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

February 11, 2019

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

RE: Closure Request
Legg Federal 001 Production Facility
Remediation Permit Number 2RP-3634
Eddy County, New Mexico

Dear Mr. Billings:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following report detailing soil sampling activities at the Legg Federal 001 production facility (Site) in Unit B, Section 27, Township 22 South, Range 30 East, in Eddy County, New Mexico (Figure 1). The purpose of the soil sampling was to assess impacts to soil after the lease automatic custody transfer (LACT) unit filter pot ball valve failed, causing the release of 46 barrels (bbls) of crude oil. The release was discovered on March 17, 2016, and affected approximately 4,436 square feet of caliche pad within the fenced facility. The valve was replaced and standing fluids were recovered using a vacuum truck. Approximately 40 bbls of crude oil were recovered from the surface of the pad and from within the lined tank containment. The former operator reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 on April 1, 2016 and was assigned Remediation Permit (RP) Number 2RP-3634. (Attachment 1). Although the release occurred while the facility was operated by the previous operator, XTO is the current operator and is committed to addressing any releases that remain unresolved.

The release is included in the Compliance Agreement for Remediation for Historical Releases (Compliance Agreement) between XTO and the NMOCD effective November 13, 2018. The purpose of the Compliance Agreement is to ensure that reportable releases that occurred prior to August 14, 2018, where XTO is responsible for the corrective action, comply with Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC) as amended on August 14, 2018. The release is categorized as a Tier II site in the Compliance Agreement, meaning remediation of the release began prior to August 14, 2018, the effective date of 19.15.29 NMAC, however a closure report had not been submitted. Based on the results of the soil sampling events, XTO is submitting this closure report and requesting no further action for this release event.

BACKGROUND

According to Section 12 of 19.15.29 NMAC, LTE applied Table 1, *Closure Criteria for Soils Impacted by a Release*. Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest water well data. The nearest permitted water well with depth to water data is C 03015, located approximately 0.4 miles northwest of the Site. The water well has a depth to groundwater of 262 feet and a total depth of 1,316 feet. The closest continuously flowing water or significant watercourse to the Site is an unnamed lake located approximately 3.1 miles 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.

SOIL SAMPLING

On January 16, 2019, an LTE scientist collected four soil samples (SS01 through SS04) within the release area to assess the lateral extent of soil impacts. The soil sample locations, depicted on Figure 2, were selected based on information provided on the initial Form C-141 and field observations. To eliminate the effects from weathering and natural degradation of contaminants at the ground surface, the soil samples were collected from each sample location at approximately 0.5 feet bgs. 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.

On January 28, 2019, LTE personnel returned to the Site to assess the vertical extent of impacted soil in the release area. Boreholes were advanced by hand auger to a depth of 4 feet bgs at the four initial soil sample locations (SS01 through SS04). Soil was field screened at 1-foot intervals in each borehole. Soil samples SS01A through SS04A were collected from a depth of 4 feet bgs at the initial SS01 through SS04 soil sample locations. The soil samples were collected, handled, and analyzed as described above and submitted to Xenco in Midland, Texas. The soil sample locations are depicted on Figure 2, and soil sample logs are included in Attachment 2.

ANALYTICAL RESULTS

Laboratory analytical results indicated that BTEX, TPH, and chloride concentrations were compliant with the NMOCD Table 1 closure criteria in soil samples SS01 through SS04 collected at 0.5 feet bgs, and soil samples SS01A through SS04A collected at 4 feet bgs. Based on the laboratory analytical results, no soil excavation was required. Laboratory analytical results are presented on Figure 2 and summarized in Table 1, and the complete laboratory analytical reports are included as Attachment 3.

CONCLUSIONS

Soil samples SS01 through SS04 and SS01A through SS04A were collected within the release area to determine if any impacted soil remained in place as a result of the historical release. Laboratory analytical results indicated that BTEX, TPH, and chloride concentrations were compliant with the NMOCD Table 1 closure criteria in all soil samples. Initial response efforts and natural degradation have mitigated impacts at the Site. XTO requests no further action for this release. An updated NMOCD Form C-141 is included as Attachment 1. A photographic log of the Site is included as Attachment 4.

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

Sincerely,
LT ENVIRONMENTAL, INC.

