005	
	Field Id:	SS01		SS02		SS03		SS04		SS05	
	Depth:	6- In		6- In		6- In		6- In		6- In	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Oct-12-18 14:45		Oct-12-18 14:55		Oct-12-18 15:00		Oct-12-18 15:10		Oct-12-18 15:20	
BTEX by EPA 8021B	***Extracted:***	Oct-18-18 16:00		Oct-18-18 16:00		Oct-18-18 16:00		Oct-18-18 16:00		Oct-18-18 16:00	
	Analyzed:	Oct-19-18 08:06		Oct-19-18 08:27		Oct-19-18 08:48		Oct-19-18 09:09		Oct-19-18 09:30	
	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	<0.00201	0.00201	<0.00202	0.00202	<0.00199	0.00199
Toluene		<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202	<0.00199	0.00199
Ethylbenzene		<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202	<0.00199	0.00199
m,p-Xylenes		<0.00398	0.00398	<0.00399	0.00399	<0.00402	0.00402	<0.00404	0.00404	<0.00398	0.00398
o-Xylene		<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202	<0.00199	0.00199
Total Xylenes		<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202	<0.00199	0.00199
Total BTEX		<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202	<0.00199	0.00199
Inorganic Anions by EPA 300	***Extracted:***	Oct-19-18 09:30		Oct-19-18 09:30		Oct-20-18 16:00		Oct-19-18 09:30		Oct-19-18 09:30	
	Analyzed:	Oct-19-18 14:19		Oct-19-18 14:29		Oct-20-18 21:15		Oct-19-18 15:01		Oct-19-18 15:14	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		326	5.00	616	4.96	1170	5.04	132	5.03	92.6	5.02
TPH by SW8015 Mod	***Extracted:***	Oct-18-18 13:00		Oct-18-18 13:00		Oct-18-18 13:00		Oct-18-18 13:00		Oct-18-18 13:00	
	Analyzed:	Oct-19-18 07:07		Oct-18-18 22:45		Oct-18-18 23:04		Oct-18-18 23:22		Oct-18-18 23:41	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		91.1	74.8	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		7520	74.8	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		271	74.8	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		7880	74.8	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0

Jessica Kramer
Project Assistant

Certificate of Analytical Results 602463

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC 003H

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	10.16.18 13.15
Lab Sample Id:	602463-001	Date Collected:	10.12.18 14.45	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	10.19.18 09.30	Basis:	Wet Weight
Seq Number:	3066959				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**326**	5.00	mg/kg	10.19.18 14.19		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	10.18.18 13.00	Basis:	Wet Weight
Seq Number:	3066919				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**91.1**	74.8	mg/kg	10.19.18 07.07		5
Diesel Range Organics (DRO)	C10C28DRO	**7520**	74.8	mg/kg	10.19.18 07.07		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**271**	74.8	mg/kg	10.19.18 07.07		5
Total TPH	PHC635	**7880**	74.8	mg/kg	10.19.18 07.07		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	10.19.18 07.07	
o-Terphenyl	84-15-1	103	%	70-135	10.19.18 07.07	

Certificate of Analytical Results 602463

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC 003H

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	10.16.18 13.15
Lab Sample Id:	602463-001	Date Collected:	10.12.18 14.45	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	10.18.18 16.00	Basis:	Wet Weight
Seq Number:	3066898				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	10.19.18 08.06	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	10.19.18 08.06	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	10.19.18 08.06	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	10.19.18 08.06	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	10.19.18 08.06	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	10.19.18 08.06	U	1
Total BTEX		<0.00199	0.00199	mg/kg	10.19.18 08.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	92	%	70-130	10.19.18 08.06	
1,4-Difluorobenzene	540-36-3	128	%	70-130	10.19.18 08.06	

Certificate of Analytical Results 602463

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC 003H

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	10.16.18 13.15
Lab Sample Id:	602463-002	Date Collected:	10.12.18 14.55	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	10.19.18 09.30	Basis:	Wet Weight
Seq Number:	3066959				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**616**	4.96	mg/kg	10.19.18 14.29		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	10.18.18 13.00	Basis:	Wet Weight
Seq Number:	3066919				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.18.18 22.45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.18.18 22.45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.18.18 22.45	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.18.18 22.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	10.18.18 22.45	
o-Terphenyl	84-15-1	100	%	70-135	10.18.18 22.45	

Certificate of Analytical Results 602463

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC 003H

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	10.16.18 13.15
Lab Sample Id:	602463-002	Date Collected:	10.12.18 14.55	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	10.18.18 16.00	Basis:	Wet Weight
Seq Number:	3066898				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.19.18 08.27	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.19.18 08.27	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.19.18 08.27	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	10.19.18 08.27	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.19.18 08.27	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.19.18 08.27	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.19.18 08.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	360	%	70-130	10.19.18 08.27	**
1,4-Difluorobenzene	540-36-3	127	%	70-130	10.19.18 08.27	

Certificate of Analytical Results 602463

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC 003H

Sample Id: **SS03** Matrix: Soil Date Received:10.16.18 13.15

Lab Sample Id: 602463-003 Date Collected: 10.12.18 15.00 Sample Depth: 6 In

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

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 10.20.18 16.00 Basis: Wet Weight

Seq Number: 3067142

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1170**	5.04	mg/kg	10.20.18 21.15		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 10.18.18 13.00 Basis: Wet Weight

Seq Number: 3066919

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.18.18 23.04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.18.18 23.04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.18.18 23.04	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.18.18 23.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	10.18.18 23.04	
o-Terphenyl	84-15-1	105	%	70-135	10.18.18 23.04	

Certificate of Analytical Results 602463

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC 003H

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	10.16.18 13.15
Lab Sample Id:	602463-003	Date Collected:	10.12.18 15.00	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	10.18.18 16.00	Basis:	Wet Weight
Seq Number:	3066898				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	10.19.18 08.48	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	10.19.18 08.48	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	10.19.18 08.48	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	10.19.18 08.48	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	10.19.18 08.48	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	10.19.18 08.48	U	1
Total BTEX		<0.00201	0.00201	mg/kg	10.19.18 08.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	112	%	70-130	10.19.18 08.48	
4-Bromofluorobenzene	460-00-4	129	%	70-130	10.19.18 08.48	

Certificate of Analytical Results 602463

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC 003H

Sample Id:	**SS04**	Matrix:	Soil	Date Received:	10.16.18 13.15
Lab Sample Id:	602463-004	Date Collected:	10.12.18 15.10	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	10.19.18 09.30	Basis:	Wet Weight
Seq Number:	3066959				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**132**	5.03	mg/kg	10.19.18 15.01		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	10.18.18 13.00	Basis:	Wet Weight
Seq Number:	3066919				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.18.18 23.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.18.18 23.22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.18.18 23.22	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.18.18 23.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	10.18.18 23.22	
o-Terphenyl	84-15-1	98	%	70-135	10.18.18 23.22	

Certificate of Analytical Results 602463

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC 003H

Sample Id:	**SS04**	Matrix:	Soil	Date Received:	10.16.18 13.15
Lab Sample Id:	602463-004	Date Collected:	10.12.18 15.10	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	10.18.18 16.00	Basis:	Wet Weight
Seq Number:	3066898				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	10.19.18 09.09	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	10.19.18 09.09	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	10.19.18 09.09	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	10.19.18 09.09	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	10.19.18 09.09	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	10.19.18 09.09	U	1
Total BTEX		<0.00202	0.00202	mg/kg	10.19.18 09.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	10.19.18 09.09	
1,4-Difluorobenzene	540-36-3	113	%	70-130	10.19.18 09.09	

