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

February 8, 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 Numbers 2RP-2761, 2RP-3741, and 2RP-3744
Eddy County, New Mexico

Dear Mr. Billings:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following report detailing the excavation of impacted soil and 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 excavation and soil sampling activities was to address impacts to soil after three separate events caused the release of crude oil and produced water in the process equipment area of the production facility.

On January 24, 2015, a gasket failed on the heater-treater fire tube. Production was diverted, and the gasket was replaced. The release pooled in an area measuring approximately 1,640 square feet and misted an area measuring approximately 5,750 square feet. The release was contained within the process equipment berm. Approximately 18 barrels (bbls) of crude oil and 5 bbls of produced water were released. The free-standing fluids were recovered with a vacuum truck; approximately 3 bbls of crude oil and 3 bbls of produced water were recovered. 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 January 26, 2015, and was assigned Remediation Permit (RP) Number 2RP-2761 (Attachment 1).

On June 3, 2016, a 3-phase vessel gas supply pot failed, causing fluids to release from the pressure relief valve on the vessel. The 3-phase vessel was isolated for repair, and the well remained flowing to a 2-phase vessel. Approximately 45 bbls of crude oil and 18 bbls of produced water were released. The release affected approximately 14,940 square feet of the caliche well pad. The free-standing fluids were recovered with a vacuum truck; approximately 30 bbls of crude oil and 10 bbls of produced water were recovered. The former operator reported the release to the NMOCD on a Release Notification and Corrective Action Form C-141 on June 14, 2016, and was assigned RP Number 2RP-3741 (Attachment 1).

On June 9, 2016, a manway gasket failed on the test heater unit. The unit was drained and isolated for repair. Approximately 0.5 bbls of crude oil and 9 bbls of produced water were

released; no fluids were recovered. The leak affected approximately 4,056 square feet of the caliche well pad; most of the area was impacted by overspray. The former operator reported the release to the NMOCD on a Release Notification and Corrective Action Form C-141 on June 14, 2016, and was assigned RP Number 2RP-3744 (Attachment 1).

Although the releases occurred while the facility was operated by the previous operator, XTO is the current operator and is committed to addressing any releases that remain unresolved. Since the three releases occurred in the process equipment area, excavation and sampling activities were completed to address and close the three releases simultaneously.

The three releases are 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 releases are categorized as Tier II sites 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 excavation activities and results of the confirmation soil sampling events, XTO is submitting this closure report and requesting no further action for these release events.

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. Ground surface elevation at the water well location is approximately 3,285 feet, which is 13 feet lower in elevation than 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 February 8, 2018, an LTE scientist collected eight preliminary soil samples (SS1 through SS8) to assess the lateral extent of soil impacts within the three release areas. 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 sample locations, depicted on Figure 2, were selected based on information provided on the initial Form C-141s and field observations. 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 indicated that soil samples SS1, SS2, and SS5 exceeded the NMOCD Table 1 closure criteria for GRO/DRO and TPH. Laboratory analytical results indicated that soil samples SS3, SS4, and SS6 through SS8 were compliant with the NMOCD Table 1 closure criteria for BTEX, TPH, and chloride.

On August 23 and 24, 2018, an LTE scientist returned to the site to collect additional preliminary soil samples (SS9 through SS22) from a depth of 0.5 feet bgs to further delineate the lateral extent of soil impacts. One soil sample (SS5A) was collected from a depth of 1 foot bgs to vertically delineate the extent of soil impacts in the area of preliminary soil sample SS5. The soil samples were collected, handled, and analyzed as described above and submitted to Xenco in Midland, Texas. Soil sample SS19 was collected for field screening purposes only and was not submitted for laboratory analysis.

Laboratory analytical results indicated that soil samples SS12, SS16, and SS21 exceeded the NMOCD Table 1 closure criteria for TPH and/or GRO/DRO. Laboratory analytical results indicated that soil samples SS5A, SS9 through SS11, SS13 through SS15, SS17 through SS20, and SS22 were compliant with the NMOCD Table 1 closure criteria for BTEX, TPH, and chloride. Soil sample locations are depicted on Figure 2, analytical results are summarized in Table 1, and the laboratory analytical reports are included in Attachment 2.