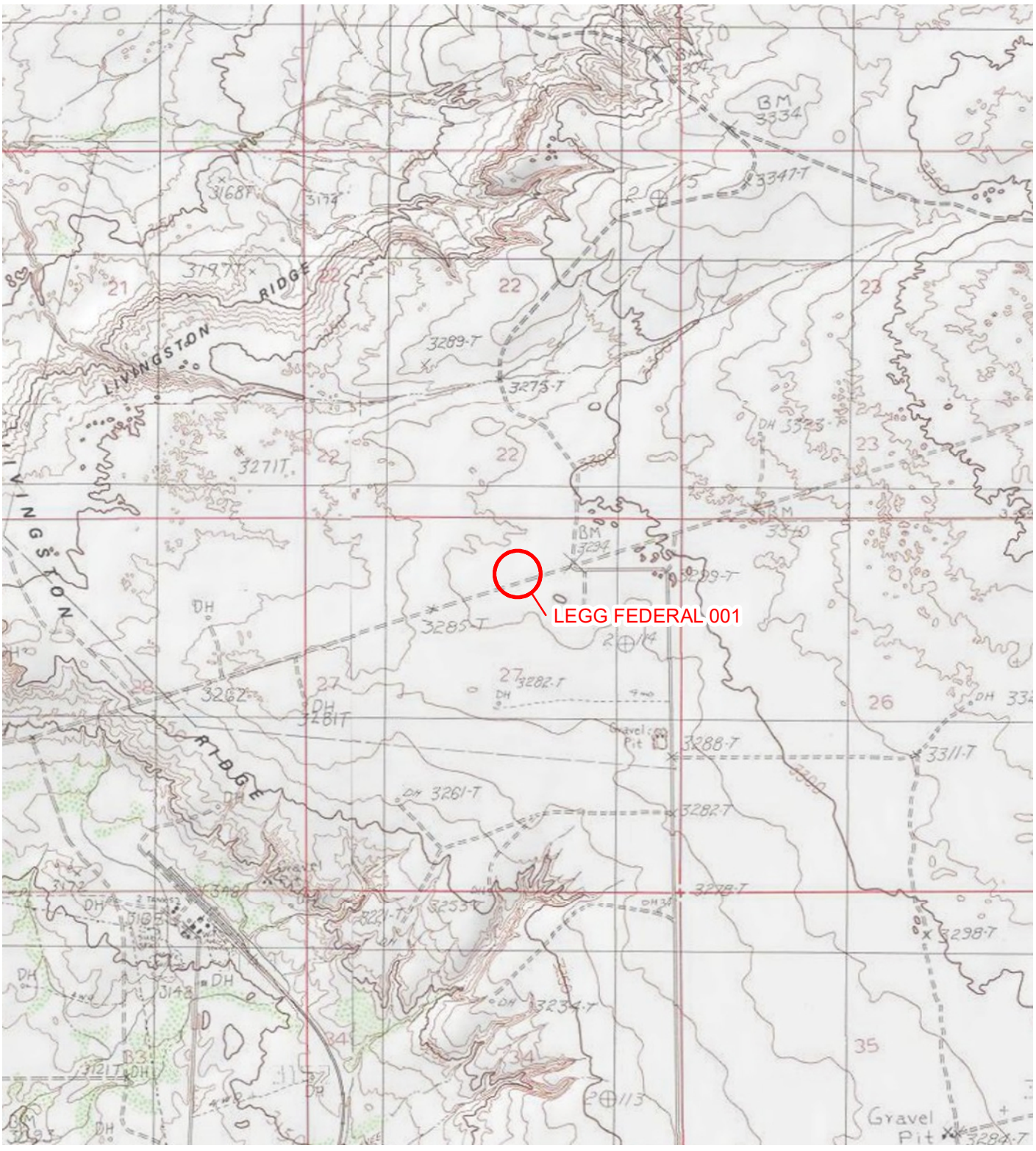
Adrian Baker
Project Geologist

Ashley L. Ager, P.G.
Senior Geologist

cc: Kyle Littrell, XTO
Jim Amos, U.S. Bureau of Land Management
Deborah McKinney, U.S. Bureau of Land Management
Michael Bratcher, NMOCD

Attachments:
Figure 1 Site Location Map
Figure 2 Soil Sample Locations

FIGURES



LEGEND

SITE LOCATION

IMAGE COURTESY OF ESRI/USGS

0 2,000 4,000

Feet

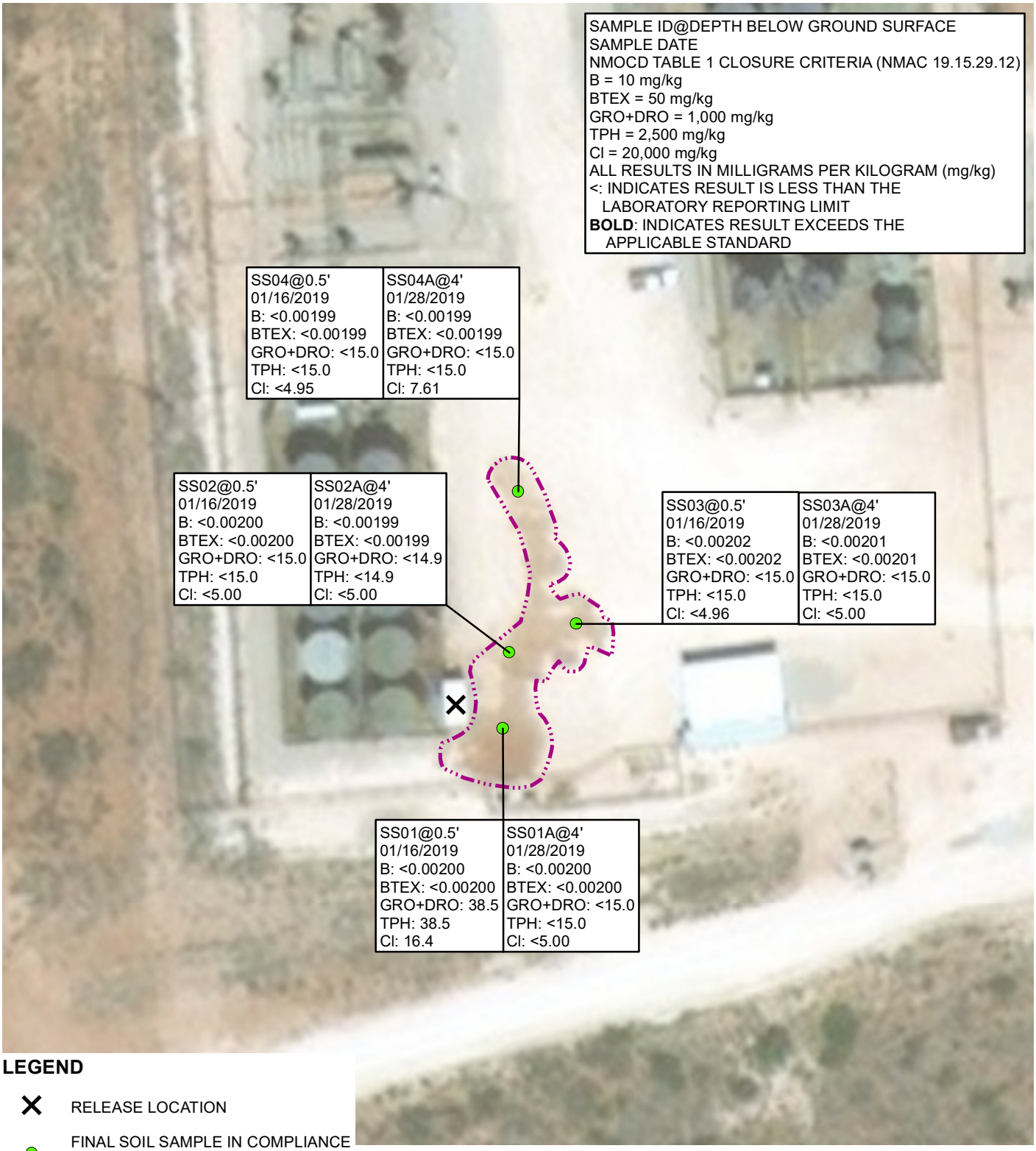
N

NEW MEXICO

NOTE: REMEDIATION PERMIT NUMBER 2RP-3634

FIGURE 1
SITE LOCATION MAP
LEGG FEDERAL 001
UNIT B SEC 27 T22S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012918024_LEGG FEDERAL 001\012918024_FIG01_SL_2019_3634.mxd