Certificate of Analytical Results 602463

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC 003H

Sample Id:	**SS05**	Matrix:	Soil	Date Received:	10.16.18 13.15
Lab Sample Id:	602463-005	Date Collected:	10.12.18 15.20	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	10.19.18 09.30	Basis:	Wet Weight
Seq Number:	3066959				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**92.6**	5.02	mg/kg	10.19.18 15.14		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	10.18.18 13.00	Basis:	Wet Weight
Seq Number:	3066919				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.18.18 23.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.18.18 23.41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.18.18 23.41	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.18.18 23.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	10.18.18 23.41	
o-Terphenyl	84-15-1	97	%	70-135	10.18.18 23.41	

Certificate of Analytical Results 602463

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC 003H

Sample Id:	**SS05**	Matrix:	Soil	Date Received:	10.16.18 13.15
Lab Sample Id:	602463-005	Date Collected:	10.12.18 15.20	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	10.18.18 16.00	Basis:	Wet Weight
Seq Number:	3066898				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	10.19.18 09.30	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	10.19.18 09.30	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	10.19.18 09.30	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	10.19.18 09.30	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	10.19.18 09.30	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	10.19.18 09.30	U	1
Total BTEX		<0.00199	0.00199	mg/kg	10.19.18 09.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	117	%	70-130	10.19.18 09.30	
4-Bromofluorobenzene	460-00-4	97	%	70-130	10.19.18 09.30	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 602463

LT Environmental, Inc.

PLU CVX JV PC 003H

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3066959 Matrix: Solid Date Prep: 10.19.18
MB Sample Id: 7664459-1-BLK LCS Sample Id: 7664459-1-BKS LCSD Sample Id: 7664459-1-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	264	106	90-110	0	20	mg/kg	10.19.18 10:11	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3067142 Matrix: Solid Date Prep: 10.20.18
MB Sample Id: 7664562-1-BLK LCS Sample Id: 7664562-1-BKS LCSD Sample Id: 7664562-1-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	269	108	264	106	90-110	2	20	mg/kg	10.20.18 21:04	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3066959 Matrix: Soil Date Prep: 10.19.18
Parent Sample Id: 602835-001 MS Sample Id: 602835-001 S MSD Sample Id: 602835-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	25.7	250	274	99	274	99	90-110	0	20	mg/kg	10.19.18 10:42	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3066959 Matrix: Soil Date Prep: 10.19.18
Parent Sample Id: 602835-011 MS Sample Id: 602835-011 S MSD Sample Id: 602835-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	17.0	249	244	91	244	91	90-110	0	20	mg/kg	10.19.18 13:07	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3067142 Matrix: Soil Date Prep: 10.20.18
Parent Sample Id: 602356-006 MS Sample Id: 602356-006 S MSD Sample Id: 602356-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	49.0	250	322	109	324	110	90-110	1	20	mg/kg	10.20.18 22:34	

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

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

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

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

QC Summary 602463

LT Environmental, Inc.

PLU CVX JV PC 003H

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3067142 Matrix: Soil Date Prep: 10.20.18
Parent Sample Id: 602463-003 MS Sample Id: 602463-003 S MSD Sample Id: 602463-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1170	252	1380	83	1380	83	90-110	0	20	mg/kg	10.20.18 21:20	X

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3066919 Matrix: Solid Date Prep: 10.18.18
MB Sample Id: 7664441-1-BLK LCS Sample Id: 7664441-1-BKS LCSD Sample Id: 7664441-1-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	985	99	957	96	70-135	3	20	mg/kg	10.18.18 17:48	
Diesel Range Organics (DRO)	<8.13	1000	984	98	954	95	70-135	3	20	mg/kg	10.18.18 17:48	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	95		119		130		70-135	%	10.18.18 17:48
o-Terphenyl	101		104		106		70-135	%	10.18.18 17:48

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3066919 Matrix: Soil Date Prep: 10.18.18
Parent Sample Id: 602472-001 MS Sample Id: 602472-001 S MSD Sample Id: 602472-001 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)	14.0	998	939	93	958	95	70-135	2	20	mg/kg	10.18.18 18:43	
Diesel Range Organics (DRO)	<8.11	998	953	95	959	96	70-135	1	20	mg/kg	10.18.18 18:43	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	117		128		70-135	%	10.18.18 18:43
o-Terphenyl	102		113		70-135	%	10.18.18 18:43

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

QC Summary 602463

LT Environmental, Inc.

PLU CVX JV PC 003H

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

Seq Number: 3066898 Matrix: Solid Date Prep: 10.18.18

MB Sample Id: 7664468-1-BLK LCS Sample Id: 7664468-1-BKS LCSD Sample Id: 7664468-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.120	120	0.120	120	70-130	0	35	mg/kg	10.18.18 23:53	
Toluene	<0.00200	0.0998	0.105	105	0.108	108	70-130	3	35	mg/kg	10.18.18 23:53	
Ethylbenzene	<0.00200	0.0998	0.114	114	0.122	122	70-130	7	35	mg/kg	10.18.18 23:53	
m,p-Xylenes	<0.00399	0.200	0.236	118	0.247	124	70-130	5	35	mg/kg	10.18.18 23:53	
o-Xylene	<0.00200	0.0998	0.115	115	0.121	121	70-130	5	35	mg/kg	10.18.18 23:53	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		116		116		70-130	%	10.18.18 23:53
4-Bromofluorobenzene	101		123		127		70-130	%	10.18.18 23:53

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

Seq Number: 3066898 Matrix: Soil Date Prep: 10.18.18

Parent Sample Id: 602357-002 MS Sample Id: 602357-002 S MSD Sample Id: 602357-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.0827	83	0.107	106	70-130	26	35	mg/kg	10.19.18 00:35	
Toluene	<0.00201	0.100	0.0736	74	0.0872	86	70-130	17	35	mg/kg	10.19.18 00:35	
Ethylbenzene	<0.00201	0.100	0.0883	88	0.0927	92	70-130	5	35	mg/kg	10.19.18 00:35	
m,p-Xylenes	<0.00402	0.201	0.177	88	0.183	91	70-130	3	35	mg/kg	10.19.18 00:35	
o-Xylene	<0.00201	0.100	0.0840	84	0.0889	88	70-130	6	35	mg/kg	10.19.18 00:35	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		123		70-130	%	10.19.18 00:35
4-Bromofluorobenzene	118		129		70-130	%	10.19.18 00:35

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

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

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

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

CHAIN OF CUSTODY

Revision 2016.1

XENCO LABORATORIES

Setting the Standard since 1990

Page 1 Of 1

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

www.xenco.com

Xenco Quote # | Xenco Job # 602463

Client / Reporting Information

Company Name / Branch: LTE
Company Address: Midland, Tx 79705
3300 N "A" street Building 1 Unit 103
Email: ABaker@LTenv.com Phone No: (432) 704 5178
Project Contact: Adrian Baker
Samplers's Name: Garrett Green

Project Information

Project Name/Number: PLU CVX JV PLC003H Tank Battery
Project Location: Carlsbad, NM
Invoice To: Kyle Littrell
PO Number: 2RP 3153