Based on the soil sample laboratory analytical results, excavation of impacted soil was required in the areas around preliminary soil samples SS1, SS2, SS5, SS12, SS16, and SS21.

EXCAVATION ACTIVITIES

During August 2018 and January 2019, LTE personnel returned to the Site to oversee excavation of impacted soil as indicated by visual staining, field screening, and laboratory analytical results exceeding the NMOCD Table 1 closure criteria for TPH and/or GRO/DRO in preliminary soil samples SS1, SS2, SS5, SS12, SS16, and SS21. To delineate hydrocarbon and chloride impacts to soil and direct excavation activities, LTE screened soil samples using a PID and Hach® chloride QuanTab® test strips. Following removal of impacted soil, LTE collected confirmation soil samples from the final excavation extents. The confirmation samples were collected as 5-point composite soil samples to comply with 19.15.29 NMAC, dated August 14, 2018.

Excavation and scraping activities were completed in the area around preliminary soil sample SS5, and confirmation soil samples FS01 and FS02 were collected from the floor of the excavation at 1 foot bgs. Excavation activities were completed in the area around preliminary soil samples SS1 and SS12, and confirmation soil samples FS03 and FS04 were collected from the floor of the excavation at 1.5 feet bgs. Excavation activities were completed in the area around preliminary soil sample SS21, and confirmation soil sample FS05 was collected from the floor of the excavation at 3 feet bgs. Excavation activities were completed in the area around preliminary soil sample SS2, and confirmation soil sample FS06 was collected from the floor of the excavation at 1 foot bgs. Excavation activities were completed in the area around preliminary soil sample SS16, and confirmation soil sample FS07 was collected from the floor of the excavation at 0.67 feet bgs.

The 5-point composite floor samples were collected by depositing 5 aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Based on the size of the excavations, each composite floor sample represented an area of 200 square feet or less. The horizontal extent of each excavation and associated confirmation soil samples are illustrated on Figure 3.

On January 21, 2019, boreholes were advanced by hand auger at three preliminary soil sample locations (SS9, SS11, and SS14) to confirm the vertical extent of soil impacts within the release area. Soil was field screened at 1-foot intervals in each borehole. One soil sample was collected for laboratory analysis from each borehole based on the field screening results. Soil sample SS09A was collected at 4 feet bgs from the SS9 location; soil sample SS11A was collected at 2 feet bgs from the SS11 location; and soil sample SS14A was collected at 4 feet bgs from the SS14 location. Hand auger refusal was encountered at 2 feet bgs in borehole SS11. The excavation and borehole soil samples were collected, handled, and analyzed as described above and submitted to Xenco in Midland, Texas. Soil sample locations are depicted on Figure 3, and soil sample logs are included in Attachment 3.

The combined excavations measured approximately 900 square feet in area and were completed to depths ranging from 0.67 feet to 3 feet bgs. A total of approximately 25 cubic yards of impacted

soil were removed from the three excavations. The impacted soil was transported and properly disposed of at the Lea Land Disposal Facility in Carlsbad, New Mexico.

ANALYTICAL RESULTS

Laboratory analytical results confirmed that the borehole soil samples and soil samples collected from the final excavation extents were compliant with the NMOCD Table 1 closure criteria for BTEX, TPH, and chloride. Laboratory analytical results indicated preliminary soil samples SS1, SS2, SS5, SS12, SS16, and SS21 exceeded the NMOCD Table 1 closure criteria for TPH and/or GRO/DRO. Impacted soil was excavated from the release areas and laboratory analytical results indicated that final confirmation soil samples FS01 through FS07 were compliant with the NMOCD Table 1 closure criteria for BTEX, TPH, and chloride. Laboratory analytical results are presented on Figure 3 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 areas and laboratory analytical results for the confirmation soil samples collected from the final excavation extents indicated that BTEX, TPH, and chloride concentrations were compliant with the NMOCD Table 1 closure criteria. Initial response efforts and excavation of impacted soil have mitigated impacts at this Site. XTO requests no further action for RP Numbers 2RP-2761, 2RP-3741, and 2RP-3744. Upon approval of the no further action request, XTO will backfill the excavations with material purchased locally and recontour the Site to match pre-existing site conditions. An updated NMOCD Form C-141 for each release is included in Attachment 1. A photographic log of the Site is included in Attachment 4.