LEGEND

- RELEASE LOCATION
- FINAL SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE STANDARDS
- RELEASE EXTENT

B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
GRO – GASOLINE RANGE ORGANICS
DRO – DIESEL RANGE ORGANICS
TPH – TOTAL PETROLEUM HYDROCARBONS
Cl - CHLORIDE
NMAC – NEW MEXICO ADMINISTRATIVE CODE
NMOCD – NEW MEXICO OIL CONSERVATION DIVISION
NOTE: REMEDIATION PERMIT NUMBER 2RP-3634

IMAGE COURTESY OF ESRI

0 60 120
Feet

N

FIGURE 2
FINAL SOIL SAMPLE LOCATIONS
LEGG FEDERAL 001
UNIT B SEC 27 T22S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012918024_LEGG FEDERAL 001\012918024_FIG02_SITE_2019_3634.mxd

TABLES

TABLE 1
SOIL ANALYTICAL RESULTS

LEGG FEDERAL 001
REMEDIATION PERMIT NUMBER 2RP-3634
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	C6-C10 GRO (mg/kg)	C10-C28 DRO (mg/kg)	C28-C40 ORO (mg/kg)	GRO and DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
SS01	0.5	01/16/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	38.5	<15.0	38.5	38.5	16.4
SS02	0.5	01/16/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<5.00
SS03	0.5	01/16/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	<4.96
SS04	0.5	01/16/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	<4.95
SS01A	4	01/28/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<5.00
SS02A	4	01/28/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<14.9	<14.9	<14.9	<14.9	<14.9	<5.00
SS03A	4	01/28/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	<5.00
SS04A	4	01/28/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	7.61
NMOCD Table 1 Closure Criteria			10	NE	NE	NE	50	NE	NE	NE	1,000	2,500	20,000

Notes:
bgs - below ground surface
BTEX - benzene, toluene, ethylbenzene, and total xylenes
mg/kg - milligrams per kilogram
NE - not established
NMOCD - New Mexico Oil Conservation Division
DRO - diesel range organics
GRO - gasoline range organics
ORO - oil range organics
TPH - total petroleum hydrocarbons
< - indicates result is below laboratory reporting limits
Bold - indicates result exceeds the applicable regulatory standard
* - indicates sample was collected in area to be reclaimed after remediation is complete; closure criteria for chloride concentration in the top 4 feet of soil is 600 mg/kg
Table 1 - closure criteria for soils impacted by a release per NMAC 19.15.29 August 2018
NMAC - New Mexico Administrative Code

ATTACHMENT 1: INITIAL/FINAL NMOCD FORM C-141 (2RP-3634)

NM OIL CONSERVATION
ARTESIA DISTRICT

APR 1 2016

RECEIVED

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised August 8, 2011

Submit to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

nAB1609640449 260737

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: BOPCO, L.P.	Contact: Amy Ruth
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 575-887-7329
Facility Name: Legg Federal 001	Facility Type: Exploration and Production

Surface Owner: Federal	Mineral Owner: Federal	API No. 30-015-04734

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
B	27	22S	30E	660	North	2004	East	Eddy

Latitude_____ Longitude_____

NATURE OF RELEASE

Type of Release: Crude Oil	Volume of Release: 46 bbls	Volume Recovered: 40 bbls
Source of Release: LACT Unit Filter Pot Valve	Date and Hour of Occurrence: 3/17/2016 8:42 am	Date and Hour of Discovery: 3/17/2016 9:10 am
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher/Heather Patterson (NMOCD), Jim Amos (BLM)	
By Whom? Amy Ruth	Date and Hour 3/17/2016 2:14 pm	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

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

Describe Cause of Problem and Remedial Action Taken.*
LACT unit operated by Plains experienced a filter pot ball valve failure. The leak was detected by BOPCO on site security cameras and Plains personnel closed the leaking valve. The valve was replaced with a Balon valve and secured with a dart and seal.

Describe Area Affected and Cleanup Action Taken.*
The leak affected 4,436 square feet of caliche pad within the fenced facility. Standing fluids were recovered from the ground and from within the zero perm tank containment.

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

Signature:

Printed Name: Amy C. Ruth

Title: ~~EHS~~ Remediation Specialist

E-mail Address: ACRuth@basspet.com

Date: 4/1/2016 Phone: 432-661-0571

OIL CONSERVATION DIVISION

Approved by Environmental Specialist: Signed By

Approval Date: 4/5/16 Expiration Date: N/A

Conditions of Approval: Attached ☐

Remediation per O.C.D. Rules & Guidelines
SUBMIT REMEDIATION PROPOSAL NO LATER THAN: 5/5/16

2RP-3634

* Attach Additional Sheets If Necessary

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

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	
District RP	2RP-3634
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: XTO Energy, Inc	OGRID: 5380
Contact Name: Kyle Littrell	Contact Telephone: (432) 221-7331
Contact email: Kyle_Littrell@xtoenergy.com	Incident #: 2RP-3634
Contact mailing address 522 W. Mermod, Suite 704 Carlsbad, NM 88220	

Location of Release Source

Latitude _____ Longitude _____
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Legg Federal 001	Site Type: Exploration and Production
Date Release Discovered: 3/17/2016	API# *(if applicable)*: 30-015-04734

Unit Letter	Section	Township	Range	County
D	27	22S	30E	Eddy

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

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) 46	Volume Recovered (bbls) 40
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

LACT unit operated by Plains experienced a filter pot ball valve failure. The leak was detected by BOPCO on site security cameras and Plains personnel closed the leaking valve. The valve was replaced with a Balon valve and secured with a dart and seal.

The leak affected 4,436 square feet of caliche pad within the fenced facility. Standing fluids were recovered from the ground and from within the zero perm tank containment.

Incident ID	
District RP	2RP-3634
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? Release greater than 25 bbls
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? To: Mike Bratcher/Heather Patterson (NMOCD), Jim Amos (BLM) By: Amy Ruth	

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: February 11, 2019

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

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-3634
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

Form C-141 State of New Mexico
Page 4 Oil Conservation Division

Incident ID	
District RP	2RP-3634
Facility ID	
Application ID	

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

Printed Name: Kyle Littrell Title: SH&E Coordinator

Signature: Date: February 11, 2019

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

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-3634
Facility ID	
Application ID	

Closure

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

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

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection). Site photographs are included showing the site and excavations.

