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

December 18, 2018

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

RE: Closure Request
Poker Lake Unit CVX JV PC #020H
Remediation Permit Number 2RP-5011
Eddy County, New Mexico

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following letter report detailing excavation of impacted soil and confirmation soil sampling activities at the Poker Lake Unit CVX JV PC #020H flow line (Site) located in Unit Letter H, Section 20, Township 24 South, Range 30 East, in Eddy County, New Mexico (Figure 1). The purpose of the soil sampling and excavation activities was to address impact to soil after the clamp applied to the flow line to address a prior release (2RP-4834) failed. The release was discovered on September 26, 2018. Approximately 3 barrels (bbls) of oil and 5 bbls of produced water were released within the open excavation associated with release 2RP-4834 and onto the surrounding pasture. The well was shut in, the damaged joint of pipe was replaced, and the well was returned to production. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 on October 11, 2018 and was assigned Remediation Permit (RP) Number 2RP-5011 (Attachment 1). Based on the excavation activities and results of the confirmation soil sampling events, XTO is requesting no further action for this release. Please note that a closure request report for release 2RP-4834 was submitted to the NMOCD in October 2018. The excavation remained open pending approval of the closure request.

BACKGROUND

The release occurred after August 14, 2018; therefore, LTE determined remediation action levels by applying Table 1, the *Closure Criteria for Soils Impacted by a Release*, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Depth to groundwater at the Site is estimated to be 182 feet below ground surface (bgs) based on the nearest water well data. The nearest permitted water well with depth to water data is C 03960, located approximately 0.69 miles southeast of the Site, with a depth to groundwater of 250 feet and a total depth of 475 feet. The water well is approximately 68 feet higher in elevation than the Site. The closest significant watercourse to the Site is an unnamed dry wash located

approximately 965 feet southwest of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. Based on these criteria, the following NMOCD Table 1 closure criteria apply: 10 milligrams per kilogram (mg/kg) benzene; 50 mg/kg total benzene, toluene, ethylbenzene, and total xylenes (BTEX); 2,500 mg/kg total petroleum hydrocarbons (TPH); 1,000 mg/kg TPH-gasoline range organics (GRO) and TPH-diesel range organics (DRO); and 20,000 mg/kg chloride. A closure criteria of 600 mg/kg chloride was applied to the excavation per NMAC 19.15.29.13.D (1) for the top 4 feet of areas that will be reclaimed following remediation.

SOIL SAMPLING

On October 16, 2018, LTE personnel inspected the Site to evaluate the release extent. The release impacted the open excavation associated with release 2RP-4834 and the surrounding pasture. The release extent was mapped using a handheld Global Positing System (GPS) unit and is depicted on Figure 2. LTE personnel collected six preliminary soil samples (SS01 through SS06) from within the release area. Soil samples SS02 and SS05 were collected at 4-feet and 9-feet bgs, respectively, from within the impacted open excavation. Soil samples SS01, SS03, SS04, and SS06 were collected at 0.5-feet bgs from the release area in the pasture surrounding the open excavation. The soil samples were screened for volatile aromatic hydrocarbons and chlorides using a photo-ionization detector (PID) and Hach® chloride QuanTab® test strips. The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler, method of analysis, and immediately placed on ice. The soil samples were shipped at 4 degrees Celsius (°C) under strict chain-of-custody procedures to Xenco Laboratories (Xenco) in Midland, Texas, for analysis of BTEX by United States Environmental Protection Agency (USEPA) Method 8021B, TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) by USEPA Method 8015M/D, and chloride by USEPA Method 300.0.

Laboratory analytical results for soil samples SS02 and SS05 indicated that TPH concentrations exceeded the NMOCD Table 1 closure criteria. Laboratory analytical results for soil samples SS01, SS03, SS04, and SS06 indicated that BTEX and TPH concentrations were compliant with the NMOCD Table 1 closure criteria and chloride concentrations were below 600 mg/kg. Laboratory analytical results are presented on Figure 2 and summarized in Table 1, and the laboratory analytical report is included in Attachment 2. Based on the soil sample analytical results, excavation of impacted soil was required.

EXCAVATION

During November 2018, LTE personnel returned to the Site to oversee excavation of impacted soil as indicated by laboratory analytical results and field screening activities. Excavation activities commenced on November 13, 2018, and concluded on November 15, 2018. To delineate

hydrocarbon and chloride impacts to soil and direct excavation activities, LTE screened soil using a PID and Hach® chloride QuanTab® test strips. Impacted soil was excavated from the release area to depths ranging from 2-feet bgs to 17-feet bgs. Following removal of impacted soil, LTE collected 5-point composite soil samples every 200 square feet from the sidewalls and floor of the excavation. The excavation depth varied and the sidewalls were sloped. One composite floor sample was warranted from the 200 square foot area that was completed to a depth of 17-feet bgs. The sidewall samples represent the shallower excavated areas and sloped sidewalls. Composite soil samples SW01 through SW08 were collected from the sidewalls of the excavation from depths of 2-feet bgs to 12-feet bgs, and composite soil sample FS01 was collected from the floor of the excavation from a depth of 17-feet bgs. The 5-point composite samples were collected by depositing 5 aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thorough mixing.

A pothole was advanced in the excavation to a depth of 26 feet bgs to delineate the depth of chloride impacts to a concentration of 600 mg/kg. Soil sample FS01A was collected from the pothole from a depth of 26 feet bgs.

All soil samples were collected, handled, and analyzed as described above and submitted to Xenco in Midland, Texas.

The excavation measured approximately 1,540 square feet at the surface with a depth ranging from 2-feet bgs to 17-feet bgs. The horizontal extent of the excavation is illustrated on Figure 2. Approximately 328 cubic yards of impacted soil were removed from the excavation. The impacted soil was transported and properly disposed of at the Lea Land Landfill Facility, in Hobbs, New Mexico.

ANALYTICAL RESULTS

Laboratory analytical results indicated that two preliminary soil samples (SS02 and SS05) initially exceeded the Table 1 closure criteria for TPH. The excavation was extended, and laboratory analytical results indicated that all confirmation soil samples (SW01 through SW08, and FS01) collected from the final excavation extent were compliant with the NMOCD Table 1 closure criteria for BTEX, TPH, and chloride. Additionally, laboratory analytical results indicated that chloride concentrations were below 600 mg/kg in pothole soil sample FS01A and in all final confirmation soil samples except sidewall sample SW06 and floor sample FS01, which were collected from depths below 4 feet bgs. Laboratory analytical results are presented on Figure 2 and summarized in Table 1, and the complete laboratory analytical reports are included as Attachment 2.

CONCLUSIONS

The impacted soil was excavated from the release area and laboratory analytical results for the confirmation soil samples collected from the final excavation extent indicate that BTEX, TPH, and chloride concentrations are compliant with the NMOCD Table 1 closure criteria. Additionally, laboratory analytical results for all soil samples collected from depths shallower than 4-feet bgs indicate that chloride concentrations are below 600 mg/kg. Excavation of impacted soil has mitigated impacts at this Site. XTO requests no further action for this release. Upon approval of the no further action request, 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 as Attachment 1. A photographic log of the Site is included as Attachment 3.

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

Sincerely,

LT ENVIRONMENTAL, INC.

Adrian Baker
Project Geologist

Ashley L. Ager, M.S., P.G.
Senior Geologist

cc: Kyle Littrell, XTO
Shelly Tucker, BLM

Attachments:

Figure 1	Site Location Map
Figure 2	Soil Sample Locations
Table 1	Soil Analytical Results
Attachment 1	Initial/Final NMOCD Form C-141 (2RP-5011)
Attachment 2	Laboratory Analytical Reports
Attachment 3	Photographic Log

IMAGE COURTESY OF ESRI/USGS

LEGEND

SITE LOCATION

0 2,000 4,000

Feet

N

NEW MEXICO

NOTE: REMEDIATION PERMIT NUMBER 2RP-5011

FIGURE 1
SITE LOCATION MAP
POKER LAKE UNIT CVX JV PC #020H
UNIT H SEC 20 T24S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012918172_POKER LAKE UNIT CVX JV PC #020H\012918172_FIG01_SL_2018_5011.mxd

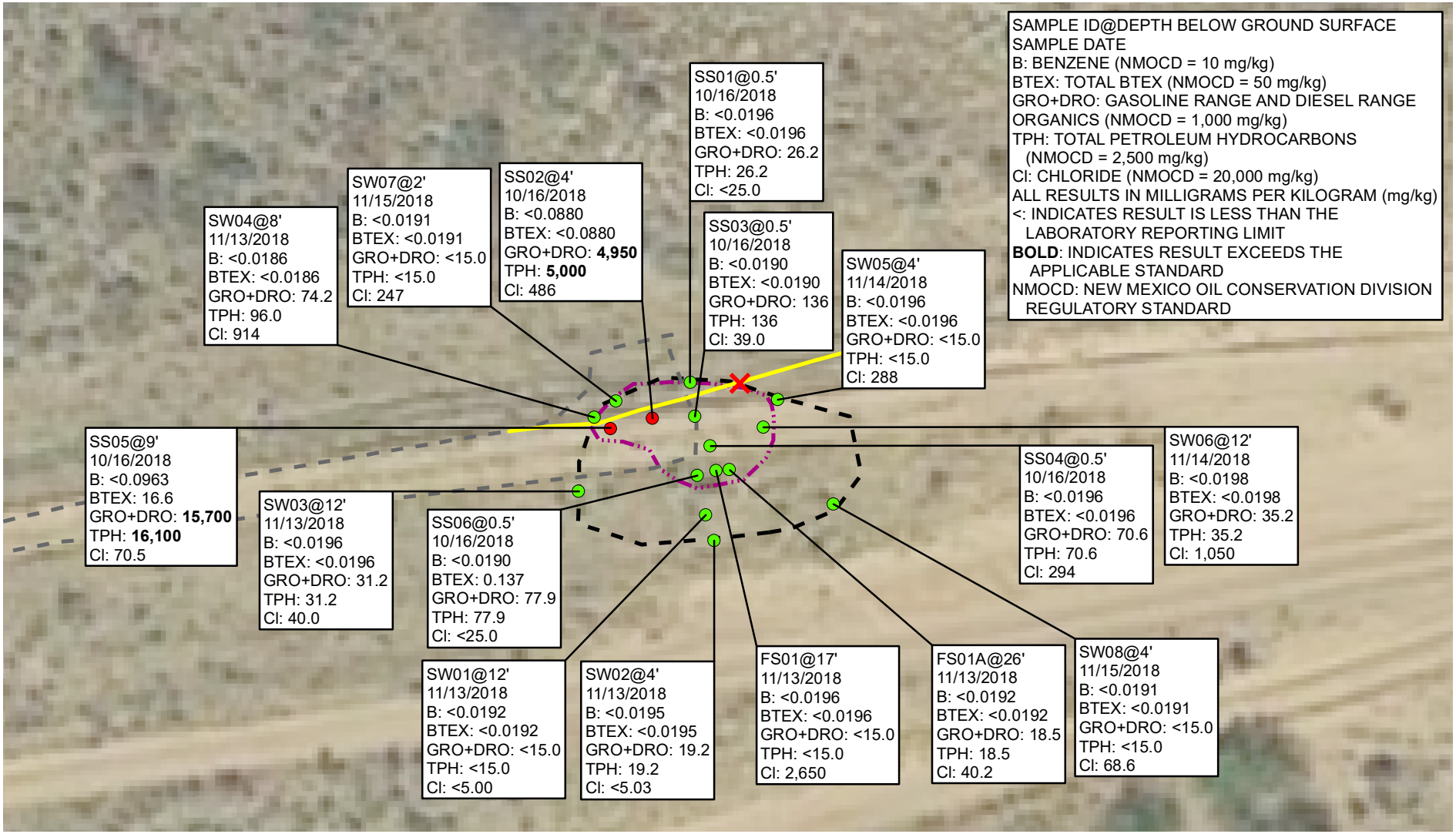

IMAGE COURTESY OF GOOGLE EARTH 2017

LEGEND

- RELEASE LOCATION (ON FLOW LINE VALVE)
- PRELIMINARY SOIL SAMPLE
- FINAL CONFIRMATION SOIL SAMPLE
- XTO FLOW LINE ON SURFACE
- RELEASE EXTENT
- EXCAVATION EXTENT (2RP-5011)
- EXCAVATION EXTENT (2RP-4834)