Analytical Information

Matrix Codes

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

No.	Field ID / Point of Collection	Collection: Sample Depth	Date	Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	BTEX 8021 (only BTEX)	TPH (MRO, GRO, DRO) 8015	Chlorides (300.00)	Field Comments
1	SS01	6"	10/12/18	1445	S	1								X	X	X	X	
2	SS02	6"	10/12/18	1455	S	1								X	X	X	X	
3	SS03	6"	10/12/18	1500	S	1								X	X	X	X	
4	SS04	6"	10/12/18	1510	S	1								X	X	X	X	
5	SS05	6"	10/12/18	1520	S	1								X	X	X	X	
6																		
7																		
8																		
9																		
10																		

Garrett Green 10/12/18

Turnaround Time (Business days) | Data Deliverable Information | Notes:

- [ ] Same Day TAT
- [x] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT
- [ ] 3 Day EMERGENCY
- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] Level II Report with TRRP checklist

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

FED-EX / UPS: Tracking # 773481658181

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

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	Garrett Green	10/15/18 1200				
2					10/15/18 13:30	Timothy R Elliott
3	Relinquished by:	Date Time: 10/16 1315	Received By:	Relinquished By: 4	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable	On Ice: N	Cooler Temp.: 0.2	Thermo. Corr. Factor: 1.000 °C

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2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.
Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 10/16/2018 01:15:00 PM

Work Order #: 602463

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?	**Yes**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**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: 10/16/2018
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 10/17/2018
Jessica Kramer

Analytical Report 611647

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU CVX JV PC #3

2RP-3153

22-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)

22-JAN-19

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

Reference: XENCO Report No(s): **611647**
PLU CVX JV PC #3
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) 611647. 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. 611647 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 611647

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC #3

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH01	S	01-15-19 11:30	2 ft	611647-001
BH01A	S	01-15-19 11:35	4 ft	611647-002
BH02	S	01-15-19 11:40	2 ft	611647-003
BH02A	S	01-15-19 11:45	4 ft	611647-004
FS01	S	01-15-19 14:15	1.5 ft	611647-005
FS02	S	01-15-19 14:20	2 ft	611647-006
SW01	S	01-15-19 14:40	0 - 1.5 ft	611647-007
SW02	S	01-15-19 14:50	0 - 1.5 ft	611647-008
SW03	S	01-15-19 15:00	0 - 1.5 ft	611647-009
FS03	S	01-15-19 15:10	1.5 ft	611647-010
BH03	S	01-15-19 15:30	2 ft	611647-011
BH03A	S	01-15-19 15:35	4 ft	611647-012

CASE NARRATIVE

Client Name: LT Environmental, Inc.
Project Name: PLU CVX JV PC #3

Project ID: *2RP-3153*
Work Order Number(s): *611647*

Report Date: *22-JAN-19*
Date Received: *01/17/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3076435 TPH by SW8015 Mod
Surrogate 1-Chlorooctane, Surrogate o-Terphenyl recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 611647-004.

Batch: LBA-3076530 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 611647

LT Environmental, Inc., Arvada, CO

Project Name: PLU CVX JV PC #3

Project Id: 2RP-3153
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Thu Jan-17-19 12:05 pm
Report Date: 22-JAN-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	611647-001		611647-002		611647-003		611647-004		611647-005		611647-006	
	Field Id:	BH01		BH01A		BH02		BH02A		FS01		FS02	
	Depth:	2- ft		4- ft		2- ft		4- ft		1.5- ft		2- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-15-19 11:30		Jan-15-19 11:35		Jan-15-19 11:40		Jan-15-19 11:45		Jan-15-19 14:15		Jan-15-19 14:20	
BTEX by EPA 8021B	***Extracted:***	Jan-21-19 14:30		Jan-21-19 14:30		Jan-21-19 14:30		Jan-21-19 14:30		Jan-21-19 14:30		Jan-21-19 14:30	
	Analyzed:	Jan-22-19 00:34		Jan-22-19 00:53		Jan-22-19 01:12		Jan-22-19 01:31		Jan-22-19 01:50		Jan-22-19 02:09	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00199	0.00199	<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201
Toluene		<0.00200	0.00200	<0.00199	0.00199	<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201
Ethylbenzene		<0.00200	0.00200	<0.00199	0.00199	<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201
m,p-Xylenes		<0.00400	0.00400	<0.00398	0.00398	<0.00403	0.00403	<0.00398	0.00398	<0.00400	0.00400	<0.00402	0.00402
o-Xylene		<0.00200	0.00200	<0.00199	0.00199	<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201
Total Xylenes		<0.00200	0.00200	<0.00199	0.00199	<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201
Total BTEX		<0.00200	0.00200	<0.00199	0.00199	<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201
Inorganic Anions by EPA 300	***Extracted:***	Jan-21-19 16:00		Jan-21-19 16:00		Jan-21-19 16:00		Jan-21-19 16:00		Jan-21-19 16:00		Jan-21-19 16:00	
	Analyzed:	Jan-21-19 19:37		Jan-21-19 19:43		Jan-21-19 20:05		Jan-21-19 20:11		Jan-21-19 20:17		Jan-21-19 20:24	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		<4.96	4.96	11.4	4.98	14.6	4.97	84.9	5.00	89.4	4.99	60.2	4.99
TPH by SW8015 Mod	***Extracted:***	Jan-20-19 08:00		Jan-20-19 08:00		Jan-20-19 08:00		Jan-20-19 08:00		Jan-20-19 08:00		Jan-20-19 08:00	
	Analyzed:	Jan-20-19 17:34		Jan-20-19 17:54		Jan-20-19 16:54		Jan-20-19 17:14		Jan-20-19 18:15		Jan-20-19 18:35	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<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

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

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 611647

LT Environmental, Inc., Arvada, CO

Project Name: PLU CVX JV PC #3

Project Id: 2RP-3153
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Thu Jan-17-19 12:05 pm
Report Date: 22-JAN-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	611647-007		611647-008		611647-009		611647-010		611647-011		611647-012	
	Field Id:	SW01		SW02		SW03		FS03		BH03		BH03A	
	Depth:	0-1.5 ft		0-1.5 ft		0-1.5 ft		1.5- ft		2- ft		4- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-15-19 14:40		Jan-15-19 14:50		Jan-15-19 15:00		Jan-15-19 15:10		Jan-15-19 15:30		Jan-15-19 15:35	
BTEX by EPA 8021B	***Extracted:***	Jan-21-19 14:30		Jan-21-19 14:30		Jan-21-19 14:30		Jan-21-19 14:30		Jan-21-19 14:30		Jan-21-19 14:30	
	Analyzed:	Jan-22-19 02:28		Jan-22-19 02:47		Jan-22-19 03:06		Jan-22-19 03:25		Jan-22-19 04:40		Jan-22-19 04:59	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200
Toluene		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200
Ethylbenzene		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200
m,p-Xylenes		<0.00401	0.00401	<0.00398	0.00398	<0.00400	0.00400	<0.00401	0.00401	<0.00398	0.00398	<0.00399	0.00399
o-Xylene		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200
Total Xylenes		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200
Total BTEX		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200
Inorganic Anions by EPA 300	***Extracted:***	Jan-21-19 16:00		Jan-21-19 16:00		Jan-21-19 16:00		Jan-21-19 16:00		Jan-21-19 16:00		Jan-21-19 16:00	
	Analyzed:	Jan-21-19 20:30		Jan-21-19 20:54		Jan-21-19 21:01		Jan-21-19 21:22		Jan-21-19 21:28		Jan-21-19 21:34	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		117	4.99	96.3	5.00	65.7	5.00	139	4.95	237	4.99	185	4.97
TPH by SW8015 Mod	***Extracted:***	Jan-21-19 14:00		Jan-21-19 14:00		Jan-21-19 14:00		Jan-21-19 14:00		Jan-21-19 14:00		Jan-21-19 14:00	
	Analyzed:	Jan-21-19 21:05		Jan-21-19 22:04		Jan-21-19 22:24		Jan-21-19 22:44		Jan-21-19 23:03		Jan-21-19 23:23	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<14.9	14.9
Diesel Range Organics (DRO)		51.3	15.0	42.9	15.0	50.4	14.9	<15.0	15.0	74.6	15.0	126	14.9
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	34.3	14.9
Total TPH		51.3	15.0	42.9	15.0	50.4	14.9	<15.0	15.0	74.6	15.0	160	14.9