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

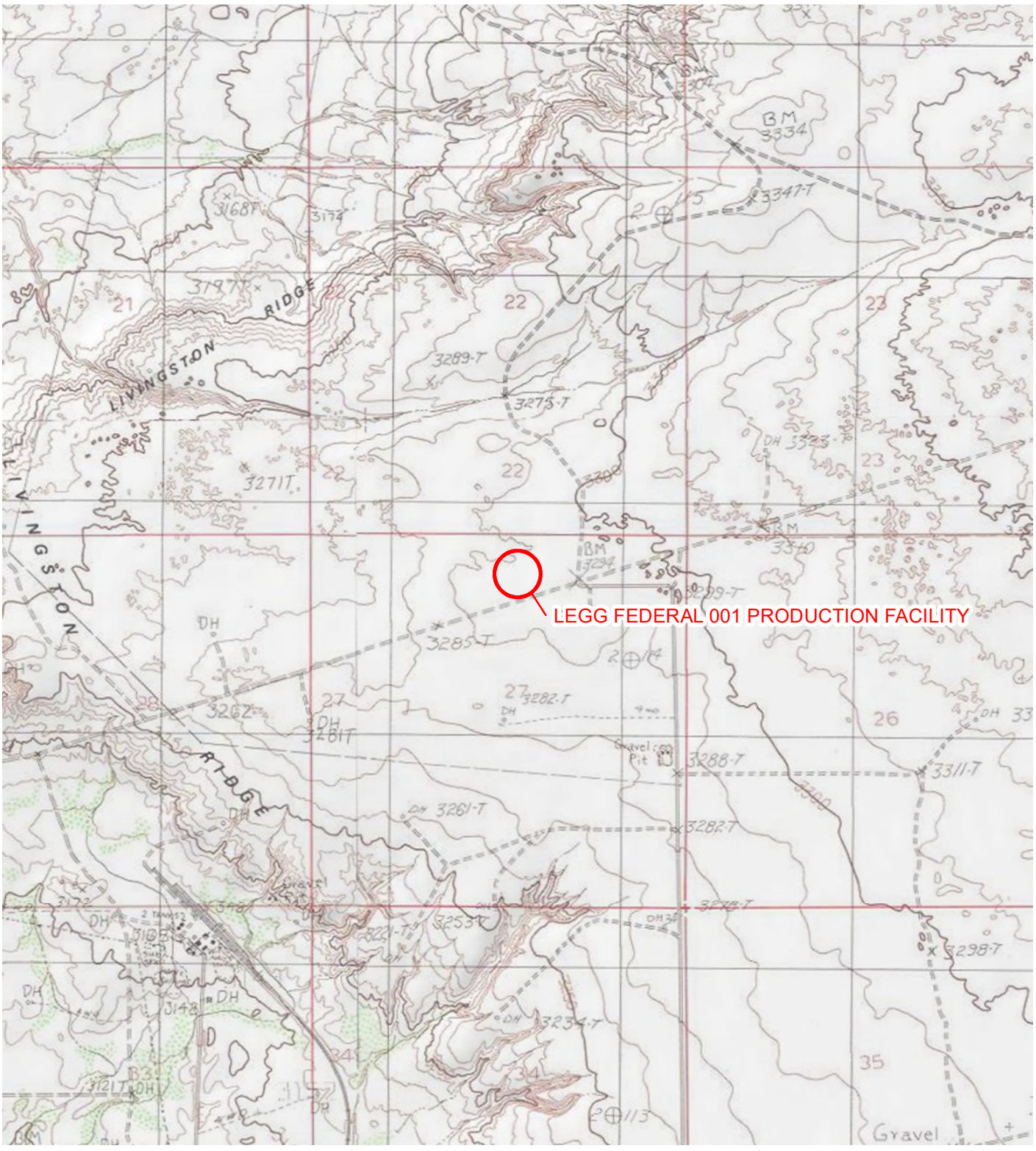
Ashley L. Ager, P.G.
Senior Geologist

cc: Kyle Littrell, XTO
Michael Bratcher, NMOCD
Jim Amos, BLM
Deborah Mckinney, BLM