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

☒ Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E Coordinator

Signature: Date: February 11, 2019

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: Brittany Hall Date: 2/24/2023

Printed Name: Brittany Hall Title: Environmental Specialist

ATTACHMENT 2: SOIL SAMPLE LOGS

LT Environmental, Inc.	Identifier: S01A	Date: 1/28/2019
LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation	Project Name: Legg Federal 001	RP Number: 2RP-3634
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: RM	Method: Hand auger
Lat/Long: 32.368532, -103.867647	Field Screening: PID	Hole Diameter: 3 inch / Total Depth: 4 feet bgs
Comments:		

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D					0			CALICHE, white/light brown, dry
M	< 128	1.6	N				SP	SAND, brown, moist
M	< 128	0.7	N		1		SM	SILTY SAND, brown, poorly graded, moist, roots
M	< 128	1.2	N		2		SP	SAND, brown/red, poorly graded, trace of clay
M	< 128	0	N		3		SC	CLAY SAND, brown/red, poorly graded, trace of roots
				SS01A	4			Total depth 4 feet bgs
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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

Identifier:	Date:
S02A	1/28/2019
Project Name:	RP Number:
Legg Federal 001	2RP-3634

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: RM	Method: Hand auger
Lat/Long: 32.368532, -103.867647	Field Screening: PID
Hole Diameter: 3 inch	Total Depth: 4 feet bgs

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D					0			CALICHE, white/light brown, dry
M	< 128	0.1	N				SP	SAND, brown, moist
M	< 128	0.1	N		1		SM	SILTY SAND, brown, poorly graded, moist, roots
M	< 128	0.1	N		2		SP	SAND, brown/red, poorly graded, trace of clay
M	< 128	0.1	N		3		SC	CLAY SAND, brown/red, poorly graded, trace of roots
				SS02A	4			Total depth 4 feet bgs
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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

Identifier:	Date:
S03A	1/28/2019
Project Name: Legg Federal 001	RP Number: 2RP-3634

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: RM	Method: Hand auger

Lat/Long: 32.368532, -103.867647	Field Screening: PID	Hole Diameter: 3 inch	Total Depth: 4 feet bgs

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D					0			CALICHE, white/light brown, dry
M	< 128	0	N				SM	SILTY SAND, brown, pooly graded, moist
M	< 128	0.1	N		1		SM	SILTY SAND, brown, poorly graded, moist, roots
M	< 128	0	N		2		SP	SAND, brown/red, poorly graded, trace of clay
M	< 128	0	N		3		SC	CLAY SAND, brown/red, poorly graded, trace of roots
				SS03A	4			Total depth 4 feet bgs
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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

Identifier:	Date:
S04A	1/28/2019
Project Name:	RP Number:
Legg Federal 001	2RP-3634

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: RM	Method: Hand auger
Lat/Long: 32.368532, -103.867647	Field Screening: PID
Hole Diameter: 3 inch	Total Depth: 4 feet bgs

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D					0			CALICHE, white/light brown, dry
M	< 128	0	N				SM	SILTY SAND, brown, pooly graded, moist
M	< 128	0	N		1		SM	SILTY SAND, brown, poorly graded, moist, roots
M	< 128	0	N		2		SP	SAND, brown/red, poorly graded, trace of clay
M	< 128	0	N		3		SC	CLAY SAND, brown/red, poorly graded, trace of roots
				SS04A	4			Total depth 4 feet bgs
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

ATTACHMENT 3: LABORATORY ANALYTICAL REPORTS

Analytical Report 611798

for

LT Environmental, Inc.

Project Manager: Adrian Baker

Legg Federal 001

2RP-3634

22-JAN-19

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

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

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

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

22-JAN-19

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

Reference: XENCO Report No(s): **611798**
Legg Federal 001
Project Address: Delaware Basin

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 611798. 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. 611798 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 611798

LT Environmental, Inc., Arvada, CO

Legg Federal 001

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	01-16-19 12:45	0.5 ft	611798-001
SS02	S	01-16-19 12:55	0.5 ft	611798-002
SS03	S	01-16-19 13:10	0.5 ft	611798-003
SS04	S	01-16-19 13:20	0.5 ft	611798-004

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Legg Federal 001

Project ID: *2RP-3634*
Work Order Number(s): *611798*

Report Date: *22-JAN-19*
Date Received: *01/18/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3076404 TPH by SW8015 Mod
Surrogate 1-Chlorooctane, Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 611429-002 S,611429-002 SD.

Batch: LBA-3076435 TPH by SW8015 Mod
Surrogate 1-Chlorooctane, Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 611429-003 SD.

Batch: LBA-3076480 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 611798

LT Environmental, Inc., Arvada, CO

Project Name: Legg Federal 001

Project Id: 2RP-3634
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Fri Jan-18-19 11:15 am
Report Date: 22-JAN-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	611798-001		611798-002		611798-003		611798-004					
	Field Id:	SS01		SS02		SS03		SS04					
	Depth:	0.5- ft		0.5- ft		0.5- ft		0.5- ft					
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	Jan-16-19 12:45		Jan-16-19 12:55		Jan-16-19 13:10		Jan-16-19 13:20					
BTEX by EPA 8021B	***Extracted:***	Jan-21-19 11:00		Jan-21-19 11:00		Jan-21-19 11:00		Jan-21-19 11:00					
	Analyzed:	Jan-21-19 16:37		Jan-21-19 16:58		Jan-21-19 17:19		Jan-21-19 17:41					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199				
Toluene		<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199				
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199				
m,p-Xylenes		<0.00401	0.00401	<0.00400	0.00400	<0.00403	0.00403	<0.00398	0.00398				
o-Xylene		<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199				
Total Xylenes		<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199				
Total BTEX		<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199				
Inorganic Anions by EPA 300	***Extracted:***	Jan-21-19 11:30		Jan-21-19 11:30		Jan-21-19 11:30		Jan-21-19 11:30					
	Analyzed:	Jan-21-19 16:57		Jan-21-19 17:03		Jan-21-19 17:21		Jan-21-19 17:28					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		16.4	4.99	<5.00	5.00	<4.96	4.96	<4.95	4.95				
TPH by SW8015 Mod	***Extracted:***	Jan-19-19 09:00		Jan-19-19 09:00		Jan-19-19 09:00		Jan-20-19 08:00					
	Analyzed:	Jan-20-19 02:19		Jan-20-19 02:39		Jan-20-19 01:40		Jan-20-19 15:13					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0				
Diesel Range Organics (DRO)		38.5	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0				
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0				
Total TPH		38.5	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0				