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

Jessica Kramer
Project Assistant

Certificate of Analytical Results 611647

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC #3

Sample Id:	**BH01**	Matrix:	Soil	Date Received:	01.17.19 12.05
Lab Sample Id:	611647-001	Date Collected:	01.15.19 11.30	Sample Depth:	2 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.21.19 16.00	Basis:	Wet Weight
Seq Number:	3076513				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	01.21.19 19.37	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.20.19 08.00	Basis:	Wet Weight
Seq Number:	3076435				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.20.19 17.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.20.19 17.34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.20.19 17.34	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.20.19 17.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	01.20.19 17.34	
o-Terphenyl	84-15-1	104	%	70-135	01.20.19 17.34	

Certificate of Analytical Results 611647

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC #3

Sample Id:	**BH01**	Matrix:	Soil	Date Received:	01.17.19 12.05
Lab Sample Id:	611647-001	Date Collected:	01.15.19 11.30	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.21.19 14.30	Basis:	Wet Weight
Seq Number:	3076530				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.22.19 00.34	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.22.19 00.34	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.22.19 00.34	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.22.19 00.34	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.22.19 00.34	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.22.19 00.34	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.22.19 00.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	01.22.19 00.34	
1,4-Difluorobenzene	540-36-3	108	%	70-130	01.22.19 00.34	

Certificate of Analytical Results 611647

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC #3

Sample Id:	**BH01A**	Matrix:	Soil	Date Received:	01.17.19 12.05
Lab Sample Id:	611647-002	Date Collected:	01.15.19 11.35	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.21.19 16.00	Basis:	Wet Weight
Seq Number:	3076513				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**11.4**	4.98	mg/kg	01.21.19 19.43		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.20.19 08.00	Basis:	Wet Weight
Seq Number:	3076435				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.20.19 17.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.20.19 17.54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.20.19 17.54	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.20.19 17.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	01.20.19 17.54	
o-Terphenyl	84-15-1	105	%	70-135	01.20.19 17.54	

Certificate of Analytical Results 611647

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC #3

Sample Id:	**BH01A**	Matrix:	Soil	Date Received:	01.17.19 12.05
Lab Sample Id:	611647-002	Date Collected:	01.15.19 11.35	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.21.19 14.30	Basis:	Wet Weight
Seq Number:	3076530				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.22.19 00.53	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.22.19 00.53	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.22.19 00.53	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.22.19 00.53	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.22.19 00.53	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.22.19 00.53	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.22.19 00.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	109	%	70-130	01.22.19 00.53	
4-Bromofluorobenzene	460-00-4	109	%	70-130	01.22.19 00.53	

Certificate of Analytical Results 611647

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC #3

Sample Id:	**BH02**	Matrix:	Soil	Date Received:	01.17.19 12.05
Lab Sample Id:	611647-003	Date Collected:	01.15.19 11.40	Sample Depth:	2 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.21.19 16.00	Basis:	Wet Weight
Seq Number:	3076513				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**14.6**	4.97	mg/kg	01.21.19 20.05		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.20.19 08.00	Basis:	Wet Weight
Seq Number:	3076435				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.20.19 16.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.20.19 16.54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.20.19 16.54	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.20.19 16.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	01.20.19 16.54	
o-Terphenyl	84-15-1	101	%	70-135	01.20.19 16.54	

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LT Environmental, Inc., Arvada, CO

PLU CVX JV PC #3

Sample Id:	**BH02**	Matrix:	Soil	Date Received:	01.17.19 12.05
Lab Sample Id:	611647-003	Date Collected:	01.15.19 11.40	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.21.19 14.30	Basis:	Wet Weight
Seq Number:	3076530				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.22.19 01.12	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.22.19 01.12	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.22.19 01.12	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	01.22.19 01.12	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.22.19 01.12	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	01.22.19 01.12	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.22.19 01.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	109	%	70-130	01.22.19 01.12	
4-Bromofluorobenzene	460-00-4	111	%	70-130	01.22.19 01.12	

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LT Environmental, Inc., Arvada, CO

PLU CVX JV PC #3

Sample Id:	**BH02A**	Matrix:	Soil	Date Received:	01.17.19 12.05
Lab Sample Id:	611647-004	Date Collected:	01.15.19 11.45	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.21.19 16.00	Basis:	Wet Weight
Seq Number:	3076513				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**84.9**	5.00	mg/kg	01.21.19 20.11		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.20.19 08.00	Basis:	Wet Weight
Seq Number:	3076435				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.20.19 17.14	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.20.19 17.14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.20.19 17.14	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.20.19 17.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	1	%	70-135	01.20.19 17.14	**
o-Terphenyl	84-15-1	4	%	70-135	01.20.19 17.14	**

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LT Environmental, Inc., Arvada, CO

PLU CVX JV PC #3

Sample Id:	**BH02A**	Matrix:	Soil	Date Received:	01.17.19 12.05
Lab Sample Id:	611647-004	Date Collected:	01.15.19 11.45	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.21.19 14.30	Basis:	Wet Weight
Seq Number:	3076530				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.22.19 01.31	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.22.19 01.31	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.22.19 01.31	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.22.19 01.31	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.22.19 01.31	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.22.19 01.31	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.22.19 01.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	110	%	70-130	01.22.19 01.31	
4-Bromofluorobenzene	460-00-4	111	%	70-130	01.22.19 01.31	

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LT Environmental, Inc., Arvada, CO

PLU CVX JV PC #3

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	01.17.19 12.05
Lab Sample Id:	611647-005	Date Collected:	01.15.19 14.15	Sample Depth:	1.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.21.19 16.00	Basis:	Wet Weight
Seq Number:	3076513				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**89.4**	4.99	mg/kg	01.21.19 20.17		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.20.19 08.00	Basis:	Wet Weight
Seq Number:	3076435				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.20.19 18.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.20.19 18.15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.20.19 18.15	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.20.19 18.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	01.20.19 18.15	
o-Terphenyl	84-15-1	105	%	70-135	01.20.19 18.15	

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LT Environmental, Inc., Arvada, CO

PLU CVX JV PC #3

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	01.17.19 12.05
Lab Sample Id:	611647-005	Date Collected:	01.15.19 14.15	Sample Depth:	1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.21.19 14.30	Basis:	Wet Weight
Seq Number:	3076530				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.22.19 01.50	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.22.19 01.50	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.22.19 01.50	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.22.19 01.50	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.22.19 01.50	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.22.19 01.50	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.22.19 01.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	111	%	70-130	01.22.19 01.50	
1,4-Difluorobenzene	540-36-3	110	%	70-130	01.22.19 01.50	

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LT Environmental, Inc., Arvada, CO