0 30 60
Feet

N

NOTE: REMEDIATION PERMIT NUMBER 2RP-5011

FIGURE 2
SOIL SAMPLE LOCATIONS
POKER LAKE UNIT CVX JV PC #020H
UNIT H SEC 20 T24S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012918172_POKER LAKE UNIT CVX JV PC #020H\012918172_FIG02_SITE_2018_5011.mxd

TABLE 1
SOIL ANALYTICAL RESULTS

POKER LAKE UNIT CVX JV PC #020H
REMEDIATION PERMIT NUMBER 2RP-5011
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	C6-C10 GRO (mg/kg)	C10-C28 DRO (mg/kg)	C28-C40 ORO (mg/kg)	GRO and DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
SS01	0.5	10/16/2018	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<15.0	26.2	<15.0	26.2	26.2	<25.0
SS02	4	10/16/2018	<0.0880	<0.0880	<0.0880	<0.0880	<0.0880	84.1	4,870	47.9	**4,950**	**5,000**	486
SS03	0.5	10/16/2018	<0.0190	<0.0190	<0.0190	<0.0190	<0.0190	<14.9	136	<14.9	136	136	39.0
SS04	0.5	10/16/2018	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<15.0	70.6	<15.0	70.6	70.6	294
SS05	9	10/16/2018	<0.0963	1.07	2.21	13.4	16.6	1,370	14,300	426	**15,700**	**16,100**	70.5
SS06	0.5	10/16/2018	<0.0190	0.0209	0.0436	0.0721	0.137	<15.0	77.9	<15.0	77.9	77.9	<25.0
FS01	17	11/13/2018	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<15.0	<15.0	<15.0	<15.0	<15.0	2,650
FS01A	26	11/13/2018	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<15.0	18.5	<15.0	18.5	18.5	40.2
SW01	12	11/13/2018	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<15.0	<15.0	<15.0	<15.0	<15.0	<5.00
SW02	4	11/13/2018	<0.0195	<0.0195	<0.0195	<0.0195	<0.0195	<14.9	19.2	<14.9	19.2	19.2	<5.03
SW03	12	11/13/2018	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<15.0	31.2	<15.0	31.2	31.2	40.0
SW04	8	11/13/2018	<0.0186	<0.0186	<0.0186	<0.0186	<0.0186	<15.0	74.2	21.8	74.2	96.0	914
SW05	4	11/14/2018	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<15.0	<15.0	<15.0	<15.0	<15.0	288
SW06	12	11/14/2018	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<15.0	35.2	<15.0	35.2	35.2	1,050
SW07	2	11/15/2018	<0.0191	<0.0191	<0.0191	<0.0191	<0.0191	<15.0	<15.0	<15.0	<15.0	<15.0	247
SW08	4	11/15/2018	<0.0191	<0.0191	<0.0191	<0.0191	<0.0191	<15.0	<15.0	<15.0	<15.0	<15.0	68.6
NMOCD Remediation Action Levels			10	NE	NE	NE	50	NE	NE	NE	1,000	2,500	20,000

Notes:
bgs - below ground surface
BTEX - benzene, toluene, ethylbenzene, and total xylenes
mg/kg - milligrams per kilogram
NE - not established
NMOCD - New Mexico Oil Conservation Division
DRO - diesel range organics
GRO - gasoline range organics
ORO - oil range organics
TPH - total petroleum hydrocarbons
< - indicates result is below laboratory reporting limits
Bold - indicates result exceeds the applicable regulatory standard.

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	NMAP1828470405
District RP	2RP-5011
Facility ID	N/A
Application ID	pMAP1828470123

Release Notification

Responsible Party

Responsible Party XTO Energy	OGRID 5380
Contact Name Kyle Littrell	Contact Telephone 432-221-7331
Contact email Kyle_Littrell@xtoenergy.com	Incident # *(assigned by OCD)* NMAP1828470405
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.20674 Longitude -103.89684

(NAD 83 in decimal degrees to 5 decimal places)

Site Name Poker Lake Unit CVX JV PC #020H	Site Type Production Well Flow Line
Date Release Discovered 9/26/2018	API# *(if applicable)* 30-015-42668

Unit Letter	Section	Township	Range	County
H	20	24S	30E	Eddy

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

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) 3	Volume Recovered (bbls) 0
☒ Produced Water	Volume Released (bbls) 5	Volume Recovered (bbls) 0
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

A release was discovered from the flow line due to a failed clamp that was applied during a prior release. The well was shut in, the damaged joint of pipe was replaced, and the well was returned to production.

State of New Mexico
Oil Conservation Division

Incident ID	NMAP1828470405
District RP	2 RP-5011
Facility ID	N/A
Application ID	pMAP1828470123

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

Initial Response

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

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

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

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

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

Printed Name: Kyle Littrell Title: SH&E Coordinator

Signature: Date: 10-11-18

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

OCD Only

Received by: Date: 10/11/18

Incident ID	NMAP1828470405
District RP	2RP-5011
Facility ID	N/A
Application ID	pMAP1828470123

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?	130 (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

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Application ID	pMAP1828470123

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

Printed Name: Kyle Littrell Title: SH&E Coordinator

Signature: Date: 10-11-18

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

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

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Facility ID	N/A
Application ID	pMAP1828470123

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.***

[X] A scaled site and sampling diagram as described in 19.15.29.11 NMAC

[X] 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)

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

[X] Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E Coordinator

Signature: Date: 12-18-2018

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: LABORATORY ANALYTICAL REPORTS

Analytical Report 602721

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU CVX JVPC 020

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): **602721**
PLU CVX JVPC 020
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) 602721. 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. 602721 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Sample Cross Reference 602721

LT Environmental, Inc., Arvada, CO

PLU CVX JVPC 020

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	10-16-18 14:30	6 In	602721-001
SS02	S	10-16-18 14:40	4 ft	602721-002
SS03	S	10-16-18 14:50	6 In	602721-003
SS04	S	10-16-18 15:00	6 In	602721-004
SS05	S	10-16-18 15:15	9 ft	602721-005
SS06	S	10-16-18 15:20	6 In	602721-006

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3066947 TPH by SW8015 Mod
Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 602721-002.

Batch: LBA-3067041 BTEX by EPA 8021B
Samples 602721-002 and 602721-005 were diluted due to hydrocarbons.

Certificate of Analysis Summary 602721

LT Environmental, Inc., Arvada, CO

Project Name: PLU CVX JVPC 020

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

Date Received in Lab: Thu Oct-18-18 10:40 am
Report Date: 23-OCT-18
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	602721-001		602721-002		602721-003		602721-004		602721-005		602721-006	
	Field Id:	SS01		SS02		SS03		SS04		SS05		SS06	
	Depth:	6- In		4- ft		6- In		6- In		9- ft		6- In	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Oct-16-18 14:30		Oct-16-18 14:40		Oct-16-18 14:50		Oct-16-18 15:00		Oct-16-18 15:15		Oct-16-18 15:20	
BTEX by EPA 8021B SUB: T104704219-18-18	***Extracted:***	Oct-19-18 12:30		Oct-19-18 12:30		Oct-19-18 12:30		Oct-19-18 12:30		Oct-19-18 12:30		Oct-19-18 12:30	
	Analyzed:	Oct-21-18 10:41		Oct-21-18 11:05		Oct-21-18 11:29		Oct-21-18 11:52		Oct-21-18 12:17		Oct-21-18 14:39	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.0196	0.0196	<0.0880	0.0880	<0.0190	0.0190	<0.0196	0.0196	<0.0963	0.0963	<0.0190	0.0190
Toluene		<0.0196	0.0196	<0.0880	0.0880	<0.0190	0.0190	<0.0196	0.0196	1.07	0.0963	0.0209	0.0190
Ethylbenzene		<0.0196	0.0196	<0.0880	0.0880	<0.0190	0.0190	<0.0196	0.0196	2.21	0.0963	0.0436	0.0190
m,p-Xylenes		<0.0393	0.0393	<0.176	0.176	<0.0381	0.0381	<0.0391	0.0391	8.15	0.193	0.0493	0.0380
o-Xylene		<0.0196	0.0196	<0.0880	0.0880	<0.0190	0.0190	<0.0196	0.0196	5.21	0.0963	0.0228	0.0190
Total Xylenes		<0.0196	0.0196	<0.0880	0.0880	<0.0190	0.0190	<0.0196	0.0196	13.4	0.0963	0.0721	0.0190
Total BTEX		<0.0196	0.0196	<0.0880	0.0880	<0.0190	0.0190	<0.0196	0.0196	16.6	0.0963	0.137	0.0190
Inorganic Anions by EPA 300 SUB: T104704219-18-18	***Extracted:***	Oct-19-18 11:00		Oct-19-18 11:00		Oct-19-18 11:00		Oct-19-18 11:00		Oct-19-18 11:00		Oct-19-18 11:00	
	Analyzed:	Oct-19-18 21:41		Oct-19-18 21:53		Oct-19-18 22:06		Oct-19-18 23:08		Oct-19-18 23:20		Oct-19-18 23:33	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		<25.0	25.0	486	25.0	39.0	25.0	294	25.0	70.5	25.0	<25.0	25.0
TPH by SW8015 Mod	***Extracted:***	Oct-19-18 07:00		Oct-19-18 07:00		Oct-19-18 07:00		Oct-19-18 07:00		Oct-19-18 07:00		Oct-19-18 07:00	
	Analyzed:	Oct-19-18 16:17		Oct-19-18 16:36		Oct-19-18 16:58		Oct-19-18 17:20		Oct-20-18 08:01		Oct-19-18 18:03	
	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	84.1	14.9	<14.9	14.9	<15.0	15.0	1370	74.9	<15.0	15.0
Diesel Range Organics (DRO)		26.2	15.0	4870	14.9	136	14.9	70.6	15.0	14300	74.9	77.9	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	47.9	14.9	<14.9	14.9	<15.0	15.0	426	74.9	<15.0	15.0
Total TPH		26.2	15.0	5000	14.9	136	14.9	70.6	15.0	16100	74.9	77.9	15.0

Jessica Kramer
Project Assistant

Certificate of Analytical Results 602721

LT Environmental, Inc., Arvada, CO

PLU CVX JVPC 020

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	10.18.18 10.40
Lab Sample Id:	602721-001	Date Collected:	10.16.18 14.30	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	RNL			% Moisture:	
Analyst:	RNL	Date Prep:	10.19.18 11.00	Basis:	Wet Weight
Seq Number:	3067028			SUB:	T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<25.0	25.0	mg/kg	10.19.18 21.41	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	10.19.18 07.00	Basis:	Wet Weight
Seq Number:	3066947				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.19.18 16.17	U	1
Diesel Range Organics (DRO)	C10C28DRO	**26.2**	15.0	mg/kg	10.19.18 16.17		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.19.18 16.17	U	1
Total TPH	PHC635	**26.2**	15.0	mg/kg	10.19.18 16.17		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	10.19.18 16.17	
o-Terphenyl	84-15-1	91	%	70-135	10.19.18 16.17	

Certificate of Analytical Results 602721

LT Environmental, Inc., Arvada, CO

PLU CVX JVPC 020

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	10.18.18 10.40
Lab Sample Id:	602721-001	Date Collected:	10.16.18 14.30	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	10.19.18 12.30	Basis:	Wet Weight
Seq Number:	3067041			SUB:	T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0196	0.0196	mg/kg	10.21.18 10.41	U	1
Toluene	108-88-3	<0.0196	0.0196	mg/kg	10.21.18 10.41	U	1
Ethylbenzene	100-41-4	<0.0196	0.0196	mg/kg	10.21.18 10.41	U	1
m,p-Xylenes	179601-23-1	<0.0393	0.0393	mg/kg	10.21.18 10.41	U	1
o-Xylene	95-47-6	<0.0196	0.0196	mg/kg	10.21.18 10.41	U	1
Total Xylenes	1330-20-7	<0.0196	0.0196	mg/kg	10.21.18 10.41	U	1
Total BTEX		<0.0196	0.0196	mg/kg	10.21.18 10.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	75	%	68-120	10.21.18 10.41	
a,a,a-Trifluorotoluene	98-08-8	79	%	71-121	10.21.18 10.41	