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

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analytical Results 611798

LT Environmental, Inc., Arvada, CO

Legg Federal 001

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	01.18.19 11.15
Lab Sample Id:	611798-001	Date Collected:	01.16.19 12.45	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.21.19 11.30	Basis:	Wet Weight
Seq Number:	3076510				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**16.4**	4.99	mg/kg	01.21.19 16.57		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.19.19 09.00	Basis:	Wet Weight
Seq Number:	3076404				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.20.19 02.19	U	1
Diesel Range Organics (DRO)	C10C28DRO	**38.5**	15.0	mg/kg	01.20.19 02.19		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.20.19 02.19	U	1
Total TPH	PHC635	**38.5**	15.0	mg/kg	01.20.19 02.19		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	01.20.19 02.19	
o-Terphenyl	84-15-1	107	%	70-135	01.20.19 02.19	

Certificate of Analytical Results 611798

LT Environmental, Inc., Arvada, CO

Legg Federal 001

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	01.18.19 11.15
Lab Sample Id:	611798-001	Date Collected:	01.16.19 12.45	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.21.19 11.00	Basis:	Wet Weight
Seq Number:	3076480				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.21.19 16.37	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.21.19 16.37	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.21.19 16.37	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	01.21.19 16.37	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.21.19 16.37	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.21.19 16.37	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.21.19 16.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	70-130	01.21.19 16.37	
1,4-Difluorobenzene	540-36-3	98	%	70-130	01.21.19 16.37	

Certificate of Analytical Results 611798

LT Environmental, Inc., Arvada, CO

Legg Federal 001

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	01.18.19 11.15
Lab Sample Id:	611798-002	Date Collected:	01.16.19 12.55	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.21.19 11.30	Basis:	Wet Weight
Seq Number:	3076510				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	01.21.19 17.03	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.19.19 09.00	Basis:	Wet Weight
Seq Number:	3076404				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.20.19 02.39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.20.19 02.39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.20.19 02.39	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.20.19 02.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	01.20.19 02.39	
o-Terphenyl	84-15-1	99	%	70-135	01.20.19 02.39	

Certificate of Analytical Results 611798

LT Environmental, Inc., Arvada, CO

Legg Federal 001

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	01.18.19 11.15
Lab Sample Id:	611798-002	Date Collected:	01.16.19 12.55	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.21.19 11.00	Basis:	Wet Weight
Seq Number:	3076480				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.21.19 16.58	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.21.19 16.58	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.21.19 16.58	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.21.19 16.58	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.21.19 16.58	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.21.19 16.58	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.21.19 16.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	109	%	70-130	01.21.19 16.58	
1,4-Difluorobenzene	540-36-3	95	%	70-130	01.21.19 16.58	

Certificate of Analytical Results 611798

LT Environmental, Inc., Arvada, CO

Legg Federal 001

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	01.18.19 11.15
Lab Sample Id:	611798-003	Date Collected:	01.16.19 13.10	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.21.19 11.30	Basis:	Wet Weight
Seq Number:	3076510				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	01.21.19 17.21	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.19.19 09.00	Basis:	Wet Weight
Seq Number:	3076404				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.20.19 01.40	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.20.19 01.40	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.20.19 01.40	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.20.19 01.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	01.20.19 01.40	
o-Terphenyl	84-15-1	101	%	70-135	01.20.19 01.40	

Certificate of Analytical Results 611798

LT Environmental, Inc., Arvada, CO

Legg Federal 001

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	01.18.19 11.15
Lab Sample Id:	611798-003	Date Collected:	01.16.19 13.10	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.21.19 11.00	Basis:	Wet Weight
Seq Number:	3076480				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.21.19 17.19	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.21.19 17.19	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.21.19 17.19	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	01.21.19 17.19	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.21.19 17.19	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	01.21.19 17.19	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.21.19 17.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	94	%	70-130	01.21.19 17.19	
4-Bromofluorobenzene	460-00-4	105	%	70-130	01.21.19 17.19	

Certificate of Analytical Results 611798

LT Environmental, Inc., Arvada, CO

Legg Federal 001

Sample Id:	**SS04**	Matrix:	Soil	Date Received:	01.18.19 11.15
Lab Sample Id:	611798-004	Date Collected:	01.16.19 13.20	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.21.19 11.30	Basis:	Wet Weight
Seq Number:	3076510				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	01.21.19 17.28	U	1

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

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.20.19 15.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.20.19 15.13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.20.19 15.13	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.20.19 15.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	01.20.19 15.13	
o-Terphenyl	84-15-1	104	%	70-135	01.20.19 15.13	

Certificate of Analytical Results 611798

LT Environmental, Inc., Arvada, CO

Legg Federal 001

Sample Id:	**SS04**	Matrix:	Soil	Date Received:	01.18.19 11.15
Lab Sample Id:	611798-004	Date Collected:	01.16.19 13.20	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.21.19 11.00	Basis:	Wet Weight
Seq Number:	3076480				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.21.19 17.41	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.21.19 17.41	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.21.19 17.41	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.21.19 17.41	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.21.19 17.41	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.21.19 17.41	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.21.19 17.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	01.21.19 17.41	
4-Bromofluorobenzene	460-00-4	113	%	70-130	01.21.19 17.41	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 611798

LT Environmental, Inc.

Legg Federal 001

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3076510 Matrix: Solid Date Prep: 01.21.19
MB Sample Id: 7670119-1-BLK LCS Sample Id: 7670119-1-BKS LCSD Sample Id: 7670119-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	252	101	239	96	90-110	5	20	mg/kg	01.21.19 15:21	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3076510 Matrix: Soil Date Prep: 01.21.19
Parent Sample Id: 611795-001 MS Sample Id: 611795-001 S MSD Sample Id: 611795-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	229	248	464	95	463	94	90-110	0	20	mg/kg	01.21.19 15:40	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3076510 Matrix: Soil Date Prep: 01.21.19
Parent Sample Id: 611798-002 MS Sample Id: 611798-002 S MSD Sample Id: 611798-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	245	98	227	91	90-110	8	20	mg/kg	01.21.19 17:09	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3076404 Matrix: Solid Date Prep: 01.19.19
MB Sample Id: 7670059-1-BLK LCS Sample Id: 7670059-1-BKS LCSD Sample Id: 7670059-1-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	820	82	825	83	70-135	1	20	mg/kg	01.19.19 20:23	
Diesel Range Organics (DRO)	<8.13	1000	910	91	915	92	70-135	1	20	mg/kg	01.19.19 20:23	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	88		126		124		70-135	%	01.19.19 20:23
o-Terphenyl	89		105		104		70-135	%	01.19.19 20:23

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 611798

LT Environmental, Inc.