PLU CVX JV PC #3

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	01.17.19 12.05
Lab Sample Id:	611647-006	Date Collected:	01.15.19 14.20	Sample Depth:	2 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.21.19 16.00	Basis:	Wet Weight
Seq Number:	3076513				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**60.2**	4.99	mg/kg	01.21.19 20.24		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.20.19 08.00	Basis:	Wet Weight
Seq Number:	3076435				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.20.19 18.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.20.19 18.35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.20.19 18.35	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.20.19 18.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	01.20.19 18.35	
o-Terphenyl	84-15-1	104	%	70-135	01.20.19 18.35	

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LT Environmental, Inc., Arvada, CO

PLU CVX JV PC #3

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	01.17.19 12.05
Lab Sample Id:	611647-006	Date Collected:	01.15.19 14.20	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.21.19 14.30	Basis:	Wet Weight
Seq Number:	3076530				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.22.19 02.09	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.22.19 02.09	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.22.19 02.09	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.22.19 02.09	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.22.19 02.09	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	01.22.19 02.09	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.22.19 02.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	111	%	70-130	01.22.19 02.09	
1,4-Difluorobenzene	540-36-3	109	%	70-130	01.22.19 02.09	

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LT Environmental, Inc., Arvada, CO

PLU CVX JV PC #3

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	01.17.19 12.05
Lab Sample Id:	611647-007	Date Collected:	01.15.19 14.40	Sample Depth:	0 - 1.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.21.19 16.00	Basis:	Wet Weight
Seq Number:	3076513				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**117**	4.99	mg/kg	01.21.19 20.30		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	01.21.19 14.00	Basis:	Wet Weight
Seq Number:	3076559				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.21.19 21.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	**51.3**	15.0	mg/kg	01.21.19 21.05		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.21.19 21.05	U	1
Total TPH	PHC635	**51.3**	15.0	mg/kg	01.21.19 21.05		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	01.21.19 21.05	
o-Terphenyl	84-15-1	110	%	70-135	01.21.19 21.05	

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LT Environmental, Inc., Arvada, CO

PLU CVX JV PC #3

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	01.17.19 12.05
Lab Sample Id:	611647-007	Date Collected:	01.15.19 14.40	Sample Depth:	0 - 1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.21.19 14.30	Basis:	Wet Weight
Seq Number:	3076530				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.22.19 02.28	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.22.19 02.28	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.22.19 02.28	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	01.22.19 02.28	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.22.19 02.28	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.22.19 02.28	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.22.19 02.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	108	%	70-130	01.22.19 02.28	
1,4-Difluorobenzene	540-36-3	109	%	70-130	01.22.19 02.28	

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LT Environmental, Inc., Arvada, CO

PLU CVX JV PC #3

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	01.17.19 12.05
Lab Sample Id:	611647-008	Date Collected:	01.15.19 14.50	Sample Depth:	0 - 1.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.21.19 16.00	Basis:	Wet Weight
Seq Number:	3076513				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**96.3**	5.00	mg/kg	01.21.19 20.54		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	01.21.19 14.00	Basis:	Wet Weight
Seq Number:	3076559				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.21.19 22.04	U	1
Diesel Range Organics (DRO)	C10C28DRO	**42.9**	15.0	mg/kg	01.21.19 22.04		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.21.19 22.04	U	1
Total TPH	PHC635	**42.9**	15.0	mg/kg	01.21.19 22.04		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	01.21.19 22.04	
o-Terphenyl	84-15-1	99	%	70-135	01.21.19 22.04	

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LT Environmental, Inc., Arvada, CO

PLU CVX JV PC #3

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	01.17.19 12.05
Lab Sample Id:	611647-008	Date Collected:	01.15.19 14.50	Sample Depth:	0 - 1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.21.19 14.30	Basis:	Wet Weight
Seq Number:	3076530				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.22.19 02.47	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.22.19 02.47	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.22.19 02.47	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.22.19 02.47	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.22.19 02.47	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.22.19 02.47	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.22.19 02.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	121	%	70-130	01.22.19 02.47	
1,4-Difluorobenzene	540-36-3	102	%	70-130	01.22.19 02.47	

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LT Environmental, Inc., Arvada, CO

PLU CVX JV PC #3

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	01.17.19 12.05
Lab Sample Id:	611647-009	Date Collected:	01.15.19 15.00	Sample Depth:	0 - 1.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.21.19 16.00	Basis:	Wet Weight
Seq Number:	3076513				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**65.7**	5.00	mg/kg	01.21.19 21.01		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	01.21.19 14.00	Basis:	Wet Weight
Seq Number:	3076559				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	01.21.19 22.24	U	1
Diesel Range Organics (DRO)	C10C28DRO	**50.4**	14.9	mg/kg	01.21.19 22.24		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	01.21.19 22.24	U	1
Total TPH	PHC635	**50.4**	14.9	mg/kg	01.21.19 22.24		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	01.21.19 22.24	
o-Terphenyl	84-15-1	101	%	70-135	01.21.19 22.24	

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LT Environmental, Inc., Arvada, CO

PLU CVX JV PC #3

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	01.17.19 12.05
Lab Sample Id:	611647-009	Date Collected:	01.15.19 15.00	Sample Depth:	0 - 1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.21.19 14.30	Basis:	Wet Weight
Seq Number:	3076530				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.22.19 03.06	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.22.19 03.06	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.22.19 03.06	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.22.19 03.06	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.22.19 03.06	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.22.19 03.06	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.22.19 03.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	109	%	70-130	01.22.19 03.06	
4-Bromofluorobenzene	460-00-4	112	%	70-130	01.22.19 03.06	

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LT Environmental, Inc., Arvada, CO

PLU CVX JV PC #3

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	01.17.19 12.05
Lab Sample Id:	611647-010	Date Collected:	01.15.19 15.10	Sample Depth:	1.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.21.19 16.00	Basis:	Wet Weight
Seq Number:	3076513				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**139**	4.95	mg/kg	01.21.19 21.22		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	01.21.19 14.00	Basis:	Wet Weight
Seq Number:	3076559				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.21.19 22.44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.21.19 22.44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.21.19 22.44	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.21.19 22.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	01.21.19 22.44	
o-Terphenyl	84-15-1	97	%	70-135	01.21.19 22.44	

Certificate of Analytical Results 611647

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC #3

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	01.17.19 12.05
Lab Sample Id:	611647-010	Date Collected:	01.15.19 15.10	Sample Depth:	1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.21.19 14.30	Basis:	Wet Weight
Seq Number:	3076530				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.22.19 03.25	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.22.19 03.25	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.22.19 03.25	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	01.22.19 03.25	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.22.19 03.25	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.22.19 03.25	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.22.19 03.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	111	%	70-130	01.22.19 03.25	
1,4-Difluorobenzene	540-36-3	108	%	70-130	01.22.19 03.25	

Certificate of Analytical Results 611647

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC #3

Sample Id:	**BH03**	Matrix:	Soil	Date Received:	01.17.19 12.05
Lab Sample Id:	611647-011	Date Collected:	01.15.19 15.30	Sample Depth:	2 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.21.19 16.00	Basis:	Wet Weight
Seq Number:	3076513				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**237**	4.99	mg/kg	01.21.19 21.28		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	01.21.19 14.00	Basis:	Wet Weight
Seq Number:	3076559				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.21.19 23.03	U	1
Diesel Range Organics (DRO)	C10C28DRO	**74.6**	15.0	mg/kg	01.21.19 23.03		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.21.19 23.03	U	1
Total TPH	PHC635	**74.6**	15.0	mg/kg	01.21.19 23.03		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	01.21.19 23.03	
o-Terphenyl	84-15-1	94	%	70-135	01.21.19 23.03	