Certificate of Analytical Results 602721

LT Environmental, Inc., Arvada, CO

PLU CVX JVPC 020

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	10.18.18 10.40
Lab Sample Id:	602721-002	Date Collected:	10.16.18 14.40	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	RNL			% Moisture:	
Analyst:	RNL	Date Prep:	10.19.18 11.00	Basis:	Wet Weight
Seq Number:	3067028			SUB:	T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**486**	25.0	mg/kg	10.19.18 21.53		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	10.19.18 07.00	Basis:	Wet Weight
Seq Number:	3066947				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**84.1**	14.9	mg/kg	10.19.18 16.36		1
Diesel Range Organics (DRO)	C10C28DRO	**4870**	14.9	mg/kg	10.19.18 16.36		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**47.9**	14.9	mg/kg	10.19.18 16.36		1
Total TPH	PHC635	**5000**	14.9	mg/kg	10.19.18 16.36		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	10.19.18 16.36	
o-Terphenyl	84-15-1	175	%	70-135	10.19.18 16.36	**

Certificate of Analytical Results 602721

LT Environmental, Inc., Arvada, CO

PLU CVX JVPC 020

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	10.18.18 10.40
Lab Sample Id:	602721-002	Date Collected:	10.16.18 14.40	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	10.19.18 12.30	Basis:	Wet Weight
Seq Number:	3067041			SUB:	T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0880	0.0880	mg/kg	10.21.18 11.05	U	5
Toluene	108-88-3	<0.0880	0.0880	mg/kg	10.21.18 11.05	U	5
Ethylbenzene	100-41-4	<0.0880	0.0880	mg/kg	10.21.18 11.05	U	5
m,p-Xylenes	179601-23-1	<0.176	0.176	mg/kg	10.21.18 11.05	U	5
o-Xylene	95-47-6	<0.0880	0.0880	mg/kg	10.21.18 11.05	U	5
Total Xylenes	1330-20-7	<0.0880	0.0880	mg/kg	10.21.18 11.05	U	5
Total BTEX		<0.0880	0.0880	mg/kg	10.21.18 11.05	U	5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	68-120	10.21.18 11.05	
a,a,a-Trifluorotoluene	98-08-8	89	%	71-121	10.21.18 11.05	

Certificate of Analytical Results 602721

LT Environmental, Inc., Arvada, CO

PLU CVX JVPC 020

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	10.18.18 10.40
Lab Sample Id:	602721-003	Date Collected:	10.16.18 14.50	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	RNL			% Moisture:	
Analyst:	RNL	Date Prep:	10.19.18 11.00	Basis:	Wet Weight
Seq Number:	3067028			SUB:	T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**39.0**	25.0	mg/kg	10.19.18 22.06		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	10.19.18 07.00	Basis:	Wet Weight
Seq Number:	3066947				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	10.19.18 16.58	U	1
Diesel Range Organics (DRO)	C10C28DRO	**136**	14.9	mg/kg	10.19.18 16.58		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	10.19.18 16.58	U	1
Total TPH	PHC635	**136**	14.9	mg/kg	10.19.18 16.58		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	82	%	70-135	10.19.18 16.58	
o-Terphenyl	84-15-1	93	%	70-135	10.19.18 16.58	

Certificate of Analytical Results 602721

LT Environmental, Inc., Arvada, CO

PLU CVX JVPC 020

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	10.18.18 10.40
Lab Sample Id:	602721-003	Date Collected:	10.16.18 14.50	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	10.19.18 12.30	Basis:	Wet Weight
Seq Number:	3067041			SUB:	T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0190	0.0190	mg/kg	10.21.18 11.29	U	1
Toluene	108-88-3	<0.0190	0.0190	mg/kg	10.21.18 11.29	U	1
Ethylbenzene	100-41-4	<0.0190	0.0190	mg/kg	10.21.18 11.29	U	1
m,p-Xylenes	179601-23-1	<0.0381	0.0381	mg/kg	10.21.18 11.29	U	1
o-Xylene	95-47-6	<0.0190	0.0190	mg/kg	10.21.18 11.29	U	1
Total Xylenes	1330-20-7	<0.0190	0.0190	mg/kg	10.21.18 11.29	U	1
Total BTEX		<0.0190	0.0190	mg/kg	10.21.18 11.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	81	%	68-120	10.21.18 11.29	
a,a,a-Trifluorotoluene	98-08-8	81	%	71-121	10.21.18 11.29	

Certificate of Analytical Results 602721

LT Environmental, Inc., Arvada, CO

PLU CVX JVPC 020

Sample Id:	**SS04**	Matrix:	Soil	Date Received:	10.18.18 10.40
Lab Sample Id:	602721-004	Date Collected:	10.16.18 15.00	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	RNL			% Moisture:	
Analyst:	RNL	Date Prep:	10.19.18 11.00	Basis:	Wet Weight
Seq Number:	3067032			SUB:	T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**294**	25.0	mg/kg	10.19.18 23.08		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	10.19.18 07.00	Basis:	Wet Weight
Seq Number:	3066947				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.19.18 17.20	U	1
Diesel Range Organics (DRO)	C10C28DRO	**70.6**	15.0	mg/kg	10.19.18 17.20		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.19.18 17.20	U	1
Total TPH	PHC635	**70.6**	15.0	mg/kg	10.19.18 17.20		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	80	%	70-135	10.19.18 17.20	
o-Terphenyl	84-15-1	87	%	70-135	10.19.18 17.20	

Certificate of Analytical Results 602721

LT Environmental, Inc., Arvada, CO

PLU CVX JVPC 020

Sample Id:	**SS04**	Matrix:	Soil	Date Received:	10.18.18 10.40
Lab Sample Id:	602721-004	Date Collected:	10.16.18 15.00	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	10.19.18 12.30	Basis:	Wet Weight
Seq Number:	3067041			SUB:	T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0196	0.0196	mg/kg	10.21.18 11.52	U	1
Toluene	108-88-3	<0.0196	0.0196	mg/kg	10.21.18 11.52	U	1
Ethylbenzene	100-41-4	<0.0196	0.0196	mg/kg	10.21.18 11.52	U	1
m,p-Xylenes	179601-23-1	<0.0391	0.0391	mg/kg	10.21.18 11.52	U	1
o-Xylene	95-47-6	<0.0196	0.0196	mg/kg	10.21.18 11.52	U	1
Total Xylenes	1330-20-7	<0.0196	0.0196	mg/kg	10.21.18 11.52	U	1
Total BTEX		<0.0196	0.0196	mg/kg	10.21.18 11.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	87	%	68-120	10.21.18 11.52	
a,a,a-Trifluorotoluene	98-08-8	85	%	71-121	10.21.18 11.52	

Certificate of Analytical Results 602721

LT Environmental, Inc., Arvada, CO

PLU CVX JVPC 020

Sample Id:	**SS05**	Matrix:	Soil	Date Received:	10.18.18 10.40
Lab Sample Id:	602721-005	Date Collected:	10.16.18 15.15	Sample Depth:	9 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	RNL			% Moisture:	
Analyst:	RNL	Date Prep:	10.19.18 11.00	Basis:	Wet Weight
Seq Number:	3067032			SUB:	T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**70.5**	25.0	mg/kg	10.19.18 23.20		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	10.19.18 07.00	Basis:	Wet Weight
Seq Number:	3066947				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**1370**	74.9	mg/kg	10.20.18 08.01		5
Diesel Range Organics (DRO)	C10C28DRO	**14300**	74.9	mg/kg	10.20.18 08.01		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**426**	74.9	mg/kg	10.20.18 08.01		5
Total TPH	PHC635	**16100**	74.9	mg/kg	10.20.18 08.01		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	126	%	70-135	10.20.18 08.01	
o-Terphenyl	84-15-1	81	%	70-135	10.20.18 08.01	

Certificate of Analytical Results 602721

LT Environmental, Inc., Arvada, CO

PLU CVX JVPC 020

Sample Id:	**SS05**	Matrix:	Soil	Date Received:	10.18.18 10.40
Lab Sample Id:	602721-005	Date Collected:	10.16.18 15.15	Sample Depth:	9 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	10.19.18 12.30	Basis:	Wet Weight
Seq Number:	3067041			SUB:	T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0963	0.0963	mg/kg	10.21.18 12.17	U	5
Toluene	108-88-3	**1.07**	0.0963	mg/kg	10.21.18 12.17		5
Ethylbenzene	100-41-4	**2.21**	0.0963	mg/kg	10.21.18 12.17		5
m,p-Xylenes	179601-23-1	**8.15**	0.193	mg/kg	10.21.18 12.17		5
o-Xylene	95-47-6	**5.21**	0.0963	mg/kg	10.21.18 12.17		5
Total Xylenes	1330-20-7	**13.4**	0.0963	mg/kg	10.21.18 12.17		5
Total BTEX		**16.6**	0.0963	mg/kg	10.21.18 12.17		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	247	%	68-120	10.21.18 12.17	**
a,a,a-Trifluorotoluene	98-08-8	100	%	71-121	10.21.18 12.17	

Certificate of Analytical Results 602721

LT Environmental, Inc., Arvada, CO

PLU CVX JVPC 020

Sample Id:	**SS06**	Matrix:	Soil	Date Received:	10.18.18 10.40
Lab Sample Id:	602721-006	Date Collected:	10.16.18 15.20	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	RNL			% Moisture:	
Analyst:	RNL	Date Prep:	10.19.18 11.00	Basis:	Wet Weight
Seq Number:	3067032			SUB:	T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<25.0	25.0	mg/kg	10.19.18 23.33	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	10.19.18 07.00	Basis:	Wet Weight
Seq Number:	3066947				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.19.18 18.03	U	1
Diesel Range Organics (DRO)	C10C28DRO	**77.9**	15.0	mg/kg	10.19.18 18.03		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.19.18 18.03	U	1
Total TPH	PHC635	**77.9**	15.0	mg/kg	10.19.18 18.03		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	82	%	70-135	10.19.18 18.03	
o-Terphenyl	84-15-1	90	%	70-135	10.19.18 18.03	

Certificate of Analytical Results 602721

LT Environmental, Inc., Arvada, CO

PLU CVX JVPC 020

Sample Id:	**SS06**	Matrix:	Soil	Date Received:	10.18.18 10.40
Lab Sample Id:	602721-006	Date Collected:	10.16.18 15.20	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	10.19.18 12.30	Basis:	Wet Weight
Seq Number:	3067041			SUB:	T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0190	0.0190	mg/kg	10.21.18 14.39	U	1
Toluene	108-88-3	**0.0209**	0.0190	mg/kg	10.21.18 14.39		1
Ethylbenzene	100-41-4	**0.0436**	0.0190	mg/kg	10.21.18 14.39		1
m,p-Xylenes	179601-23-1	**0.0493**	0.0380	mg/kg	10.21.18 14.39		1
o-Xylene	95-47-6	**0.0228**	0.0190	mg/kg	10.21.18 14.39		1
Total Xylenes	1330-20-7	**0.0721**	0.0190	mg/kg	10.21.18 14.39		1
Total BTEX		**0.137**	0.0190	mg/kg	10.21.18 14.39		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	118	%	68-120	10.21.18 14.39	
a,a,a-Trifluorotoluene	98-08-8	107	%	71-121	10.21.18 14.39	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 602721

LT Environmental, Inc.