Legg Federal 001

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3076435 — Matrix: Solid — Date Prep: 01.20.19
MB Sample Id: 7670060-1-BLK — LCS Sample Id: 7670060-1-BKS — LCSD Sample Id: 7670060-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	836	84	849	85	70-135	2	20	mg/kg	01.20.19 10:40	
Diesel Range Organics (DRO)	<8.13	1000	939	94	955	96	70-135	2	20	mg/kg	01.20.19 10:40	

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

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3076404 — Matrix: Soil — Date Prep: 01.19.19
Parent Sample Id: 611429-002 — MS Sample Id: 611429-002 S — MSD Sample Id: 611429-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	871	87	912	91	70-135	5	20	mg/kg	01.19.19 21:22	
Diesel Range Organics (DRO)	10.6	1000	958	95	1010	100	70-135	5	20	mg/kg	01.19.19 21:22	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	203	**	209	**	70-135	%	01.19.19 21:22
o-Terphenyl	183	**	198	**	70-135	%	01.19.19 21:22

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3076435 — Matrix: Soil — Date Prep: 01.20.19
Parent Sample Id: 611429-003 — MS Sample Id: 611429-003 S — MSD Sample Id: 611429-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	18.8	1000	945	93	930	91	70-135	2	20	mg/kg	01.20.19 11:40	
Diesel Range Organics (DRO)	80.3	1000	1120	104	1090	101	70-135	3	20	mg/kg	01.20.19 11:40	

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

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 611798

LT Environmental, Inc.

Legg Federal 001

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3076480 — Matrix: Solid — Date Prep: 01.21.19
MB Sample Id: 7670131-1-BLK — LCS Sample Id: 7670131-1-BKS — LCSD Sample Id: 7670131-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.124	124	0.122	122	70-130	2	35	mg/kg	01.21.19 12:19	
Toluene	<0.00199	0.0996	0.103	103	0.103	103	70-130	0	35	mg/kg	01.21.19 12:19	
Ethylbenzene	<0.00199	0.0996	0.122	122	0.120	120	70-130	2	35	mg/kg	01.21.19 12:19	
m,p-Xylenes	<0.00398	0.199	0.245	123	0.239	120	70-130	2	35	mg/kg	01.21.19 12:19	
o-Xylene	<0.00199	0.0996	0.115	115	0.112	112	70-130	3	35	mg/kg	01.21.19 12:19	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	93		128		86		70-130	%	01.21.19 12:19
4-Bromofluorobenzene	102		99		79		70-130	%	01.21.19 12:19

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3076480 — Matrix: Soil — Date Prep: 01.21.19
Parent Sample Id: 611795-003 — MS Sample Id: 611795-003 S — MSD Sample Id: 611795-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.112	112	0.122	121	70-130	9	35	mg/kg	01.21.19 13:02	
Toluene	<0.00200	0.0998	0.0897	90	0.0997	99	70-130	11	35	mg/kg	01.21.19 13:02	
Ethylbenzene	<0.00200	0.0998	0.102	102	0.109	108	70-130	7	35	mg/kg	01.21.19 13:02	
m,p-Xylenes	<0.00399	0.200	0.202	101	0.206	102	70-130	2	35	mg/kg	01.21.19 13:02	
o-Xylene	<0.00200	0.0998	0.0955	96	0.0990	98	70-130	4	35	mg/kg	01.21.19 13:02	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		111		70-130	%	01.21.19 13:02
4-Bromofluorobenzene	88		75		70-130	%	01.21.19 13:02

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

Chain of Custody

Work Order No: 611798

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:	Carlsbad, NM 88220
Phone:	432.704.5178	Email:	llaumbach@ltenv.com, abaker@ltenv.com

Work Order Comments

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

Project Name:	Legg Federal 001	Turn Around	
Project Number:	2RP-3634	Routine	☒
P.O. Number:		Rush:	3 day
Sampler's Name:	Lynda Lambach	Due Date:	~~01/24~~ 01/22

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	4.2/4.1	Thermometer ID	R8	
Received Intact:	(Yes) No			
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.1	
Sample Custody Seals:	Yes No (N/A)	Total Containers:		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
SS01	S	01/16/2019	12:45	0.5'	1	X	X	X
SS02	S		12:55	0.5'	1	X	X	X
SS03	S		13:10	0.5'	1	X	X	X
SS04	S		13:20	0.5'	1	X	X	X

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time		Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			01/17/2019 13:30	2			1118/19 1115
3				4			
5				6			

Revised Date 051418 Rev. 2018.1

7742 2439 2838

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

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

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 01/18/2019 11:15:00 AM

Work Order #: 611798

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

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	4.1
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Katie Lowe Date: 01/18/2019

Checklist reviewed by: Jessica Kramer Date: 01/21/2019

Jessica Kramer

Analytical Report 613313

for

LT Environmental, Inc.

Project Manager: Adrian Baker

Legg Federal 001

012918024

05-FEB-19

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

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

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

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

05-FEB-19

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

Reference: XENCO Report No(s): **613313**
Legg Federal 001
Project Address: Delaware Basin

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 613313. 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. 613313 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 613313

LT Environmental, Inc., Arvada, CO

Legg Federal 001

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01A	S	01-28-19 08:40	4 ft	613313-001
SS02A	S	01-28-19 09:15	4 ft	613313-002
SS03A	S	01-28-19 09:35	4 ft	613313-003
SS04A	S	01-28-19 09:55	4 ft	613313-004

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Legg Federal 001

Project ID: *012918024*
Work Order Number(s): *613313*

Report Date: *05-FEB-19*
Date Received: *02/04/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3078044 BTEX by EPA 8021B

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

Certificate of Analysis Summary 613313

LT Environmental, Inc., Arvada, CO

Project Name: Legg Federal 001

Project Id: 012918024
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Mon Feb-04-19 08:00 am
Report Date: 05-FEB-19
Project Manager: Jessica Kramer