Certificate of Analytical Results 611647

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC #3

Sample Id:	**BH03**	Matrix:	Soil	Date Received:	01.17.19 12.05
Lab Sample Id:	611647-011	Date Collected:	01.15.19 15.30	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.21.19 14.30	Basis:	Wet Weight
Seq Number:	3076530				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.22.19 04.40	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.22.19 04.40	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.22.19 04.40	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.22.19 04.40	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.22.19 04.40	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.22.19 04.40	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.22.19 04.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	01.22.19 04.40	
1,4-Difluorobenzene	540-36-3	107	%	70-130	01.22.19 04.40	

Certificate of Analytical Results 611647

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC #3

Sample Id:	**BH03A**	Matrix:	Soil	Date Received:	01.17.19 12.05
Lab Sample Id:	611647-012	Date Collected:	01.15.19 15.35	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.21.19 16.00	Basis:	Wet Weight
Seq Number:	3076513				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**185**	4.97	mg/kg	01.21.19 21.34		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	01.21.19 14.00	Basis:	Wet Weight
Seq Number:	3076559				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	01.21.19 23.23	U	1
Diesel Range Organics (DRO)	C10C28DRO	**126**	14.9	mg/kg	01.21.19 23.23		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**34.3**	14.9	mg/kg	01.21.19 23.23		1
Total TPH	PHC635	**160**	14.9	mg/kg	01.21.19 23.23		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	01.21.19 23.23	
o-Terphenyl	84-15-1	99	%	70-135	01.21.19 23.23	

Certificate of Analytical Results 611647

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC #3

Sample Id:	**BH03A**	Matrix:	Soil	Date Received:	01.17.19 12.05
Lab Sample Id:	611647-012	Date Collected:	01.15.19 15.35	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.21.19 14.30	Basis:	Wet Weight
Seq Number:	3076530				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.22.19 04.59	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.22.19 04.59	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.22.19 04.59	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.22.19 04.59	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.22.19 04.59	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.22.19 04.59	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.22.19 04.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	01.22.19 04.59	
4-Bromofluorobenzene	460-00-4	125	%	70-130	01.22.19 04.59	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 611647

LT Environmental, Inc.

PLU CVX JV PC #3

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3076513 Matrix: Solid Date Prep: 01.21.19
MB Sample Id: 7670156-1-BLK LCS Sample Id: 7670156-1-BKS LCSD Sample Id: 7670156-1-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	248	99	236	94	90-110	5	20	mg/kg	01.21.19 18:54	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3076513 Matrix: Soil Date Prep: 01.21.19
Parent Sample Id: 611651-022 MS Sample Id: 611651-022 S MSD Sample Id: 611651-022 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	122	249	378	103	344	89	90-110	9	20	mg/kg	01.21.19 19:12	X

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3076513 Matrix: Soil Date Prep: 01.21.19
Parent Sample Id: 611651-024 MS Sample Id: 611651-024 S MSD Sample Id: 611651-024 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	109	250	332	89	327	87	90-110	2	20	mg/kg	01.21.19 20:42	X

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3076435 Matrix: Solid Date Prep: 01.20.19
MB Sample Id: 7670060-1-BLK LCS Sample Id: 7670060-1-BKS LCSD Sample Id: 7670060-1-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	836	84	849	85	70-135	2	20	mg/kg	01.20.19 10:40	
Diesel Range Organics (DRO)	<8.13	1000	939	94	955	96	70-135	2	20	mg/kg	01.20.19 10:40	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	92		129		129		70-135	%	01.20.19 10:40
o-Terphenyl	94		105		106		70-135	%	01.20.19 10:40

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

QC Summary 611647

LT Environmental, Inc.

PLU CVX JV PC #3

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3076559 Matrix: Solid Date Prep: 01.21.19
MB Sample Id: 7670205-1-BLK LCS Sample Id: 7670205-1-BKS LCSD Sample Id: 7670205-1-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	949	95	954	95	70-135	1	20	mg/kg	01.21.19 20:25	
Diesel Range Organics (DRO)	<8.13	1000	1080	108	1070	107	70-135	1	20	mg/kg	01.21.19 20:25	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	90		123		122		70-135	%	01.21.19 20:25
o-Terphenyl	90		96		96		70-135	%	01.21.19 20:25

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3076435 Matrix: Soil Date Prep: 01.20.19
Parent Sample Id: 611429-003 MS Sample Id: 611429-003 S MSD Sample Id: 611429-003 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)	18.8	1000	945	93	930	91	70-135	2	20	mg/kg	01.20.19 11:40	
Diesel Range Organics (DRO)	80.3	1000	1120	104	1090	101	70-135	3	20	mg/kg	01.20.19 11:40	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	135		138	**	70-135	%	01.20.19 11:40
o-Terphenyl	112		137	**	70-135	%	01.20.19 11:40

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3076559 Matrix: Soil Date Prep: 01.21.19
Parent Sample Id: 611647-007 MS Sample Id: 611647-007 S MSD Sample Id: 611647-007 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)	<7.99	999	916	92	920	92	70-135	0	20	mg/kg	01.21.19 21:25	
Diesel Range Organics (DRO)	51.3	999	1090	104	1110	106	70-135	2	20	mg/kg	01.21.19 21:25	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	129		121		70-135	%	01.21.19 21:25
o-Terphenyl	112		110		70-135	%	01.21.19 21:25

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. = Log(Sample Duplicate) - Log(Original Sample)

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

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

QC Summary 611647

LT Environmental, Inc.

PLU CVX JV PC #3

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3076530 Matrix: Solid Date Prep: 01.21.19
MB Sample Id: 7670183-1-BLK LCS Sample Id: 7670183-1-BKS LCSD Sample Id: 7670183-1-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	0.121	121	0.126	126	70-130	4	35	mg/kg	01.21.19 22:42	
Toluene	<0.000456	0.100	0.107	107	0.111	111	70-130	4	35	mg/kg	01.21.19 22:42	
Ethylbenzene	<0.000565	0.100	0.102	102	0.105	105	70-130	3	35	mg/kg	01.21.19 22:42	
m,p-Xylenes	<0.00101	0.200	0.198	99	0.205	102	70-130	3	35	mg/kg	01.21.19 22:42	
o-Xylene	<0.000344	0.100	0.0985	99	0.102	102	70-130	3	35	mg/kg	01.21.19 22:42	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		105		105		70-130	%	01.21.19 22:42
4-Bromofluorobenzene	94		101		102		70-130	%	01.21.19 22:42

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3076530 Matrix: Soil Date Prep: 01.21.19
Parent Sample Id: 611647-001 MS Sample Id: 611647-001 S MSD Sample Id: 611647-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	0.000450	0.100	0.0965	96	0.109	109	70-130	12	35	mg/kg	01.21.19 23:20	
Toluene	<0.000457	0.100	0.0953	95	0.0979	98	70-130	3	35	mg/kg	01.21.19 23:20	
Ethylbenzene	<0.000566	0.100	0.0908	91	0.0924	93	70-130	2	35	mg/kg	01.21.19 23:20	
m,p-Xylenes	<0.00102	0.200	0.183	92	0.181	91	70-130	1	35	mg/kg	01.21.19 23:20	
o-Xylene	0.000430	0.100	0.0914	91	0.0899	90	70-130	2	35	mg/kg	01.21.19 23:20	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		104		70-130	%	01.21.19 23:20
4-Bromofluorobenzene	113		106		70-130	%	01.21.19 23:20