PLU CVX JVPC 020

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3067028 Matrix: Solid Date Prep: 10.19.18
MB Sample Id: 7664554-1-BLK LCS Sample Id: 7664554-1-BKS LCSD Sample Id: 7664554-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1.26	250	246	98	239	96	90-110	3	20	mg/kg	10.19.18 16:43	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3067032 Matrix: Solid Date Prep: 10.19.18
MB Sample Id: 7664555-1-BLK LCS Sample Id: 7664555-1-BKS LCSD Sample Id: 7664555-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.572	250	240	96	244	98	90-110	2	20	mg/kg	10.19.18 22:43	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3067028 Matrix: Soil Date Prep: 10.19.18
Parent Sample Id: 602716-012 MS Sample Id: 602716-012 S MSD Sample Id: 602716-012 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	383	250	628	98	648	106	80-120	3	20	mg/kg	10.19.18 17:33	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3067028 Matrix: Soil Date Prep: 10.19.18
Parent Sample Id: 602719-002 MS Sample Id: 602719-002 S MSD Sample Id: 602719-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	36.9	250	277	96	275	95	80-120	1	20	mg/kg	10.19.18 20:39	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3067032 Matrix: Soil Date Prep: 10.19.18
Parent Sample Id: 602721-006 MS Sample Id: 602721-006 S MSD Sample Id: 602721-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	4.84	250	250	98	247	97	80-120	1	20	mg/kg	10.19.18 23:45	

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

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

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

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

QC Summary 602721

LT Environmental, Inc.

PLU CVX JVPC 020

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3066947 Matrix: Solid Date Prep: 10.19.18
MB Sample Id: 7664444-1-BLK LCS Sample Id: 7664444-1-BKS LCSD Sample Id: 7664444-1-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)	8.13	1000	932	93	947	95	70-135	2	20	mg/kg	10.19.18 09:21	
Diesel Range Organics (DRO)	<8.13	1000	932	93	948	95	70-135	2	20	mg/kg	10.19.18 09:21	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	93		126		127		70-135	%	10.19.18 09:21
o-Terphenyl	98		103		103		70-135	%	10.19.18 09:21

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3066947 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
Gasoline Range Hydrocarbons (GRO)	13.5	999	917	90	901	89	70-135	2	20	mg/kg	10.19.18 10:20	
Diesel Range Organics (DRO)	95.3	999	975	88	952	86	70-135	2	20	mg/kg	10.19.18 10:20	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	119		116		70-135	%	10.19.18 10:20
o-Terphenyl	97		106		70-135	%	10.19.18 10:20

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3067041 Matrix: Solid Date Prep: 10.19.18
MB Sample Id: 7664512-1-BLK LCS Sample Id: 7664512-1-BKS LCSD Sample Id: 7664512-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.0200	2.00	1.80	90	1.82	91	55-120	1	20	mg/kg	10.21.18 06:41	
Toluene	<0.0200	2.00	1.76	88	1.78	89	77-120	1	20	mg/kg	10.21.18 06:41	
Ethylbenzene	<0.0200	2.00	1.83	92	1.85	93	77-120	1	20	mg/kg	10.21.18 06:41	
m,p-Xylenes	<0.0400	4.00	3.66	92	3.70	93	78-120	1	20	mg/kg	10.21.18 06:41	
o-Xylene	<0.0200	2.00	1.85	93	1.87	94	78-120	1	20	mg/kg	10.21.18 06:41	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	76		86		84		68-120	%	10.21.18 06:41
a,a,a-Trifluorotoluene	75		89		85		71-121	%	10.21.18 06:41

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

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]
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 602721

LT Environmental, Inc.

PLU CVX JVPC 020

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

Seq Number: 3067041 Matrix: Soil Date Prep: 10.19.18

Parent Sample Id: 602722-009 MS Sample Id: 602722-009 S MSD Sample Id: 602722-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.0191	1.91	1.64	86	1.48	83	54-120	10	25	mg/kg	10.21.18 08:41	
Toluene	<0.0191	1.91	1.75	92	1.50	84	57-120	15	25	mg/kg	10.21.18 08:41	
Ethylbenzene	<0.0191	1.91	1.92	101	1.58	89	58-131	19	25	mg/kg	10.21.18 08:41	
m,p-Xylenes	<0.0382	3.82	3.83	100	3.16	89	62-124	19	25	mg/kg	10.21.18 08:41	
o-Xylene	<0.0191	1.91	1.86	97	1.57	88	62-124	17	25	mg/kg	10.21.18 08:41	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	113		89		68-120	%	10.21.18 08:41
a,a,a-Trifluorotoluene	109		91		71-121	%	10.21.18 08:41

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

Page 1 Of 1

XENCO LABORATORIES

Setting the Standard since 1990

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 # 602721

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: PLUCVX JVPC 020
Project Location: Carlsbad, NM
Invoice To: XTO / Kyle Littrell
PO Number: Not assigned

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	Collection: Date	Collection: 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"	10/16/18	1430	S	1								X	X	X	X	
2	SS02	4'	10/16/18	1440	S	1								X	X	X	X	
3	SS03	6"	10/16/18	1450	S	1								X	X	X	X	
4	SS04	6"	10/16/18	1500	S	1								X	X	X	X	
5	SS05	9'	10/16/18	1515	S	1								X	X	X	X	
6	SS06	6"	10/16/18	1520	S	1								X	X	X	X	
7																		
8																		
9																		
10																		

10/17/2018

Turnaround Time (Business days)

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

Data Deliverable Information

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

Notes:

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

FED-EX / UPS: Tracking #

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

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		10/17/18 12:02	1	2	10/17/18 1520	2 10/18/18 1040
3	Relinquished by:	Date Time:	Received By: 3	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. 3.2 Thermo. Corr. Factor 0.0

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

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

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Inter-Office Shipment

IOS Number **115728**

Date/Time: 10/18/18 11:54
Lab# From: **Midland**
Lab# To: **Lubbock**

Created by: Brianna Teel
Delivery Priority:
Air Bill No.: 773515268264

Please send report to: Jessica Kramer
Address: 1211 W. Florida Ave, Midland TX 79701
E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
602721-001	S	SS01	10/16/18 14:30	E300	Inorganic Anions by EPA 300	10/24/18	11/13/18	JKR	CL	
602721-001	S	SS01	10/16/18 14:30	SW8021B	BTEX by EPA 8021B	10/24/18	10/30/18	JKR	BR4FBZ BZ BZME EBZ X	
602721-002	S	SS02	10/16/18 14:40	E300	Inorganic Anions by EPA 300	10/24/18	11/13/18	JKR	CL	
602721-002	S	SS02	10/16/18 14:40	SW8021B	BTEX by EPA 8021B	10/24/18	10/30/18	JKR	BR4FBZ BZ BZME EBZ X	
602721-003	S	SS03	10/16/18 14:50	SW8021B	BTEX by EPA 8021B	10/24/18	10/30/18	JKR	BR4FBZ BZ BZME EBZ X	
602721-003	S	SS03	10/16/18 14:50	E300	Inorganic Anions by EPA 300	10/24/18	11/13/18	JKR	CL	
602721-004	S	SS04	10/16/18 15:00	E300	Inorganic Anions by EPA 300	10/24/18	11/13/18	JKR	CL	
602721-004	S	SS04	10/16/18 15:00	SW8021B	BTEX by EPA 8021B	10/24/18	10/30/18	JKR	BR4FBZ BZ BZME EBZ X	
602721-005	S	SS05	10/16/18 15:15	SW8021B	BTEX by EPA 8021B	10/24/18	10/30/18	JKR	BR4FBZ BZ BZME EBZ X	
602721-005	S	SS05	10/16/18 15:15	E300	Inorganic Anions by EPA 300	10/24/18	11/13/18	JKR	CL	
602721-006	S	SS06	10/16/18 15:20	SW8021B	BTEX by EPA 8021B	10/24/18	10/30/18	JKR	BR4FBZ BZ BZME EBZ X	
602721-006	S	SS06	10/16/18 15:20	E300	Inorganic Anions by EPA 300	10/24/18	11/13/18	JKR	CL	

Inter Office Shipment or Sample Comments:

Relinquished By: Brianna Teel
Brianna Teel

Date Relinquished: 10/18/2018

Received By: Brenda Ward
Brenda Ward

Date Received: 10/19/2018 10:44

Cooler Temperature: 2.9

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Lubbock

IOS #: 115728

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : IR-3

Sent By: Brianna Teel **Date Sent:** 10/18/2018 11:54 AM

Received By: Brenda Ward **Date Received:** 10/19/2018 10:44 AM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	2.9	
#2 *Shipping container in good condition?	**Yes**	0
#3 *Samples received with appropriate temperature?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**	
#5 *Custody Seals Signed and dated for Containers/coolers	**Yes**	
#6 *IOS present?	**No**	
#7 Any missing/extra samples?	**No**	
#8 IOS agrees with sample label(s)/matrix?	**Yes**	
#9 Sample matrix/ properties agree with IOS?	**Yes**	
#10 Samples in proper container/ bottle?	**Yes**	
#11 Samples properly preserved?	**Yes**	
#12 Sample container(s) intact?	**Yes**	
#13 Sufficient sample amount for indicated test(s)?	**Yes**	
#14 All samples received within hold time?	**Yes**	

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ **Contacted by :** _____ **Date:** _____

Checklist reviewed by: Brenda Ward Date: 10/19/2018

Brenda Ward

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 10/18/2018 10:40:00 AM

Work Order #: 602721

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	
#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)?	**Yes**	Lubbock-BTEX/Chlorides
#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: 10/18/2018
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 10/18/2018
Jessica Kramer

Analytical Report 605806

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU CVX JV PC #20H

28-NOV-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)

28-NOV-18

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

Reference: XENCO Report No(s): **605806**
PLU CVX JV PC #20H
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) 605806. 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. 605806 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Sample Cross Reference 605806

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC #20H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	11-13-18 13:10	17 ft	605806-001
SW01	S	11-13-18 14:45	12 ft	605806-002
SW02	S	11-13-18 15:00	4 ft	605806-003
FS01A	S	11-13-18 15:15	26 ft	605806-004
SW03	S	11-13-18 15:45	12 ft	605806-005
SW04	S	11-13-18 16:00	8 ft	605806-006

Sample receipt non conformances and comments:

PER CLIENTS REQUEST, CORRECT SAMPLE NAME TO PLU CVX JV PC #20H. JKR 11/28/18

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3070611 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 605806

LT Environmental, Inc., Arvada, CO

Project Name: PLU CVX JV PC #20H

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

Date Received in Lab: Fri Nov-16-18 12:30 pm
Report Date: 28-NOV-18
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	605806-001		605806-002		605806-003		605806-004		605806-005		605806-006	
	Field Id:	FS01		SW01		SW02		FS01A		SW03		SW04	
	Depth:	17- ft		12- ft		4- ft		26- ft		12- ft		8- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Nov-13-18 13:10		Nov-13-18 14:45		Nov-13-18 15:00		Nov-13-18 15:15		Nov-13-18 15:45		Nov-13-18 16:00	
BTEX by EPA 8021B SUB: T104704219-18-18	***Extracted:***	Nov-20-18 10:00		Nov-20-18 10:00		Nov-20-18 10:00		Nov-20-18 10:00		Nov-20-18 10:00		Nov-20-18 10:00	
	Analyzed:	Nov-21-18 11:01		Nov-21-18 12:38		Nov-21-18 13:02		Nov-21-18 13:27		Nov-21-18 13:51		Nov-21-18 14:19	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.0196	0.0196	<0.0192	0.0192	<0.0195	0.0195	<0.0192	0.0192	<0.0196	0.0196	<0.0186	0.0186
Toluene		<0.0196	0.0196	<0.0192	0.0192	<0.0195	0.0195	<0.0192	0.0192	<0.0196	0.0196	<0.0186	0.0186
Ethylbenzene		<0.0196	0.0196	<0.0192	0.0192	<0.0195	0.0195	<0.0192	0.0192	<0.0196	0.0196	<0.0186	0.0186
m,p-Xylenes		<0.0392	0.0392	<0.0385	0.0385	<0.0389	0.0389	<0.0384	0.0384	<0.0392	0.0392	<0.0372	0.0372
o-Xylene		<0.0196	0.0196	<0.0192	0.0192	<0.0195	0.0195	<0.0192	0.0192	<0.0196	0.0196	<0.0186	0.0186
Total Xylenes		<0.0196	0.0196	<0.0192	0.0192	<0.0195	0.0195	<0.0192	0.0192	<0.0196	0.0196	<0.0186	0.0186
Total BTEX		<0.0196	0.0196	<0.0192	0.0192	<0.0195	0.0195	<0.0192	0.0192	<0.0196	0.0196	<0.0186	0.0186
Inorganic Anions by EPA 300 SUB: T104704219-18-18	***Extracted:***	Nov-20-18 08:30		Nov-20-18 08:30		Nov-20-18 08:30		Nov-20-18 08:30		Nov-20-18 08:30		Nov-20-18 08:30	
	Analyzed:	Nov-20-18 15:12		Nov-20-18 15:18		Nov-20-18 15:36		Nov-20-18 14:41		Nov-20-18 15:42		Nov-20-18 15:49	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		2650	25.0	<5.00	5.00	<5.03	5.03	40.2	5.00	40.0	4.98	914	5.00
TPH by SW8015 Mod	***Extracted:***	Nov-16-18 17:00		Nov-16-18 17:00		Nov-16-18 17:00		Nov-16-18 17:00		Nov-16-18 17:00		Nov-16-18 17:00	
	Analyzed:	Nov-18-18 06:13		Nov-18-18 07:11		Nov-18-18 07:30		Nov-18-18 07:50		Nov-18-18 08:09		Nov-18-18 08:29	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	19.2	14.9	18.5	15.0	31.2	15.0	74.2	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	21.8	15.0
Total TPH		<15.0	15.0	<15.0	15.0	19.2	14.9	18.5	15.0	31.2	15.0	96.0	15.0