Analysis Requested															
	Lab Id:	613313-001		613313-002		613313-003		613313-004							
	Field Id:	SS01A		SS02A		SS03A		SS04A							
	Depth:	4- ft		4- ft		4- ft		4- ft							
	Matrix:	SOIL		SOIL		SOIL		SOIL							
	Sampled:	Jan-28-19 08:40		Jan-28-19 09:15		Jan-28-19 09:35		Jan-28-19 09:55							
BTEX by EPA 8021B	***Extracted:***	Feb-04-19 11:00		Feb-04-19 11:00		Feb-04-19 11:00		Feb-04-19 11:00							
	Analyzed:	Feb-04-19 16:57		Feb-04-19 17:18		Feb-04-19 18:43		Feb-04-19 19:05							
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL						
Benzene		<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199						
Toluene		<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199						
Ethylbenzene		<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199						
m,p-Xylenes		<0.00399	0.00399	<0.00398	0.00398	<0.00402	0.00402	<0.00398	0.00398						
o-Xylene		<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199						
Total Xylenes		<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199						
Total BTEX		<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199						
Inorganic Anions by EPA 300	***Extracted:***	Feb-04-19 15:00		Feb-04-19 15:00		Feb-04-19 15:00		Feb-04-19 15:00							
	Analyzed:	Feb-04-19 21:15		Feb-04-19 21:36		Feb-04-19 21:42		Feb-04-19 21:48							
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL						
Chloride		<5.00	5.00	<5.00	5.00	<5.00	5.00	7.61	4.99						
TPH by SW8015 Mod	***Extracted:***	Feb-04-19 11:00		Feb-04-19 11:00		Feb-04-19 11:00		Feb-04-19 11:00							
	Analyzed:	Feb-04-19 19:00		Feb-04-19 19:19		Feb-04-19 19:39		Feb-04-19 19:59							
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL						
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0						
Diesel Range Organics (DRO)		<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0						
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0						
Total TPH		<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0						

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

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analytical Results 613313

LT Environmental, Inc., Arvada, CO

Legg Federal 001

Sample Id:	**SS01A**	Matrix:	Soil	Date Received:	02.04.19 08.00
Lab Sample Id:	613313-001	Date Collected:	01.28.19 08.40	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.04.19 15.00	Basis:	Wet Weight
Seq Number:	3078004				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	02.04.19 21.15	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.04.19 11.00	Basis:	Wet Weight
Seq Number:	3078102				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.04.19 19.00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.04.19 19.00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	02.04.19 19.00	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.04.19 19.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	02.04.19 19.00	
o-Terphenyl	84-15-1	88	%	70-135	02.04.19 19.00	

Certificate of Analytical Results 613313

LT Environmental, Inc., Arvada, CO

Legg Federal 001

Sample Id:	**SS01A**	Matrix:	Soil	Date Received:	02.04.19 08.00
Lab Sample Id:	613313-001	Date Collected:	01.28.19 08.40	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.04.19 11.00	Basis:	Wet Weight
Seq Number:	3078044				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.04.19 16.57	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.04.19 16.57	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.04.19 16.57	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.04.19 16.57	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.04.19 16.57	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.04.19 16.57	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.04.19 16.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	125	%	70-130	02.04.19 16.57	
1,4-Difluorobenzene	540-36-3	96	%	70-130	02.04.19 16.57	

Certificate of Analytical Results 613313

LT Environmental, Inc., Arvada, CO

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Sample Id:	**SS02A**	Matrix:	Soil	Date Received:	02.04.19 08.00
Lab Sample Id:	613313-002	Date Collected:	01.28.19 09.15	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.04.19 15.00	Basis:	Wet Weight
Seq Number:	3078004				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	02.04.19 21.36	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.04.19 11.00	Basis:	Wet Weight
Seq Number:	3078102				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	02.04.19 19.19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	02.04.19 19.19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	02.04.19 19.19	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	02.04.19 19.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	02.04.19 19.19	
o-Terphenyl	84-15-1	90	%	70-135	02.04.19 19.19	

Certificate of Analytical Results 613313

LT Environmental, Inc., Arvada, CO

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Sample Id:	**SS02A**	Matrix:	Soil	Date Received:	02.04.19 08.00
Lab Sample Id:	613313-002	Date Collected:	01.28.19 09.15	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.04.19 11.00	Basis:	Wet Weight
Seq Number:	3078044				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.04.19 17.18	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.04.19 17.18	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.04.19 17.18	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.04.19 17.18	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.04.19 17.18	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	02.04.19 17.18	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.04.19 17.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	90	%	70-130	02.04.19 17.18	
4-Bromofluorobenzene	460-00-4	117	%	70-130	02.04.19 17.18	

Certificate of Analytical Results 613313

LT Environmental, Inc., Arvada, CO

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Sample Id:	**SS03A**	Matrix:	Soil	Date Received:	02.04.19 08.00
Lab Sample Id:	613313-003	Date Collected:	01.28.19 09.35	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.04.19 15.00	Basis:	Wet Weight
Seq Number:	3078004				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	02.04.19 21.42	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.04.19 11.00	Basis:	Wet Weight
Seq Number:	3078102				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.04.19 19.39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.04.19 19.39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	02.04.19 19.39	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.04.19 19.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	02.04.19 19.39	
o-Terphenyl	84-15-1	85	%	70-135	02.04.19 19.39	

Certificate of Analytical Results 613313

LT Environmental, Inc., Arvada, CO

Legg Federal 001

Sample Id:	**SS03A**	Matrix:	Soil	Date Received:	02.04.19 08.00
Lab Sample Id:	613313-003	Date Collected:	01.28.19 09.35	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.04.19 11.00	Basis:	Wet Weight
Seq Number:	3078044				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	02.04.19 18.43	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	02.04.19 18.43	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	02.04.19 18.43	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	02.04.19 18.43	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	02.04.19 18.43	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	02.04.19 18.43	U	1
Total BTEX		<0.00201	0.00201	mg/kg	02.04.19 18.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	80	%	70-130	02.04.19 18.43	
4-Bromofluorobenzene	460-00-4	91	%	70-130	02.04.19 18.43	

Certificate of Analytical Results 613313

LT Environmental, Inc., Arvada, CO

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Sample Id:	**SS04A**	Matrix:	Soil	Date Received:	02.04.19 08.00
Lab Sample Id:	613313-004	Date Collected:	01.28.19 09.55	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.04.19 15.00	Basis:	Wet Weight
Seq Number:	3078004				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**7.61**	4.99	mg/kg	02.04.19 21.48		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.04.19 11.00	Basis:	Wet Weight
Seq Number:	3078102				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.04.19 19.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.04.19 19.59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	02.04.19 19.59	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.04.19 19.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	02.04.19 19.59	
o-Terphenyl	84-15-1	95	%	70-135	02.04.19 19.59	

Certificate of Analytical Results 613313

LT Environmental, Inc., Arvada, CO

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Sample Id:	**SS04A**	Matrix:	Soil	Date Received:	02.04.19 08.00
Lab Sample Id:	613313-004	Date Collected:	01.28.19 09.55	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.04.19 11.00	Basis:	Wet Weight
Seq Number:	3078044				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.04.19 19.05	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.04.19 19.05	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.04.19 19.05	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.04.19 19.05	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.04.19 19.05	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	02.04.19 19.05	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.04.19 19.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	90	%	70-130	02.04.19 19.05	
4-Bromofluorobenzene	460-00-4	96	%	70-130	02.04.19 19.05	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 613313

LT Environmental, Inc.