Attachments:

Figure 1	Site Location Map
Figure 2	Initial Soil Sample Locations
Figure 3	Final Soil Sample Locations
Table 1	Soil Analytical Results
Attachment 1	Initial/Final NMOCD Form C-141 (2RP-2761, 2RP-3741, and 2RP-3744)
Attachment 2	Laboratory Analytical Reports
Attachment 3	Soil Sample Logs
Attachment 4	Photographic Log

FIGURES



LEGEND

SITE LOCATION

IMAGE COURTESY OF ESRI/USGS

0 2,000 4,000

Feet

N

NEW MEXICO

NOTE: REMEDIATION PERMIT NUMBERS 2RP-2761, 2RP-3741, & 2RP-3744.

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

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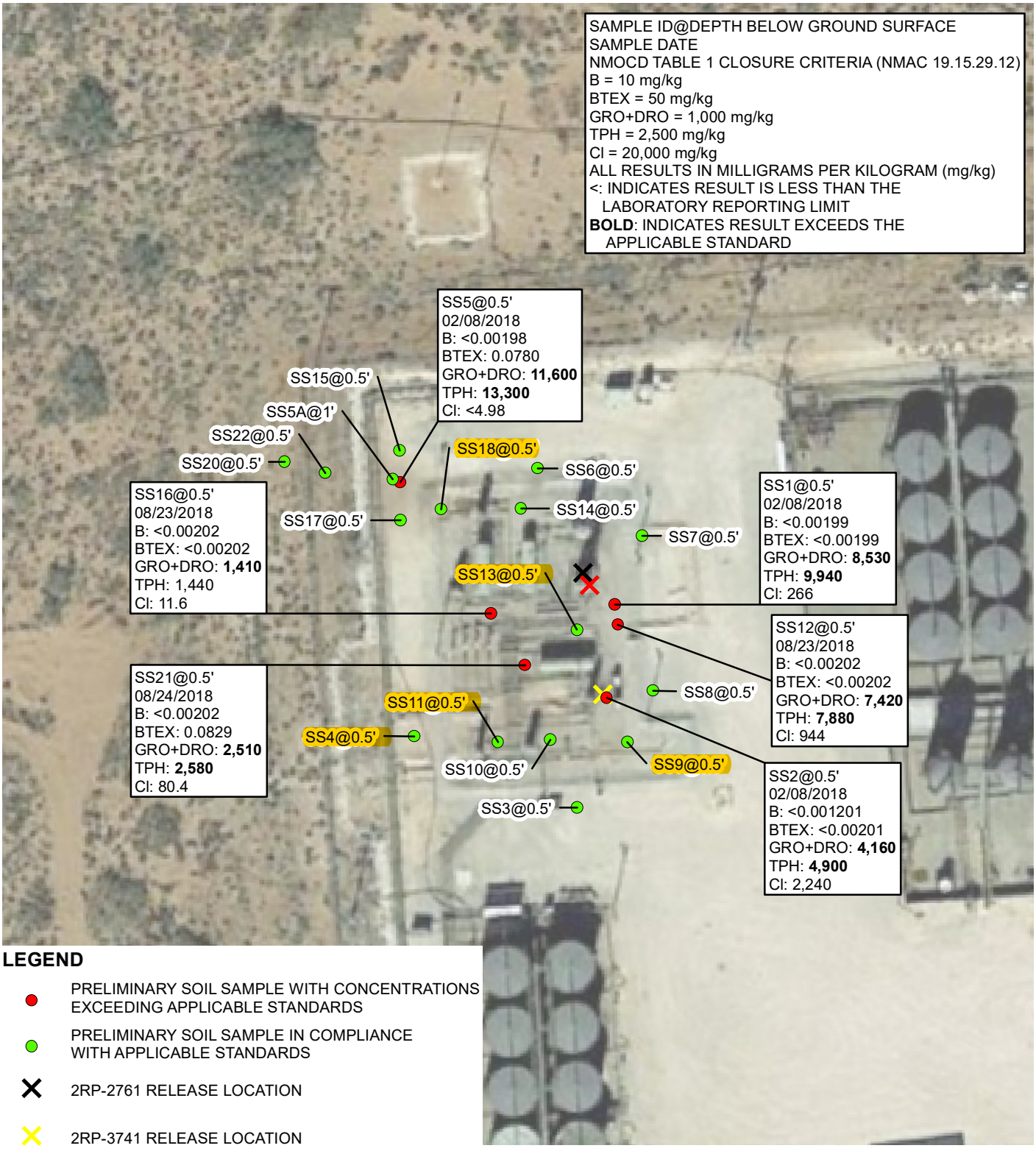