Certificate of Analytical Results 605806

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC #20H

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	11.16.18 12.30
Lab Sample Id:	605806-001	Date Collected:	11.13.18 13.10	Sample Depth:	17 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	11.20.18 08.30	Basis:	Wet Weight
Seq Number:	3070594			SUB:	T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2650**	25.0	mg/kg	11.20.18 15.12		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	11.16.18 17.00	Basis:	Wet Weight
Seq Number:	3070150				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	11.18.18 06.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	11.18.18 06.13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	11.18.18 06.13	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	11.18.18 06.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	11.18.18 06.13	
o-Terphenyl	84-15-1	96	%	70-135	11.18.18 06.13	

Certificate of Analytical Results 605806

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC #20H

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	11.16.18 12.30
Lab Sample Id:	605806-001	Date Collected:	11.13.18 13.10	Sample Depth:	17 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	11.20.18 10.00	Basis:	Wet Weight
Seq Number:	3070611			SUB:	T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0196	0.0196	mg/kg	11.21.18 11.01	U	1
Toluene	108-88-3	<0.0196	0.0196	mg/kg	11.21.18 11.01	U	1
Ethylbenzene	100-41-4	<0.0196	0.0196	mg/kg	11.21.18 11.01	U	1
m,p-Xylenes	179601-23-1	<0.0392	0.0392	mg/kg	11.21.18 11.01	U	1
o-Xylene	95-47-6	<0.0196	0.0196	mg/kg	11.21.18 11.01	U	1
Total Xylenes	1330-20-7	<0.0196	0.0196	mg/kg	11.21.18 11.01	U	1
Total BTEX		<0.0196	0.0196	mg/kg	11.21.18 11.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	87	%	68-120	11.21.18 11.01	
a,a,a-Trifluorotoluene	98-08-8	90	%	71-121	11.21.18 11.01	

Certificate of Analytical Results 605806

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC #20H

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	11.16.18 12.30
Lab Sample Id:	605806-002	Date Collected:	11.13.18 14.45	Sample Depth:	12 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	11.20.18 08.30	Basis:	Wet Weight
Seq Number:	3070594			SUB:	T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	11.20.18 15.18	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	11.16.18 17.00	Basis:	Wet Weight
Seq Number:	3070150				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	11.18.18 07.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	11.18.18 07.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	11.18.18 07.11	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	11.18.18 07.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	11.18.18 07.11	
o-Terphenyl	84-15-1	93	%	70-135	11.18.18 07.11	

Certificate of Analytical Results 605806

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC #20H

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	11.16.18 12.30
Lab Sample Id:	605806-002	Date Collected:	11.13.18 14.45	Sample Depth:	12 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	11.20.18 10.00	Basis:	Wet Weight
Seq Number:	3070611			SUB:	T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0192	0.0192	mg/kg	11.21.18 12.38	U	1
Toluene	108-88-3	<0.0192	0.0192	mg/kg	11.21.18 12.38	U	1
Ethylbenzene	100-41-4	<0.0192	0.0192	mg/kg	11.21.18 12.38	U	1
m,p-Xylenes	179601-23-1	<0.0385	0.0385	mg/kg	11.21.18 12.38	U	1
o-Xylene	95-47-6	<0.0192	0.0192	mg/kg	11.21.18 12.38	U	1
Total Xylenes	1330-20-7	<0.0192	0.0192	mg/kg	11.21.18 12.38	U	1
Total BTEX		<0.0192	0.0192	mg/kg	11.21.18 12.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	90	%	68-120	11.21.18 12.38	
a,a,a-Trifluorotoluene	98-08-8	95	%	71-121	11.21.18 12.38	

Certificate of Analytical Results 605806

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC #20H

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	11.16.18 12.30
Lab Sample Id:	605806-003	Date Collected:	11.13.18 15.00	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	11.20.18 08.30	Basis:	Wet Weight
Seq Number:	3070594			SUB:	T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.03	5.03	mg/kg	11.20.18 15.36	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	11.16.18 17.00	Basis:	Wet Weight
Seq Number:	3070150				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	11.18.18 07.30	U	1
Diesel Range Organics (DRO)	C10C28DRO	**19.2**	14.9	mg/kg	11.18.18 07.30		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	11.18.18 07.30	U	1
Total TPH	PHC635	**19.2**	14.9	mg/kg	11.18.18 07.30		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	11.18.18 07.30	
o-Terphenyl	84-15-1	95	%	70-135	11.18.18 07.30	

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC #20H

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	11.16.18 12.30
Lab Sample Id:	605806-003	Date Collected:	11.13.18 15.00	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	11.20.18 10.00	Basis:	Wet Weight
Seq Number:	3070611			SUB:	T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0195	0.0195	mg/kg	11.21.18 13.02	U	1
Toluene	108-88-3	<0.0195	0.0195	mg/kg	11.21.18 13.02	U	1
Ethylbenzene	100-41-4	<0.0195	0.0195	mg/kg	11.21.18 13.02	U	1
m,p-Xylenes	179601-23-1	<0.0389	0.0389	mg/kg	11.21.18 13.02	U	1
o-Xylene	95-47-6	<0.0195	0.0195	mg/kg	11.21.18 13.02	U	1
Total Xylenes	1330-20-7	<0.0195	0.0195	mg/kg	11.21.18 13.02	U	1
Total BTEX		<0.0195	0.0195	mg/kg	11.21.18 13.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	93	%	68-120	11.21.18 13.02	
a,a,a-Trifluorotoluene	98-08-8	98	%	71-121	11.21.18 13.02	

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC #20H

Sample Id:	**FS01A**	Matrix:	Soil	Date Received:	11.16.18 12.30
Lab Sample Id:	605806-004	Date Collected:	11.13.18 15.15	Sample Depth:	26 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	11.20.18 08.30	Basis:	Wet Weight
Seq Number:	3070594			SUB:	T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**40.2**	5.00	mg/kg	11.20.18 14.41		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	11.16.18 17.00	Basis:	Wet Weight
Seq Number:	3070150				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	11.18.18 07.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	**18.5**	15.0	mg/kg	11.18.18 07.50		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	11.18.18 07.50	U	1
Total TPH	PHC635	**18.5**	15.0	mg/kg	11.18.18 07.50		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	11.18.18 07.50	
o-Terphenyl	84-15-1	111	%	70-135	11.18.18 07.50	

Certificate of Analytical Results 605806

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC #20H

Sample Id:	**FS01A**	Matrix:	Soil	Date Received:	11.16.18 12.30
Lab Sample Id:	605806-004	Date Collected:	11.13.18 15.15	Sample Depth:	26 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	11.20.18 10.00	Basis:	Wet Weight
Seq Number:	3070611			SUB:	T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0192	0.0192	mg/kg	11.21.18 13.27	U	1
Toluene	108-88-3	<0.0192	0.0192	mg/kg	11.21.18 13.27	U	1
Ethylbenzene	100-41-4	<0.0192	0.0192	mg/kg	11.21.18 13.27	U	1
m,p-Xylenes	179601-23-1	<0.0384	0.0384	mg/kg	11.21.18 13.27	U	1
o-Xylene	95-47-6	<0.0192	0.0192	mg/kg	11.21.18 13.27	U	1
Total Xylenes	1330-20-7	<0.0192	0.0192	mg/kg	11.21.18 13.27	U	1
Total BTEX		<0.0192	0.0192	mg/kg	11.21.18 13.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	82	%	68-120	11.21.18 13.27	
a,a,a-Trifluorotoluene	98-08-8	90	%	71-121	11.21.18 13.27	

Certificate of Analytical Results 605806

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC #20H

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	11.16.18 12.30
Lab Sample Id:	605806-005	Date Collected:	11.13.18 15.45	Sample Depth:	12 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	11.20.18 08.30	Basis:	Wet Weight
Seq Number:	3070594			SUB:	T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**40.0**	4.98	mg/kg	11.20.18 15.42		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	11.16.18 17.00	Basis:	Wet Weight
Seq Number:	3070150				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	11.18.18 08.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	**31.2**	15.0	mg/kg	11.18.18 08.09		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	11.18.18 08.09	U	1
Total TPH	PHC635	**31.2**	15.0	mg/kg	11.18.18 08.09		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	11.18.18 08.09	
o-Terphenyl	84-15-1	96	%	70-135	11.18.18 08.09	

Certificate of Analytical Results 605806

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC #20H

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	11.16.18 12.30
Lab Sample Id:	605806-005	Date Collected:	11.13.18 15.45	Sample Depth:	12 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	11.20.18 10.00	Basis:	Wet Weight
Seq Number:	3070611			SUB:	T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0196	0.0196	mg/kg	11.21.18 13.51	U	1
Toluene	108-88-3	<0.0196	0.0196	mg/kg	11.21.18 13.51	U	1
Ethylbenzene	100-41-4	<0.0196	0.0196	mg/kg	11.21.18 13.51	U	1
m,p-Xylenes	179601-23-1	<0.0392	0.0392	mg/kg	11.21.18 13.51	U	1
o-Xylene	95-47-6	<0.0196	0.0196	mg/kg	11.21.18 13.51	U	1
Total Xylenes	1330-20-7	<0.0196	0.0196	mg/kg	11.21.18 13.51	U	1
Total BTEX		<0.0196	0.0196	mg/kg	11.21.18 13.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	95	%	68-120	11.21.18 13.51	
a,a,a-Trifluorotoluene	98-08-8	102	%	71-121	11.21.18 13.51	

Certificate of Analytical Results 605806

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC #20H

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	11.16.18 12.30
Lab Sample Id:	605806-006	Date Collected:	11.13.18 16.00	Sample Depth:	8 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	11.20.18 08.30	Basis:	Wet Weight
Seq Number:	3070594			SUB:	T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**914**	5.00	mg/kg	11.20.18 15.49		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	11.16.18 17.00	Basis:	Wet Weight
Seq Number:	3070150				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	11.18.18 08.29	U	1
Diesel Range Organics (DRO)	C10C28DRO	**74.2**	15.0	mg/kg	11.18.18 08.29		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**21.8**	15.0	mg/kg	11.18.18 08.29		1
Total TPH	PHC635	**96.0**	15.0	mg/kg	11.18.18 08.29		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	11.18.18 08.29	
o-Terphenyl	84-15-1	91	%	70-135	11.18.18 08.29	

Certificate of Analytical Results 605806

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC #20H

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	11.16.18 12.30
Lab Sample Id:	605806-006	Date Collected:	11.13.18 16.00	Sample Depth:	8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	11.20.18 10.00	Basis:	Wet Weight
Seq Number:	3070611			SUB:	T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0186	0.0186	mg/kg	11.21.18 14.19	U	1
Toluene	108-88-3	<0.0186	0.0186	mg/kg	11.21.18 14.19	U	1
Ethylbenzene	100-41-4	<0.0186	0.0186	mg/kg	11.21.18 14.19	U	1
m,p-Xylenes	179601-23-1	<0.0372	0.0372	mg/kg	11.21.18 14.19	U	1
o-Xylene	95-47-6	<0.0186	0.0186	mg/kg	11.21.18 14.19	U	1
Total Xylenes	1330-20-7	<0.0186	0.0186	mg/kg	11.21.18 14.19	U	1
Total BTEX		<0.0186	0.0186	mg/kg	11.21.18 14.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	116	%	68-120	11.21.18 14.19	
a,a,a-Trifluorotoluene	98-08-8	120	%	71-121	11.21.18 14.19	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 605806

LT Environmental, Inc.