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

Chain of Custody

Work Order No: 601647

XENCO LABORATORIES

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

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Project Manager:	Adrian Baker	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.704.5178 Email:		bbelill@ltenv.com

Work Order Comments

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

Project Name:	PLU CVX JV PC #3
Project Number:	2RP-3153
P.O. Number:	
Sampler's Name:	Benjamin Belill

Turn Around
Routine ☑
Rush:
Due Date:

SAMPLE RECEIPT

Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	0.5/0.2	Thermometer ID	IR
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.1
Sample Custody Seals:	Yes (No) N/A	Total Containers:	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	Sample Comments
BH01	S	01/15/19	1130	2'	1	X	X	X	discrete
BH01A			1135	4'	1	X	X	X	
BH02			1140	2'		X	X	X	
BH02A			1145	4'		X	X	X	
FS01			1415	1.5'		X	X	X	Composite
FS02			1420	2'		X	X	X	
SW01			1440	0-1.5'		X	X	X	
SW02			1450	0-1.5'		X	X	X	
~~BS03~~ SW03			1500	0-1.5'		X	X	X	
FS03			1510	1.5'		X	X	X	

Work Order Notes

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

ANALYSIS REQUEST

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			1/16/19@1155	2		1/17/19 1205
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

Chain of Custody

Work Order No: 611647

XENCO LABORATORIES

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296
Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000) www.xenco.com Page 2 of 2

Project Manager:	Adrian Baker	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.704.5178 Email:	bbelill@ltenv.com	

Work Order Comments

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

Project Name:	PLU CVX JV PC #3	Turn Around	
Project Number:	2RP-3153	Routine	☑
P.O. Number:		Rush:	
Sampler's Name:	Benjamin Belill	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	0.3 1.0.2	Thermometer ID	
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.1
Sample Custody Seals:	Yes (No) N/A	Total Containers:	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	Sample Comments
BH03	S	1/15/19	1530	2'	1	X	X	X	discrete
BH03A	↓	↓	1535	4'	↓	X	X	X	↓

ANALYSIS REQUEST

Work Order Notes

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

1530 1/15/19

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			1/16/19@1155	2		1/17/19 1205
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 01/17/2019 12:05:00 PM

Work Order #: 611647

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: 01/17/2019

Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 01/18/2019

Jessica Kramer

Analytical Report 628183

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU CVX JV PC 003H

27-JUN-19

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

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

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)

27-JUN-19

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

Reference: XENCO Report No(s): **628183**
PLU CVX JV PC 003H
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) 628183. 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. 628183 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 628183

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC 003H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW04	S	06-17-19 14:17	0 - 4.5 ft	628183-001
FS04	S	06-17-19 14:15	4.5 ft	628183-002
BH03B	S	06-17-19 15:00	8 ft	628183-003

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU CVX JV PC 003H

Project ID:
Work Order Number(s): *628183*

Report Date: *27-JUN-19*
Date Received: *06/19/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3093110 TPH by SW8015 Mod
Surrogate o-Terphenyl recovered below QC limits. Matrix interferences is suspected.
Samples affected are: 628183-003,628183-002.

Batch: LBA-3093583 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 628183

LT Environmental, Inc., Arvada, CO

Project Name: PLU CVX JV PC 003H

Project Id:
Contact: Dan Moir
Project Location: Delaware Basin

Date Received in Lab: Wed Jun-19-19 11:40 am
Report Date: 27-JUN-19
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	628183-001		628183-002		628183-003					
	Field Id:	SW04		FS04		BH03B					
	Depth:	0-4.5 ft		4.5- ft		8- ft					
	Matrix:	SOIL		SOIL		SOIL					
	Sampled:	Jun-17-19 14:17		Jun-17-19 14:15		Jun-17-19 15:00					
BTEX by EPA 8021B	***Extracted:***	Jun-24-19 23:00		Jun-24-19 23:00		Jun-24-19 23:00					
	Analyzed:	Jun-25-19 21:36		Jun-25-19 21:58		Jun-25-19 22:20					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200				
Toluene		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200				
Ethylbenzene		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200				
m,p-Xylenes		<0.00399	0.00399	<0.00398	0.00398	<0.00400	0.00400				
o-Xylene		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200				
Total Xylenes		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200				
Total BTEX		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200				
Chloride by EPA 300	***Extracted:***	Jun-19-19 15:50		Jun-19-19 15:50		Jun-19-19 16:10					
	Analyzed:	Jun-19-19 19:00		Jun-19-19 19:05		Jun-19-19 21:47					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		33.9	5.04	169	5.03	201	5.04				
TPH by SW8015 Mod	***Extracted:***	Jun-20-19 11:50		Jun-20-19 11:50		Jun-20-19 11:50					
	Analyzed:	Jun-21-19 08:13		Jun-21-19 08:38		Jun-21-19 09:04					
	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				
Motor Oil Range Hydrocarbons (MRO)		<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				
Total GRO-DRO		<14.9	14.9	<15.0	15.0	<15.0	15.0				

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analytical Results 628183

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC 003H

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628183-001	Date Collected:	06.17.19 14.17	Sample Depth:	0 - 4.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	06.19.19 15.50	Basis:	Wet Weight
Seq Number:	3092944				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**33.9**	5.04	mg/kg	06.19.19 19.00		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.20.19 11.50	Basis:	Wet Weight
Seq Number:	3093110				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	06.21.19 08.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	06.21.19 08.13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	06.21.19 08.13	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	06.21.19 08.13	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	06.21.19 08.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	83	%	70-135	06.21.19 08.13	
o-Terphenyl	84-15-1	85	%	70-135	06.21.19 08.13	

Certificate of Analytical Results 628183

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC 003H

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628183-001	Date Collected:	06.17.19 14.17	Sample Depth:	0 - 4.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.24.19 23.00	Basis:	Wet Weight
Seq Number:	3093583				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.25.19 21.36	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.25.19 21.36	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.25.19 21.36	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	06.25.19 21.36	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.25.19 21.36	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.25.19 21.36	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.25.19 21.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	70-130	06.25.19 21.36	
1,4-Difluorobenzene	540-36-3	95	%	70-130	06.25.19 21.36	

Certificate of Analytical Results 628183

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC 003H

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628183-002	Date Collected:	06.17.19 14.15	Sample Depth:	4.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	06.19.19 15.50	Basis:	Wet Weight
Seq Number:	3092944				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**169**	5.03	mg/kg	06.19.19 19.05		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.20.19 11.50	Basis:	Wet Weight
Seq Number:	3093110				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.21.19 08.38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.21.19 08.38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.21.19 08.38	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.21.19 08.38	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.21.19 08.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	77	%	70-135	06.21.19 08.38	
o-Terphenyl	84-15-1	68	%	70-135	06.21.19 08.38	**

Certificate of Analytical Results 628183

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC 003H

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628183-002	Date Collected:	06.17.19 14.15	Sample Depth:	4.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.24.19 23.00	Basis:	Wet Weight
Seq Number:	3093583				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	06.25.19 21.58	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	06.25.19 21.58	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	06.25.19 21.58	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	06.25.19 21.58	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	06.25.19 21.58	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	06.25.19 21.58	U	1
Total BTEX		<0.00199	0.00199	mg/kg	06.25.19 21.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	97	%	70-130	06.25.19 21.58	
4-Bromofluorobenzene	460-00-4	106	%	70-130	06.25.19 21.58	

Certificate of Analytical Results 628183

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC 003H

Sample Id:	**BH03B**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628183-003	Date Collected:	06.17.19 15.00	Sample Depth:	8 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	06.19.19 16.10	Basis:	Wet Weight
Seq Number:	3092962				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**201**	5.04	mg/kg	06.19.19 21.47		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.20.19 11.50	Basis:	Wet Weight
Seq Number:	3093110				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.21.19 09.04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.21.19 09.04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.21.19 09.04	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.21.19 09.04	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.21.19 09.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	77	%	70-135	06.21.19 09.04	
o-Terphenyl	84-15-1	69	%	70-135	06.21.19 09.04	**

Certificate of Analytical Results 628183

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC 003H

Sample Id:	**BH03B**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628183-003	Date Collected:	06.17.19 15.00	Sample Depth:	8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.24.19 23.00	Basis:	Wet Weight
Seq Number:	3093583				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.25.19 22.20	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.25.19 22.20	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.25.19 22.20	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	06.25.19 22.20	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.25.19 22.20	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.25.19 22.20	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.25.19 22.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	70-130	06.25.19 22.20	
1,4-Difluorobenzene	540-36-3	95	%	70-130	06.25.19 22.20	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 628183

LT Environmental, Inc.