LEGEND

- PRELIMINARY SOIL SAMPLE WITH CONCENTRATIONS EXCEEDING APPLICABLE STANDARDS
- PRELIMINARY SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE STANDARDS
- 2RP-2761 RELEASE LOCATION
- 2RP-3741 RELEASE LOCATION
- 2RP-3744 RELEASE LOCATION

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 NUMBERS 2RP-2761, 2RP-3741, & 2RP-3744.

IMAGE COURTESY OF GOOGLE EARTH 2017

0 60 120
Feet

N

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

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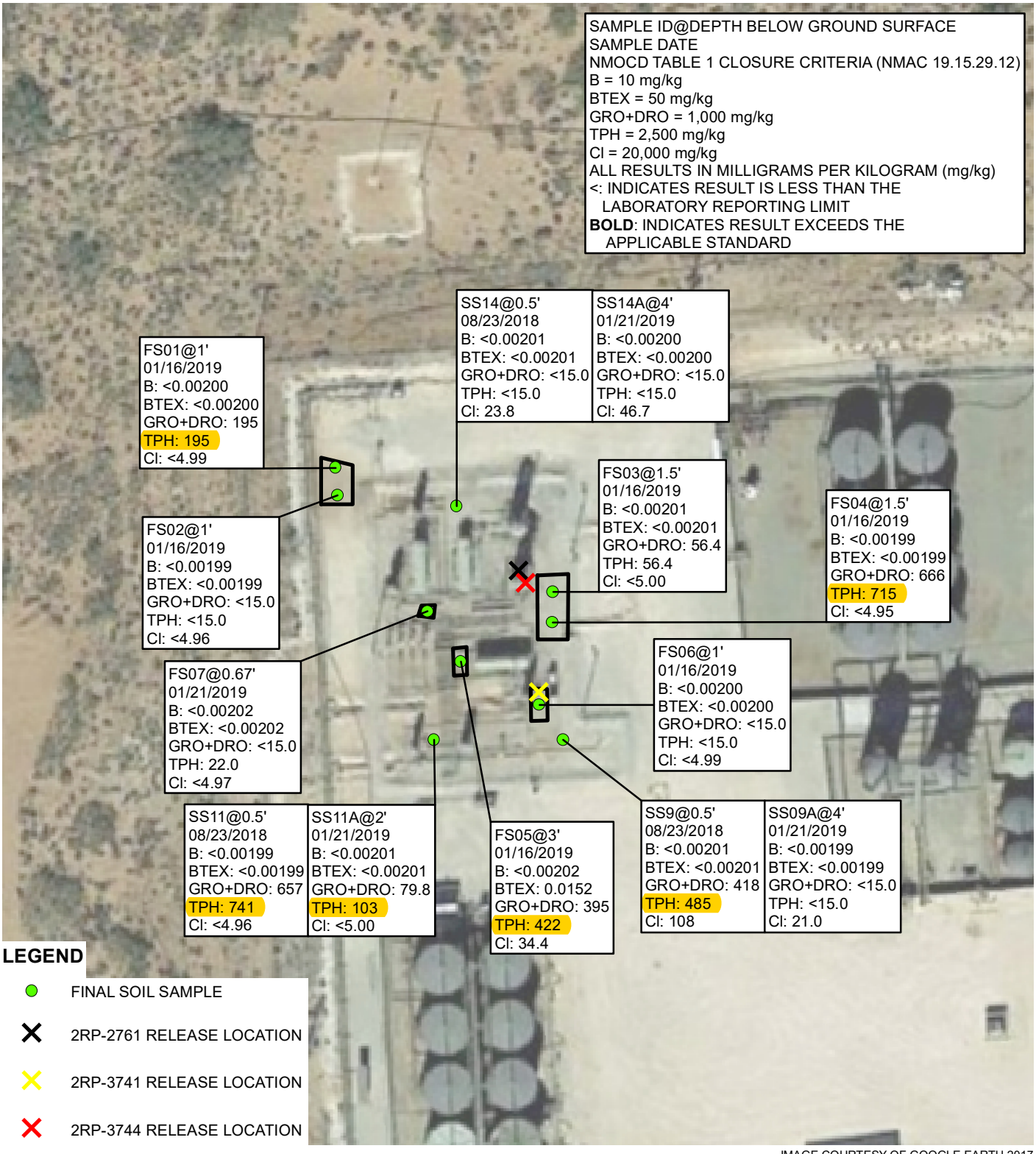