PLU CVX JV PC #20H

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3070594 Matrix: Solid Date Prep: 11.20.18
MB Sample Id: 7666507-1-BLK LCS Sample Id: 7666507-1-BKS LCSD Sample Id: 7666507-1-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	251	100	267	107	90-110	6	20	mg/kg	11.20.18 14:28	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3070594 Matrix: Soil Date Prep: 11.20.18
Parent Sample Id: 605806-004 MS Sample Id: 605806-004 S MSD Sample Id: 605806-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	40.2	250	297	103	308	107	90-110	4	20	mg/kg	11.20.18 14:47	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3070594 Matrix: Soil Date Prep: 11.20.18
Parent Sample Id: 605808-005 MS Sample Id: 605808-005 S MSD Sample Id: 605808-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	5.14	250	268	105	265	104	90-110	1	20	mg/kg	11.20.18 16:13	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3070150 Matrix: Solid Date Prep: 11.16.18
MB Sample Id: 7666458-1-BLK LCS Sample Id: 7666458-1-BKS LCSD Sample Id: 7666458-1-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	971	97	927	93	70-135	5	20	mg/kg	11.18.18 05:34	
Diesel Range Organics (DRO)	<8.13	1000	1060	106	1080	108	70-135	2	20	mg/kg	11.18.18 05:34	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	109		120		126		70-135	%	11.18.18 05:34
o-Terphenyl	118		112		125		70-135	%	11.18.18 05:34

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

QC Summary 605806

LT Environmental, Inc.

PLU CVX JV PC #20H

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3070150 Matrix: Soil Date Prep: 11.16.18
Parent Sample Id: 605806-001 MS Sample Id: 605806-001 S MSD Sample Id: 605806-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	999	889	89	989	99	70-135	11	20	mg/kg	11.18.18 06:32	
Diesel Range Organics (DRO)	<8.12	999	1010	101	1070	107	70-135	6	20	mg/kg	11.18.18 06:32	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	124		126		70-135	%	11.18.18 06:32
o-Terphenyl	122		108		70-135	%	11.18.18 06:32

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3070611 Matrix: Solid Date Prep: 11.20.18
MB Sample Id: 7666783-1-BLK LCS Sample Id: 7666783-1-BKS LCSD Sample Id: 7666783-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.0200	2.00	1.99	100	2.00	100	55-120	1	20	mg/kg	11.21.18 09:01	
Toluene	<0.0200	2.00	1.97	99	2.00	100	77-120	2	20	mg/kg	11.21.18 09:01	
Ethylbenzene	<0.0200	2.00	2.05	103	2.13	107	77-120	4	20	mg/kg	11.21.18 09:01	
m,p-Xylenes	<0.0400	4.00	4.10	103	4.25	106	78-120	4	20	mg/kg	11.21.18 09:01	
o-Xylene	<0.0200	2.00	2.08	104	2.09	105	78-120	0	20	mg/kg	11.21.18 09:01	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	85		86		104		68-120	%	11.21.18 09:01
a,a,a-Trifluorotoluene	88		87		100		71-121	%	11.21.18 09:01

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3070611 Matrix: Soil Date Prep: 11.20.18
Parent Sample Id: 605806-001 MS Sample Id: 605806-001 S MSD Sample Id: 605806-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.0191	1.91	1.84	96	1.86	97	54-120	1	25	mg/kg	11.21.18 11:25	
Toluene	<0.0191	1.91	1.85	97	1.88	98	57-120	2	25	mg/kg	11.21.18 11:25	
Ethylbenzene	<0.0191	1.91	1.90	99	1.96	102	58-131	3	25	mg/kg	11.21.18 11:25	
m,p-Xylenes	<0.0382	3.82	3.82	100	3.96	103	62-124	4	25	mg/kg	11.21.18 11:25	
o-Xylene	<0.0191	1.91	1.86	97	1.93	101	62-124	4	25	mg/kg	11.21.18 11:25	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	108		86		68-120	%	11.21.18 11:25
a,a,a-Trifluorotoluene	116		89		71-121	%	11.21.18 11:25

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

CHAIN OF CUSTODY

Page 1 Of 1

XENCO LABORATORIES

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Midland, Texas (432-704-5251)
Phoenix, Arizona (480-355-0900)
www.xenco.com

Xenco Quote #: | Xenco Job #: 665806

Client / Reporting Information

Company Name / Branch: Ltenvironmental, Inc. Permian Office
Company Address: 3300 N "A" St. Building 1 Unit 103 Midland, TX 79705
Email: abaker@ltenv.com Phone No: (432) 704-5178
Project Contact: Adrian Baker
Samplers's Name: Ben Belill

Project Information

Project Name/Number: PLU CVX JV PC #20 H
Project Location: Carlsbad, NM
Invoice To: XTO Energy - Kyle Littrell
PO Number: 2RP-5011

Analytical Information

BTEX (only BTEX) 8021
TPH (DRO GRO MRO) 8015
Chloride (300.00)

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 preservatives: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Field Comments
1	FS01	17'	11/13/18	1310	S	1								X	Composite
2	SW01	12'		1445										X	↓
3	SW02	4'		1500										X	Discrete
4	FS01A	26'		1515										X	Composite
5	SW03	12'		1545										X	Composite
6	SW04	8'	↓	1600	↓	↓								X	
7															
8															
9					BOB		11/13/18								
10															

Turnaround Time (Business days)

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

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

Data Deliverable Information

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

Notes:

FED-EX / UPS: Tracking # 773404476856

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

1 Relinquished by Sampler: BT-Baker	Date Time: 11/13/18 1510	Received By: Samantha P. Elliott	2 Relinquished By:	Date Time: 11/15 1530	Received By: 11/16
3 Relinquished by:	Date Time:	Received By:	4 Relinquished By:	Date Time:	Received By: 12:30
5 Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice / Cooler Temp. 1.1 / 2.0 / Therm. Corr. Factor

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

ORIGIN ID:CAOA (575) 887-6245
XENCO
PAC N MAL
910 W PIERCE ST
CARLSBAD, NM 88220
UNITED STATES US

SHIP DATE: 15NOV18
ACTWGT: 58.00 LB
CAD: 10181370/INET4040
DIMS: 26x14x15 IN
BILL RECIPIENT

TO HOLD FOR XENCO
FEDEX EXPRESS SHIP CENTER
FEDEX SHIP CENTER
3600 COUNTY RD 1276 S
MIDLAND TX 79711
(806) 794-1296

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41 MAFA

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Inter-Office Shipment

IOS Number **117556**

Date/Time: 11/19/18 10:17
Lab# From: **Midland**
Lab# To: **Lubbock**

Created by: Brianna Teel
Delivery Priority:
Air Bill No.:

Please send report to: Jessica Kramer
Address: 1211 W. Florida Ave, Midland TX 79701
E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
605806-001	S	FS01	11/13/18 13:10	E300	Inorganic Anions by EPA 300	11/23/18	12/11/18	JKR	CL	
605806-001	S	FS01	11/13/18 13:10	SW8021B	BTEX by EPA 8021B	11/23/18	11/27/18	JKR	BR4FBZ BZ BZME EBZ X	
605806-002	S	SW01	11/13/18 14:45	E300	Inorganic Anions by EPA 300	11/23/18	12/11/18	JKR	CL	
605806-002	S	SW01	11/13/18 14:45	SW8021B	BTEX by EPA 8021B	11/23/18	11/27/18	JKR	BR4FBZ BZ BZME EBZ X	
605806-003	S	SW02	11/13/18 15:00	SW8021B	BTEX by EPA 8021B	11/23/18	11/27/18	JKR	BR4FBZ BZ BZME EBZ X	
605806-003	S	SW02	11/13/18 15:00	E300	Inorganic Anions by EPA 300	11/23/18	12/11/18	JKR	CL	
605806-004	S	FS01A	11/13/18 15:15	E300	Inorganic Anions by EPA 300	11/23/18	12/11/18	JKR	CL	
605806-004	S	FS01A	11/13/18 15:15	SW8021B	BTEX by EPA 8021B	11/23/18	11/27/18	JKR	BR4FBZ BZ BZME EBZ X	
605806-005	S	SW03	11/13/18 15:45	SW8021B	BTEX by EPA 8021B	11/23/18	11/27/18	JKR	BR4FBZ BZ BZME EBZ X	
605806-005	S	SW03	11/13/18 15:45	E300	Inorganic Anions by EPA 300	11/23/18	12/11/18	JKR	CL	
605806-006	S	SW04	11/13/18 16:00	SW8021B	BTEX by EPA 8021B	11/23/18	11/27/18	JKR	BR4FBZ BZ BZME EBZ X	
605806-006	S	SW04	11/13/18 16:00	E300	Inorganic Anions by EPA 300	11/23/18	12/11/18	JKR	CL	

Inter Office Shipment or Sample Comments:

Relinquished By: Brianna Teel
Brianna Teel

Date Relinquished: 11/19/2018

Received By:

Date Received:

Cooler Temperature:

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 11/16/2018 12:30:00 PM

Work Order #: 605806

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)?	**Yes**	Xenco Lubbock - BTEX
#18 Water VOC samples have zero headspace?	**N/A**	

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

Analyst: PH Device/Lot#:

Checklist completed by: Katie Lowe Date: 11/16/2018

Checklist reviewed by: Jessica Kramer Date: 11/16/2018

Jessica Kramer

Analytical Report 605807

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU CVX JV PC #20H

27-NOV-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)

27-NOV-18

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

Reference: XENCO Report No(s): **605807**
PLU CVX JV PC #20H
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) 605807. 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. 605807 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Sample Cross Reference 605807

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC #20H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW05	S	11-14-18 14:45	4 ft	605807-001
SW06	S	11-14-18 15:00	12 ft	605807-002

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3070611 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 605807

LT Environmental, Inc., Arvada, CO

Project Name: PLU CVX JV PC #20H

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

Date Received in Lab: Fri Nov-16-18 12:30 pm
Report Date: 27-NOV-18
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	605807-001		605807-002					
	Field Id:	SW05		SW06					
	Depth:	4- ft		12- ft					
	Matrix:	SOIL		SOIL					
	Sampled:	Nov-14-18 14:45		Nov-14-18 15:00					
BTEX by EPA 8021B	***Extracted:***	Nov-20-18 10:00		Nov-20-18 10:00					
SUB: T104704219-18-18	***Analyzed:***	Nov-21-18 14:43		Nov-21-18 15:07					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.0196	0.0196	<0.0198	0.0198				
Toluene		<0.0196	0.0196	<0.0198	0.0198				
Ethylbenzene		<0.0196	0.0196	<0.0198	0.0198				
m,p-Xylenes		<0.0393	0.0393	<0.0396	0.0396				
o-Xylene		<0.0196	0.0196	<0.0198	0.0198				
Total Xylenes		<0.0196	0.0196	<0.0198	0.0198				
Total BTEX		<0.0196	0.0196	<0.0198	0.0198				
Inorganic Anions by EPA 300	***Extracted:***	Nov-20-18 08:30		Nov-20-18 08:30					
	Analyzed:	Nov-20-18 15:55		Nov-20-18 16:01					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		288	4.99	1050	4.97				
TPH by SW8015 Mod	***Extracted:***	Nov-16-18 17:00		Nov-16-18 17:00					
	Analyzed:	Nov-18-18 08:48		Nov-18-18 09:07					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0				
Diesel Range Organics (DRO)		<15.0	15.0	35.2	15.0				
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0				
Total TPH		<15.0	15.0	35.2	15.0				