PLU CVX JV PC 003H

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3092944 — Matrix: Solid — Date Prep: 06.19.19
MB Sample Id: 7680338-1-BLK — LCS Sample Id: 7680338-1-BKS — LCSD Sample Id: 7680338-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	250	100	251	100	90-110	0	20	mg/kg	06.19.19 16:44	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3092962 — Matrix: Solid — Date Prep: 06.19.19
MB Sample Id: 7680340-1-BLK — LCS Sample Id: 7680340-1-BKS — LCSD Sample Id: 7680340-1-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	246	98	246	98	90-110	0	20	mg/kg	06.19.19 21:32	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3092944 — Matrix: Soil — Date Prep: 06.19.19
Parent Sample Id: 628030-008 — MS Sample Id: 628030-008 S — MSD Sample Id: 628030-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	21.1	250	280	104	279	103	90-110	0	20	mg/kg	06.19.19 16:59	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3092944 — Matrix: Soil — Date Prep: 06.19.19
Parent Sample Id: 628181-002 — MS Sample Id: 628181-002 S — MSD Sample Id: 628181-002 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	259	104	257	104	90-110	1	20	mg/kg	06.19.19 18:07	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3092962 — Matrix: Soil — Date Prep: 06.19.19
Parent Sample Id: 628183-003 — MS Sample Id: 628183-003 S — MSD Sample Id: 628183-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	201	252	441	95	441	95	90-110	0	20	mg/kg	06.19.19 21:54	

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

QC Summary 628183

LT Environmental, Inc.

PLU CVX JV PC 003H

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3092962 Matrix: Soil Date Prep: 06.19.19
Parent Sample Id: 628185-006 MS Sample Id: 628185-006 S MSD Sample Id: 628185-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	79.2	248	333	102	332	102	90-110	0	20	mg/kg	06.19.19 23:35	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3093110 Matrix: Solid Date Prep: 06.20.19
MB Sample Id: 7680420-1-BLK LCS Sample Id: 7680420-1-BKS LCSD Sample Id: 7680420-1-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	964	96	922	92	70-135	4	20	mg/kg	06.21.19 00:52	
Diesel Range Organics (DRO)	<8.13	1000	953	95	926	93	70-135	3	20	mg/kg	06.21.19 00:52	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	93		102		99		70-135	%	06.21.19 00:52
o-Terphenyl	84		101		104		70-135	%	06.21.19 00:52

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3093110 Matrix: Soil Date Prep: 06.20.19
Parent Sample Id: 628185-001 MS Sample Id: 628185-001 S MSD Sample Id: 628185-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	808	81	858	86	70-135	6	20	mg/kg	06.21.19 02:05	
Diesel Range Organics (DRO)	10.7	1000	778	77	824	81	70-135	6	20	mg/kg	06.21.19 02:05	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	73		86		70-135	%	06.21.19 02:05
o-Terphenyl	71		87		70-135	%	06.21.19 02:05

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

QC Summary 628183

LT Environmental, Inc.

PLU CVX JV PC 003H

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

Seq Number: 3093583 Matrix: Solid Date Prep: 06.24.19

MB Sample Id: 7680657-1-BLK LCS Sample Id: 7680657-1-BKS LCSD Sample Id: 7680657-1-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	0.0884	88	0.0870	87	70-130	2	35	mg/kg	06.25.19 07:06	
Toluene	<0.00200	0.100	0.0784	78	0.0868	87	70-130	10	35	mg/kg	06.25.19 07:06	
Ethylbenzene	<0.00200	0.100	0.0738	74	0.0925	93	70-130	22	35	mg/kg	06.25.19 07:06	
m,p-Xylenes	<0.00400	0.200	0.144	72	0.185	93	70-130	25	35	mg/kg	06.25.19 07:06	
o-Xylene	<0.00200	0.100	0.0707	71	0.0857	86	70-130	19	35	mg/kg	06.25.19 07:06	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	93		97		95		70-130	%	06.25.19 07:06
4-Bromofluorobenzene	97		102		97		70-130	%	06.25.19 07:06

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

Seq Number: 3093583 Matrix: Soil Date Prep: 06.24.19

Parent Sample Id: 627969-001 MS Sample Id: 627969-001 S MSD Sample Id: 627969-001 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	0.0922	92	0.0999	100	70-130	8	35	mg/kg	06.25.19 11:37	
Toluene	<0.00200	0.0998	0.0882	88	0.0968	97	70-130	9	35	mg/kg	06.25.19 11:37	
Ethylbenzene	<0.00200	0.0998	0.0941	94	0.102	102	70-130	8	35	mg/kg	06.25.19 11:37	
m,p-Xylenes	<0.00399	0.200	0.187	94	0.205	103	70-130	9	35	mg/kg	06.25.19 11:37	
o-Xylene	<0.00200	0.0998	0.0868	87	0.0954	96	70-130	9	35	mg/kg	06.25.19 11:37	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		100		70-130	%	06.25.19 11:37
4-Bromofluorobenzene	108		104		70-130	%	06.25.19 11:37

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

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

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

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

XENCO LABORATORIES

Chain of Custody

Work Order No: 428183

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

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Project Manager:	DAN MOIR	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental	Company Name:	XTO
Address:	3300 North A Street	Address:	3104 E. Greene Street
City, State ZIP:	Midland TX 79705	City, State ZIP:	Carlsbad NM 88220
Phone:	432 236 3849	Email:	abyers@ltenv.com

Work Order Comments

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

Project Name:	PLU CUX JV PC 003H	Turn Around	
Project Number:		Routine ☐	
P.O. Number:	2RP-3153	Rush: 3day	
Sampler's Name:	Anna Byers	Due Date: 6/21	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	0.5/0.3	Thermometer ID	DR	
Received Intact:	(Yes) No			
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes (No) N/A	Total Containers:		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)	Work Order Notes
SW04	S	6/17	1417	0-4.5'	1	X	X	X	TAT starts the day recevied by the lab, if received by 4:30pm
FS04	S	6/17	1415	4.5'	1				Sample Comments
BH03B	S	6/17	1500	8'	1				

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U 1631 / 245.1 / 7470 / 7471 : Hg

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Anna Byers		6/18/19 @ 0945	2	FedEx Ground	6/18/19 14:00
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 06/19/2019 11:40:00 AM

Work Order #: 628183

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

Temperature Measuring device used : R8

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 06/19/2019

Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 06/19/2019

Jessica Kramer