B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
GRO – GASOLINE RANGE ORGANICS
DRO – DIESEL RANGE ORGANICS
TPH – TOTAL PETROLEUM HYDROCARBONS
Cl - CHLORIDE
NMAC – NEW MEXICO ADMINISTRATIVE CODE
NMOCD – NEW MEXICO OIL CONSERVATION DIVISION
NOTE: REMEDIATION PERMIT NUMBERS 2RP-2761, 2RP-3741, & 2RP-3744.

FIGURE 3
FINAL SOIL SAMPLE LOCATIONS
LEGG FEDERAL 001 PRODUCTION FACILITY
UNIT B SEC 27 T22S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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TABLES

TABLE 1
SOIL ANALYTICAL RESULTS

LEGG FEDERAL 001 PRODUCTION FACILITY
REMEDIATION PERMIT NUMBERS 2RP-2761, 2RP-3741, and 2RP-3744
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)
SS1	0.5	02/08/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<74.9	8,530	1,410	**8,530**	**9,940**	266
SS2	0.5	02/08/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	4,160	743	**4,160**	**4,900**	2,240
SS3	0.5	02/08/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	64.2	<15.0	64.2	64.2	6.10
SS4	0.5	02/08/2018	<0.00200	<0.00200	0.00212	0.00472	0.00684	<15.0	232	39.2	232	271	15.4
SS5	0.5	02/08/2018	<0.00198	0.00288	0.0337	0.0414	0.0780	457	11,100	1,760	**11,600**	**13,300**	<4.98
SS6	0.5	02/08/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	44.6	33.2	44.6	77.8	298
SS7	0.5	02/08/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	8.48
SS8	0.5	02/08/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	22.8
SS10	0.5	08/23/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	67.2	<15.0	67.2	67.2	10.6
SS11	0.5	08/23/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	657	83.7	657	741	<4.96
SS12	0.5	08/23/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<74.7	7,420	455	**7,420**	**7,880**	944
SS13	0.5	08/23/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	158	<15.0	158	158	546
SS14	0.5	08/23/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	23.8
SS15	0.5	08/23/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	18.7	<15.0	18.7	18.7	<4.99
SS16	0.5	08/23/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	1,410	27.4	**1,410**	1,440	11.6
SS9	0.5	08/23/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	418	67.3	418	485	108
SS17	0.5	08/24/2018	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	<4.95
SS18	0.5	08/24/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	181	38.3	181	219	64.6
SS20	0.5	08/24/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	<4.96
SS21	0.5	08/24/2018	<0.00202	0.00870	0.0127	0.0615	0.0829	148	2,360	70.7	**2,510**	**2,580**	80.4
SS22	0.5	08/24/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	45.8	<15.0	45.8	45.8	<5.00
SS5A	1	08/24/2018	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<14.9	<14.9	<14.9	<14.9	<14.9	<4.95
FS01	1	01/16/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	195	<15.0	195	195	<4.99
FS02	1	01/16/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	<4.96
FS03	1.5	01/16/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	56.4	<15.0	56.4	56.4	<5.00
FS04	1.5	01/16/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	666	48.5	666	715	<4.95