Jessica Kramer
Project Assistant

Certificate of Analytical Results 605807

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC #20H

Sample Id:	**SW05**	Matrix:	Soil	Date Received:	11.16.18 12.30
Lab Sample Id:	605807-001	Date Collected:	11.14.18 14.45	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	11.20.18 08.30	Basis:	Wet Weight
Seq Number:	3070594				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**288**	4.99	mg/kg	11.20.18 15.55		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	11.16.18 17.00	Basis:	Wet Weight
Seq Number:	3070150				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	11.18.18 08.48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	11.18.18 08.48	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	11.18.18 08.48	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	11.18.18 08.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	11.18.18 08.48	
o-Terphenyl	84-15-1	95	%	70-135	11.18.18 08.48	

Certificate of Analytical Results 605807

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC #20H

Sample Id:	**SW05**	Matrix:	Soil	Date Received:	11.16.18 12.30
Lab Sample Id:	605807-001	Date Collected:	11.14.18 14.45	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	11.20.18 10.00	Basis:	Wet Weight
Seq Number:	3070611			SUB:	T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0196	0.0196	mg/kg	11.21.18 14.43	U	1
Toluene	108-88-3	<0.0196	0.0196	mg/kg	11.21.18 14.43	U	1
Ethylbenzene	100-41-4	<0.0196	0.0196	mg/kg	11.21.18 14.43	U	1
m,p-Xylenes	179601-23-1	<0.0393	0.0393	mg/kg	11.21.18 14.43	U	1
o-Xylene	95-47-6	<0.0196	0.0196	mg/kg	11.21.18 14.43	U	1
Total Xylenes	1330-20-7	<0.0196	0.0196	mg/kg	11.21.18 14.43	U	1
Total BTEX		<0.0196	0.0196	mg/kg	11.21.18 14.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	111	%	68-120	11.21.18 14.43	
a,a,a-Trifluorotoluene	98-08-8	117	%	71-121	11.21.18 14.43	

Certificate of Analytical Results 605807

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC #20H

Sample Id:	**SW06**	Matrix:	Soil	Date Received:	11.16.18 12.30
Lab Sample Id:	605807-002	Date Collected:	11.14.18 15.00	Sample Depth:	12 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	11.20.18 08.30	Basis:	Wet Weight
Seq Number:	3070594				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1050**	4.97	mg/kg	11.20.18 16.01		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	11.16.18 17.00	Basis:	Wet Weight
Seq Number:	3070150				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	11.18.18 09.07	U	1
Diesel Range Organics (DRO)	C10C28DRO	**35.2**	15.0	mg/kg	11.18.18 09.07		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	11.18.18 09.07	U	1
Total TPH	PHC635	**35.2**	15.0	mg/kg	11.18.18 09.07		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	11.18.18 09.07	
o-Terphenyl	84-15-1	109	%	70-135	11.18.18 09.07	

Certificate of Analytical Results 605807

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC #20H

Sample Id:	**SW06**	Matrix:	Soil	Date Received:	11.16.18 12.30
Lab Sample Id:	605807-002	Date Collected:	11.14.18 15.00	Sample Depth:	12 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	11.20.18 10.00	Basis:	Wet Weight
Seq Number:	3070611			SUB:	T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0198	0.0198	mg/kg	11.21.18 15.07	U	1
Toluene	108-88-3	<0.0198	0.0198	mg/kg	11.21.18 15.07	U	1
Ethylbenzene	100-41-4	<0.0198	0.0198	mg/kg	11.21.18 15.07	U	1
m,p-Xylenes	179601-23-1	<0.0396	0.0396	mg/kg	11.21.18 15.07	U	1
o-Xylene	95-47-6	<0.0198	0.0198	mg/kg	11.21.18 15.07	U	1
Total Xylenes	1330-20-7	<0.0198	0.0198	mg/kg	11.21.18 15.07	U	1
Total BTEX		<0.0198	0.0198	mg/kg	11.21.18 15.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	89	%	68-120	11.21.18 15.07	
a,a,a-Trifluorotoluene	98-08-8	88	%	71-121	11.21.18 15.07	

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 605807

LT Environmental, Inc.

PLU CVX JV PC #20H

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3070594 Matrix: Solid Date Prep: 11.20.18
MB Sample Id: 7666507-1-BLK LCS Sample Id: 7666507-1-BKS LCSD Sample Id: 7666507-1-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	251	100	267	107	90-110	6	20	mg/kg	11.20.18 14:28	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3070594 Matrix: Soil Date Prep: 11.20.18
Parent Sample Id: 605806-004 MS Sample Id: 605806-004 S MSD Sample Id: 605806-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	40.2	250	297	103	308	107	90-110	4	20	mg/kg	11.20.18 14:47	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3070594 Matrix: Soil Date Prep: 11.20.18
Parent Sample Id: 605808-005 MS Sample Id: 605808-005 S MSD Sample Id: 605808-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	5.14	250	268	105	265	104	90-110	1	20	mg/kg	11.20.18 16:13	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3070150 Matrix: Solid Date Prep: 11.16.18
MB Sample Id: 7666458-1-BLK LCS Sample Id: 7666458-1-BKS LCSD Sample Id: 7666458-1-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	971	97	927	93	70-135	5	20	mg/kg	11.18.18 05:34	
Diesel Range Organics (DRO)	<8.13	1000	1060	106	1080	108	70-135	2	20	mg/kg	11.18.18 05:34	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	109		120		126		70-135	%	11.18.18 05:34
o-Terphenyl	118		112		125		70-135	%	11.18.18 05:34

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

QC Summary 605807

LT Environmental, Inc.

PLU CVX JV PC #20H

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3070150 Matrix: Soil Date Prep: 11.16.18
Parent Sample Id: 605806-001 MS Sample Id: 605806-001 S MSD Sample Id: 605806-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	999	889	89	989	99	70-135	11	20	mg/kg	11.18.18 06:32	
Diesel Range Organics (DRO)	<8.12	999	1010	101	1070	107	70-135	6	20	mg/kg	11.18.18 06:32	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	124		126		70-135	%	11.18.18 06:32
o-Terphenyl	122		108		70-135	%	11.18.18 06:32

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3070611 Matrix: Solid Date Prep: 11.20.18
MB Sample Id: 7666783-1-BLK LCS Sample Id: 7666783-1-BKS LCSD Sample Id: 7666783-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.0200	2.00	1.99	100	2.00	100	55-120	1	20	mg/kg	11.21.18 09:01	
Toluene	<0.0200	2.00	1.97	99	2.00	100	77-120	2	20	mg/kg	11.21.18 09:01	
Ethylbenzene	<0.0200	2.00	2.05	103	2.13	107	77-120	4	20	mg/kg	11.21.18 09:01	
m,p-Xylenes	<0.0400	4.00	4.10	103	4.25	106	78-120	4	20	mg/kg	11.21.18 09:01	
o-Xylene	<0.0200	2.00	2.08	104	2.09	105	78-120	0	20	mg/kg	11.21.18 09:01	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	85		86		104		68-120	%	11.21.18 09:01
a,a,a-Trifluorotoluene	88		87		100		71-121	%	11.21.18 09:01

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3070611 Matrix: Soil Date Prep: 11.20.18
Parent Sample Id: 605806-001 MS Sample Id: 605806-001 S MSD Sample Id: 605806-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.0191	1.91	1.84	96	1.86	97	54-120	1	25	mg/kg	11.21.18 11:25	
Toluene	<0.0191	1.91	1.85	97	1.88	98	57-120	2	25	mg/kg	11.21.18 11:25	
Ethylbenzene	<0.0191	1.91	1.90	99	1.96	102	58-131	3	25	mg/kg	11.21.18 11:25	
m,p-Xylenes	<0.0382	3.82	3.82	100	3.96	103	62-124	4	25	mg/kg	11.21.18 11:25	
o-Xylene	<0.0191	1.91	1.86	97	1.93	101	62-124	4	25	mg/kg	11.21.18 11:25	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	108		86		68-120	%	11.21.18 11:25
a,a,a-Trifluorotoluene	116		89		71-121	%	11.21.18 11:25

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

CHAIN OF CUSTODY

Page 1 of 1

XENCO LABORATORIES

Setting the Standard since 1990

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

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

www.xenco.com

Xenco Quote # | Xenco Job # 605801

Client / Reporting Information

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

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

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

Project Contact: Adrian Baker

Samplers's Name: Ben Belill

Project Information

Project Name/Number: PLU CVX JV PC #201H

Project Location: Carlsbad, NM

Invoice To: XTO Energy - Kyle Littrell

PO Number: 2RP-5011

Analytical Information

Matrix Codes

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

No.	Field ID / Point of Collection	Sample Depth	Collected: Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	BTEX (only BTEX) 8021	TPH/DRO, GRO, MRO) 8015	Chloride (300.00)	Field Comments
1	SW05	4'	11/14/18	1445	S	1								X	X	X	X	Composite
2	SW06	12'	11/14/18	1500	S	1								X	X	X	X	Composite
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		

BSB 11/14/18

Turnaround Time (Business days)

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

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

Data Deliverable Information

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

Notes:

FED-EX / UPS: Tracking # 773746411050

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	B.T. Baker	11/15/18 @ 1510	Timothy R. Elliott	2	11/15 1530	2 Marcell 11/16
3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice / Cooler Temp. / Thermo. Corr. Factor
						4 12:30 2.1 2.0 RS

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Inter-Office Shipment

IOS Number **117555**

Date/Time: 11/19/18 10:16
Lab# From: **Midland**
Lab# To: **Lubbock**

Created by: Brianna Teel
Delivery Priority:
Air Bill No.:

Please send report to: Jessica Kramer
Address: 1211 W. Florida Ave, Midland TX 79701
E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
605807-001	S	SW05	11/14/18 14:45	SW8021B	BTEX by EPA 8021B	11/23/18	11/28/18	JKR	BR4FBZ BZ BZME EBZ X	
605807-002	S	SW06	11/14/18 15:00	SW8021B	BTEX by EPA 8021B	11/23/18	11/28/18	JKR	BR4FBZ BZ BZME EBZ X	

Inter Office Shipment or Sample Comments:

Relinquished By: Brianna Teel
Brianna Teel

Date Relinquished: 11/19/2018

Received By:

Date Received:

Cooler Temperature:

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 11/16/2018 12:30:00 PM

Work Order #: 605807

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)?	**Yes**	Xenco Lubbock
#18 Water VOC samples have zero headspace?	**N/A**	

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

Analyst: PH Device/Lot#:

Checklist completed by: Katie Lowe Date: 11/16/2018

Checklist reviewed by: Jessica Kramer Date: 11/16/2018

Jessica Kramer

Analytical Report 605810

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU CVX JV PC #20H

27-NOV-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)

27-NOV-18

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

Reference: XENCO Report No(s): **605810**
PLU CVX JV PC #20H
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) 605810. 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. 605810 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Sample Cross Reference 605810

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC #20H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW07	S	11-15-18 09:00	2 ft	605810-001
SW08	S	11-15-18 12:00	4 ft	605810-002

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3070616 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 605810