Legg Federal 001

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3078004 — Matrix: Solid — Date Prep: 02.04.19
MB Sample Id: 7671027-1-BLK — LCS Sample Id: 7671027-1-BKS — LCSD Sample Id: 7671027-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	256	102	262	105	90-110	2	20	mg/kg	02.04.19 19:08	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3078004 — Matrix: Soil — Date Prep: 02.04.19
Parent Sample Id: 613311-001 — MS Sample Id: 613311-001 S — MSD Sample Id: 613311-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	278	249	513	94	531	102	90-110	3	20	mg/kg	02.04.19 19:26	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3078004 — Matrix: Soil — Date Prep: 02.04.19
Parent Sample Id: 613312-004 — MS Sample Id: 613312-004 S — MSD Sample Id: 613312-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	664	250	943	112	927	105	90-110	2	20	mg/kg	02.04.19 20:56	X

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3078102 — Matrix: Solid — Date Prep: 02.04.19
MB Sample Id: 7671081-1-BLK — LCS Sample Id: 7671081-1-BKS — LCSD Sample Id: 7671081-1-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	826	83	951	95	70-135	14	20	mg/kg	02.04.19 13:04	
Diesel Range Organics (DRO)	<8.13	1000	918	92	1070	107	70-135	15	20	mg/kg	02.04.19 13:04	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	102		119		125		70-135	%	02.04.19 13:04
o-Terphenyl	104		115		127		70-135	%	02.04.19 13:04

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 613313

LT Environmental, Inc.

Legg Federal 001

Analytical Method: TPH by SW8015 Mod | Prep Method: TX1005P
Seq Number: 3078102 | Matrix: Soil | Date Prep: 02.04.19
Parent Sample Id: 613311-001 | MS Sample Id: 613311-001 S | MSD Sample Id: 613311-001 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)	13.6	999	827	81	849	84	70-135	3	20	mg/kg	02.04.19 14:03	
Diesel Range Organics (DRO)	<8.12	999	867	87	885	89	70-135	2	20	mg/kg	02.04.19 14:03	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	113		115		70-135	%	02.04.19 14:03
o-Terphenyl	110		111		70-135	%	02.04.19 14:03

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3078044 | Matrix: Solid | Date Prep: 02.04.19
MB Sample Id: 7671062-1-BLK | LCS Sample Id: 7671062-1-BKS | LCSD Sample Id: 7671062-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.107	107	0.111	111	70-130	4	35	mg/kg	02.04.19 09:33	
Toluene	<0.00199	0.0996	0.0879	88	0.0880	88	70-130	0	35	mg/kg	02.04.19 09:33	
Ethylbenzene	<0.00199	0.0996	0.101	101	0.108	108	70-130	7	35	mg/kg	02.04.19 09:33	
m,p-Xylenes	<0.00398	0.199	0.201	101	0.223	112	70-130	10	35	mg/kg	02.04.19 09:33	
o-Xylene	<0.00199	0.0996	0.0886	89	0.0964	96	70-130	8	35	mg/kg	02.04.19 09:33	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	83		109		112		70-130	%	02.04.19 09:33
4-Bromofluorobenzene	93		99		107		70-130	%	02.04.19 09:33

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3078044 | Matrix: Soil | Date Prep: 02.04.19
Parent Sample Id: 613340-001 | MS Sample Id: 613340-001 S | MSD Sample Id: 613340-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.0676	68	0.0744	75	70-130	10	35	mg/kg	02.04.19 12:39	X
Toluene	<0.00199	0.0994	0.0546	55	0.0622	62	70-130	13	35	mg/kg	02.04.19 12:39	X
Ethylbenzene	<0.00199	0.0994	0.0672	68	0.0762	76	70-130	13	35	mg/kg	02.04.19 12:39	X
m,p-Xylenes	<0.00398	0.199	0.130	65	0.141	71	70-130	8	35	mg/kg	02.04.19 12:39	X
o-Xylene	<0.00199	0.0994	0.0588	59	0.0676	68	70-130	14	35	mg/kg	02.04.19 12:39	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	127		119		70-130	%	02.04.19 12:39
4-Bromofluorobenzene	98		103		70-130	%	02.04.19 12:39

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

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]
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: 613313

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 Littrel
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:	Carlsbad NM
Phone:	432.704.5178	Email:	rmcafee@ltenv.com

Work Order Comments

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

Project Name:	Legg Federal 001	Turn Around	
Project Number:	01241 8024	Routine	~~X~~ ON
P.O. Number:	2RP-3634	Rush:	Yes
Sampler's Name:	Robert McAfee	Due Date:	2/5/19

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	2.1/2.0	Thermometer ID	
Received Intact:	(Yes) No		R8
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.1
Sample Custody Seals:	Yes No (N/A)	Total Containers:	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)	Sample Comments
SS01A	S	01/28/19	0840	4'	1	x	x	x	discrete
SS02A	↓	↓	0915	↓	↓	x	x	x	↓
SS03A			0935			x	x	x	
SS04A	↓	↓	0955	↓	↓	x	x	x	

Work Order Notes

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

ANALYSIS REQUEST

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			2/1/19 @ 1350	2		Feb 2 2019 15:30
3			2/4/19 0900	4		
5				6		

Revised Date 051418 Rev. 2018.1

7743 7545 7990

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

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

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 02/04/2019 08:00:00 AM

Work Order #: 613313

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

Temperature Measuring device used : R8

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 02/04/2019

Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 02/04/2019

Jessica Kramer

ATTACHMENT 4: PHOTOGRAPHIC LOG

View of the release area.

Project: 012918024	XTO Energy, Inc. Legg Federal 001 (2RP-3634)	Advancing Opportunity
September 5, 2018	Photographic Log	

Southeast facing view of release area beyond berm.

Project: 012918024	XTO Energy, Inc. Legg Federal 001 (2RP-3634)	LTE Advancing Opportunity
October 28, 2018	Photographic Log	

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 190514

CONDITIONS

Operator: BOPCO, L.P. 6401 Holiday Hill Rd Midland, TX 79707	OGRID: 260737
	Action Number: 190514
	Action Type: [IM-SD] Incident File Support Doc (ENV) (IM-BNF)

CONDITIONS

Created By	Condition	Condition Date
bhall	None	2/24/2023