TABLE 1 (Continued)
SOIL ANALYTICAL RESULTS

LEGG FEDERAL 001 PRODUCTION FACILITY
REMEDIATION PERMIT NUMBERS 2RP-2761, 2RP-3741, and 2RP-3744
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)
FS05	3	01/16/2019	<0.00202	<0.00202	0.00370	0.0115	0.0152	<15.0	395	26.7	395	422	34.4
FS06	1	01/16/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<4.99
SS09A	4	01/21/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	21.0
SS11A	2	01/21/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	79.8	23.2	79.8	103	<5.00
SS14A	4	01/21/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	46.7
FS07	0.67	01/21/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	22.0	22.0	<15.0	22.0	<4.97
NMOCD Table 1 Closure Criteria			10	NE	NE	NE	50	NE	NE	NE	1,000	2,500	20,000

Notes:
bgs - below ground surface
BTEX - benzene, toluene, ethylbenzene, and total xylenes
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 an off-pad pasture area; closure criteria for chloride concentrations in contaminated off-pad soil less than 4 feet bgs 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-2761, 2RP-3741, AND 2RP-3744)

NM OIL CONSERVATION
ARTESIA DISTRICT
JAN 26 2015
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 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC

Release Notification and Corrective Action

nAB1502726789

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: BOPCO, L.P. 260737	Contact: Tony Savoie
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 575-887-7329
Facility Name: Legg Federal Tank Battery	Facility Type: Production Facility

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 N 32.369047 **Longitude** W 103.867870

NATURE OF RELEASE

Type of Release: Crude oil and produced water	Volume of Release: 18 bbls crude oil and 5 bbls PW	Volume Recovered: 3 bbls crude oil and 3 bbls PW
Source of Release: Heater-treater	Date and Hour of Occurrence: 1/24/15 time unknown	Date and Hour of Discovery: 1/24/15 at 4:00 a.m. approximately 11:00 a.m.
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? M. Bratcher, H. Patterson, and Jim Amos	
By Whom? Tony Savoie	Date and Hour 1/24/14 at 11:42 a.m.	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* A gasket failed on the hearter-treater fire tube. The production was diverted and the gasket was replaced.

Describe Area Affected and Cleanup Action Taken.*
The release pooled up in an area measuring about 1640 sq. ft inside the bermed area, and an area measuring approximately 5,750 inside the bermed area was misted with crude oil. All of the free standing fluid was picked up with a vacuum truck. The stained area will be left as is pending remediation. The impacted area will be cleaned up in accordance to the NMOCD and BLM remediation guidelines.

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

Signature: Tony Savoie

Printed Name: Tony Savoie

Title: Waste Management and Remediation Specialist

E-mail Address: tasavoie@basspet.com

Date: 1/26/15 Phone: 432-556-8730

OIL CONSERVATION DIVISION

Signed By Mike Bratcher

Approved by Environmental Specialist:

Approval Date: 1/27/15 Expiration Date: N/A

Conditions of Approval: Remediation per O.C.D. Rules & Guidelines SUBMIT REMEDIATION PROPOSAL NO LATER THAN: 2/27/15 ☐ Attached

2RP-2761

* 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-2761
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-2761
Contact mailing address 522 W. Mermod, Suite 704 Carlsbad, NM 88220	

Location of Release Source

Latitude 32.369047 Longitude -103.867870
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Legg Federal Tank Battery	Site Type: Production Facility
Date Release Discovered: 1/24/15	API# *(if applicable)* 30-015-04734

Unit Letter	Section	Township	Range	County
B	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) 18	Volume Recovered (bbls) 3
☒ Produced Water	Volume Released (bbls) 5	Volume Recovered (bbls) 3
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