LT Environmental, Inc., Arvada, CO

Project Name: PLU CVX JV PC #20H

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

Date Received in Lab: Fri Nov-16-18 12:30 pm
Report Date: 27-NOV-18
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	605810-001		605810-002					
	Field Id:	SW07		SW08					
	Depth:	2- ft		4- ft					
	Matrix:	SOIL		SOIL					
	Sampled:	Nov-15-18 09:00		Nov-15-18 12:00					
BTEX by EPA 8021B	***Extracted:***	Nov-20-18 10:00		Nov-20-18 10:00					
SUB: T104704219-18-18	***Analyzed:***	Nov-22-18 04:59		Nov-22-18 05:24					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.0191	0.0191	<0.0191	0.0191				
Toluene		<0.0191	0.0191	<0.0191	0.0191				
Ethylbenzene		<0.0191	0.0191	<0.0191	0.0191				
m,p-Xylenes		<0.0382	0.0382	<0.0382	0.0382				
o-Xylene		<0.0191	0.0191	<0.0191	0.0191				
Total Xylenes		<0.0191	0.0191	<0.0191	0.0191				
Total BTEX		<0.0191	0.0191	<0.0191	0.0191				
Inorganic Anions by EPA 300	***Extracted:***	Nov-20-18 09:30		Nov-20-18 09:30					
SUB: T104704219-18-18	***Analyzed:***	Nov-20-18 18:30		Nov-20-18 18:36					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		247	4.96	68.6	4.98				
TPH by SW8015 Mod	***Extracted:***	Nov-16-18 17:00		Nov-16-18 17:00					
	Analyzed:	Nov-18-18 14:03		Nov-18-18 14:22					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0				
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0				
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0				
Total TPH		<15.0	15.0	<15.0	15.0				

Jessica Kramer
Project Assistant

Certificate of Analytical Results 605810

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC #20H

Sample Id:	**SW07**	Matrix:	Soil	Date Received:	11.16.18 12.30
Lab Sample Id:	605810-001	Date Collected:	11.15.18 09.00	Sample Depth:	2 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	11.20.18 09.30	Basis:	Wet Weight
Seq Number:	3070596			SUB:	T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**247**	4.96	mg/kg	11.20.18 18.30		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	11.16.18 17.00	Basis:	Wet Weight
Seq Number:	3070150				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	11.18.18 14.03	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	11.18.18 14.03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	11.18.18 14.03	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	11.18.18 14.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	11.18.18 14.03	
o-Terphenyl	84-15-1	106	%	70-135	11.18.18 14.03	

Certificate of Analytical Results 605810

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC #20H

Sample Id:	**SW07**	Matrix:	Soil	Date Received:	11.16.18 12.30
Lab Sample Id:	605810-001	Date Collected:	11.15.18 09.00	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	11.20.18 10.00	Basis:	Wet Weight
Seq Number:	3070616			SUB:	T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0191	0.0191	mg/kg	11.22.18 04.59	U	1
Toluene	108-88-3	<0.0191	0.0191	mg/kg	11.22.18 04.59	U	1
Ethylbenzene	100-41-4	<0.0191	0.0191	mg/kg	11.22.18 04.59	U	1
m,p-Xylenes	179601-23-1	<0.0382	0.0382	mg/kg	11.22.18 04.59	U	1
o-Xylene	95-47-6	<0.0191	0.0191	mg/kg	11.22.18 04.59	U	1
Total Xylenes	1330-20-7	<0.0191	0.0191	mg/kg	11.22.18 04.59	U	1
Total BTEX		<0.0191	0.0191	mg/kg	11.22.18 04.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	86	%	68-120	11.22.18 04.59	
a,a,a-Trifluorotoluene	98-08-8	92	%	71-121	11.22.18 04.59	

Certificate of Analytical Results 605810

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC #20H

Sample Id:	**SW08**	Matrix:	Soil	Date Received:	11.16.18 12.30
Lab Sample Id:	605810-002	Date Collected:	11.15.18 12.00	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	11.20.18 09.30	Basis:	Wet Weight
Seq Number:	3070596			SUB:	T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**68.6**	4.98	mg/kg	11.20.18 18.36		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	11.16.18 17.00	Basis:	Wet Weight
Seq Number:	3070150				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	11.18.18 14.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	11.18.18 14.22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	11.18.18 14.22	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	11.18.18 14.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	11.18.18 14.22	
o-Terphenyl	84-15-1	108	%	70-135	11.18.18 14.22	

Certificate of Analytical Results 605810

LT Environmental, Inc., Arvada, CO

PLU CVX JV PC #20H

Sample Id:	**SW08**	Matrix:	Soil	Date Received:	11.16.18 12.30
Lab Sample Id:	605810-002	Date Collected:	11.15.18 12.00	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	11.20.18 10.00	Basis:	Wet Weight
Seq Number:	3070616			SUB:	T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0191	0.0191	mg/kg	11.22.18 05.24	U	1
Toluene	108-88-3	<0.0191	0.0191	mg/kg	11.22.18 05.24	U	1
Ethylbenzene	100-41-4	<0.0191	0.0191	mg/kg	11.22.18 05.24	U	1
m,p-Xylenes	179601-23-1	<0.0382	0.0382	mg/kg	11.22.18 05.24	U	1
o-Xylene	95-47-6	<0.0191	0.0191	mg/kg	11.22.18 05.24	U	1
Total Xylenes	1330-20-7	<0.0191	0.0191	mg/kg	11.22.18 05.24	U	1
Total BTEX		<0.0191	0.0191	mg/kg	11.22.18 05.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	95	%	68-120	11.22.18 05.24	
a,a,a-Trifluorotoluene	98-08-8	99	%	71-121	11.22.18 05.24	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 605810

LT Environmental, Inc.

PLU CVX JV PC #20H

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3070596 Matrix: Solid Date Prep: 11.20.18
MB Sample Id: 7666508-1-BLK LCS Sample Id: 7666508-1-BKS LCSD Sample Id: 7666508-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	260	104	262	105	90-110	1	20	mg/kg	11.20.18 17:59	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3070596 Matrix: Soil Date Prep: 11.20.18
Parent Sample Id: 605815-003 MS Sample Id: 605815-003 S MSD Sample Id: 605815-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	888	249	1110	89	1120	93	90-110	1	20	mg/kg	11.20.18 18:18	X

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3070596 Matrix: Soil Date Prep: 11.20.18
Parent Sample Id: 605815-006 MS Sample Id: 605815-006 S MSD Sample Id: 605815-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1130	248	1320	77	1350	89	90-110	2	20	mg/kg	11.20.18 19:44	X

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3070150 Matrix: Solid Date Prep: 11.16.18
MB Sample Id: 7666458-1-BLK LCS Sample Id: 7666458-1-BKS LCSD Sample Id: 7666458-1-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	971	97	927	93	70-135	5	20	mg/kg	11.18.18 05:34	
Diesel Range Organics (DRO)	<8.13	1000	1060	106	1080	108	70-135	2	20	mg/kg	11.18.18 05:34	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	109		120		126		70-135	%	11.18.18 05:34
o-Terphenyl	118		112		125		70-135	%	11.18.18 05:34

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

QC Summary 605810

LT Environmental, Inc.

PLU CVX JV PC #20H

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3070150 Matrix: Soil Date Prep: 11.16.18
Parent Sample Id: 605806-001 MS Sample Id: 605806-001 S MSD Sample Id: 605806-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	999	889	89	989	99	70-135	11	20	mg/kg	11.18.18 06:32	
Diesel Range Organics (DRO)	<8.12	999	1010	101	1070	107	70-135	6	20	mg/kg	11.18.18 06:32	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	124		126		70-135	%	11.18.18 06:32
o-Terphenyl	122		108		70-135	%	11.18.18 06:32

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3070616 Matrix: Solid Date Prep: 11.20.18
MB Sample Id: 7666784-1-BLK LCS Sample Id: 7666784-1-BKS LCSD Sample Id: 7666784-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.0200	2.00	2.07	104	2.07	104	55-120	0	20	mg/kg	11.21.18 22:41	
Toluene	<0.0200	2.00	2.05	103	2.05	103	77-120	0	20	mg/kg	11.21.18 22:41	
Ethylbenzene	<0.0200	2.00	2.12	106	2.11	106	77-120	0	20	mg/kg	11.21.18 22:41	
m,p-Xylenes	<0.0400	4.00	4.19	105	4.24	106	78-120	1	20	mg/kg	11.21.18 22:41	
o-Xylene	<0.0200	2.00	2.16	108	2.11	106	78-120	2	20	mg/kg	11.21.18 22:41	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	91		113		90		68-120	%	11.21.18 22:41
a,a,a-Trifluorotoluene	94		113		89		71-121	%	11.21.18 22:41

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3070616 Matrix: Soil Date Prep: 11.20.18
Parent Sample Id: 605809-003 MS Sample Id: 605809-003 S MSD Sample Id: 605809-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.0196	1.96	1.83	93	1.78	93	54-120	3	25	mg/kg	11.22.18 01:03	
Toluene	<0.0196	1.96	1.88	96	1.82	95	57-120	3	25	mg/kg	11.22.18 01:03	
Ethylbenzene	<0.0196	1.96	1.92	98	1.88	98	58-131	2	25	mg/kg	11.22.18 01:03	
m,p-Xylenes	<0.0391	3.91	3.81	97	3.76	98	62-124	1	25	mg/kg	11.22.18 01:03	
o-Xylene	<0.0196	1.96	1.88	96	1.84	96	62-124	2	25	mg/kg	11.22.18 01:03	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	112		97		68-120	%	11.22.18 01:03
a,a,a-Trifluorotoluene	116		103		71-121	%	11.22.18 01:03

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

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

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

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

Chain of Custody

Work Order No: 605810

XENCO LABORATORIES

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

www.xenco.com Page 1 of 1

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

Work Order Comments

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

Project Name:	PLU CVX JV PC #20H	Turn Around	
Project Number:	LTE# 02918172	Routine	☒
P.O. Number:	2RP-5011	Rush:	
Sampler's Name:	Ben Belill	Due Date:	

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
SW07	S	11/15/18	0900	2'	1	X	X	X
SW08	S	11/15/18	1200	4'	1	X	X	X

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

Composite Type
Composite Type

11/15/18 BSM

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	B T Belill	Timothy P. Elliott	11/15/18 @1510	2		
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

Final 1.000

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

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

Inter-Office Shipment

IOS Number **117557**

Date/Time: 11/19/18 10:55
Lab# From: **Midland**
Lab# To: **Lubbock**

Created by: Brianna Teel
Delivery Priority:
Air Bill No.:

Please send report to: Jessica Kramer
Address: 1211 W. Florida Ave, Midland TX 79701
E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
605810-001	S	SW07	11/15/18 09:00	SW8021B	BTEX by EPA 8021B	11/23/18	11/29/18	JKR	BR4FBZ BZ BZME EBZ X	
605810-001	S	SW07	11/15/18 09:00	E300	Inorganic Anions by EPA 300	11/23/18	12/13/18	JKR	CL	
605810-002	S	SW08	11/15/18 12:00	SW8021B	BTEX by EPA 8021B	11/23/18	11/29/18	JKR	BR4FBZ BZ BZME EBZ X	
605810-002	S	SW08	11/15/18 12:00	E300	Inorganic Anions by EPA 300	11/23/18	12/13/18	JKR	CL	

Inter Office Shipment or Sample Comments:

Relinquished By: Brianna Teel
Brianna Teel

Date Relinquished: 11/19/2018

Received By: _____

Date Received: _____

Cooler Temperature: _____

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 11/16/2018 12:30:00 PM

Work Order #: 605810

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)?	**Yes**	Xenco Lubbock - BTEX, Chloride
#18 Water VOC samples have zero headspace?	**N/A**	

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

Analyst: PH Device/Lot#:

Checklist completed by: Katie Lowe Date: 11/16/2018

Checklist reviewed by: Jessica Kramer Date: 11/16/2018

View northwest of the excavation

Project: 012918172	XTO Energy, Inc. Poker Lake Unit CVX JV PC #020H	LTE Advancing Opportunity
November 13, 2018	Photographic Log	

View of the excavation southeastern boundary

Project: 012918172	XTO Energy, Inc. Poker Lake Unit CVX JV PC #020H	LTE Advancing Opportunity
November 14, 2018	Photographic Log	

View of the excavation western boundary

Project: 012918172	XTO Energy, Inc. Poker Lake Unit CVX JV PC #020H	LTE Advancing Opportunity
November 15, 2018	Photographic Log	