A gasket failed on the heater-treater fire tube. The production was diverted and the gasket was replaced. The release pooled up in an area measuring about 1640 sq. ft inside the bermed area, and an area measuring approximately 5,750 inside the bermed area was misted with crude oil. All of the free-standing fluid was picked up with a vacuum truck.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-2761
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?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

Initial Response

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

☒ 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: 2/8/2019

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

OCD Only

Received by: Date:

Incident ID	
District RP	2RP-2761
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-2761
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: 2/8/2019

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

OCD Only

Received by: Date:

Form C-141 State of New Mexico
Page 5 Oil Conservation Division

Incident ID	
District RP	2RP-2761
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: 2/8/2019

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: Ashley Maxwell Date: 3/22/2023

Printed Name: Ashley Maxwell Title: Environmental Specialist

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

State of New Mexico
Energy Minerals and Natural Resources

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

NM OIL CONSERVATION
ARTESIA DISTRICT
JUN 14 2016
RECEIVED

Form C-141
Revised August 8, 2011
Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

nAB1611673278

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: BOPCO, L.P. 260737	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	540	North	2300	East	Eddy

Latitude 32.368906° Longitude -103.867843°

NATURE OF RELEASE

Type of Release: Crude Oil and Produced Water	Volume of Release: 45 bbls oil, 18 bbls pw	Volume Recovered: 30 bbls oil, 10 bbls pw
Source of Release: Three phase vessel	Date and Hour of Occurrence: 6/3/2016 time unknown	Date and Hour of Discovery: 6/3/2016 7 pm
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher/Heather Patterson (NMOCD), Shelly Tucker (BLM)	
By Whom? Amy Ruth	Date and Hour: 6/4/2016 11:14 am	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

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

Describe Cause of Problem and Remedial Action Taken.*
JRU 12H well surged and the three phase vessel gas supply pot failed. Fluids exited the pressure relief valve on the vessel. The three phase vessel was isolated for repair and the well was left flowing to the two phase vessel of the test train.

Describe Area Affected and Cleanup Action Taken.*
The leak affected 14,940 sq. ft. of location caliche pad. Standing fluids were recovered.

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

Signature:	OIL CONSERVATION DIVISION
Printed Name: Amy C. Ruth	Approved by Environmental Specialist:
Title: EHS Remediation Specialist	Approval Date: 6/14/16 Expiration Date: N/A
E-mail Address: ACRuth@basspet.com	Conditions of Approval: Remediation per O.C.D. Rules & Guidelines SUBMIT REMEDIATION PROPOSAL NO LATER THAN: 7/15/16 ☐ Attached
Date: 6/14/2016 Phone: 432-661-0571	2RP-3741

* Attach Additional Sheets If Necessary

District I
1625 N. French Dr., Hobbs, NM 88240
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1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	
District RP	2RP-3741
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-3741
Contact mailing address 522 W. Mermod, Suite 704 Carlsbad, NM 88220	

Location of Release Source

Latitude 32.368906 Longitude -103.867843
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Legg Federal Tank Battery	Site Type Exploration and Production
Date Release Discovered 6/3/2016	API# *(if applicable)* 30-015-04734

Unit Letter	Section	Township	Range	County
B	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) 45	Volume Recovered (bbls) 30
☒ Produced Water	Volume Released (bbls) 18	Volume Recovered (bbls) 10
	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

JRU 12H well surged and the three-phase vessel gas supply pot failed. Fluids exited the pressure relief valve on the vessel. The three-phase vessel was isolated for repair and the well was left flowing to the two-phase vessel of the test train. The leak affected 14,940 sq. ft. of location caliche pad. Standing fluids were recovered.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-3741
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 was greater than 25 bbls.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? By: Amy Ruth To: Mike Bratcher/Heather Patterson (NMOCD), Shelly Tucker (BLM)	

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: 2/8/2019

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

OCD Only

Received by: Date:

Incident ID	
District RP	2RP-3741
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.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-3741
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: 2/8/2019

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-3741
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: 2/8/2018

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: Ashley Maxwell Date: 3/22/2023

Printed Name: Ashley Maxwell Title: Environmental Specialist

NM OIL CONSERVATION
ARTESIA DISTRICT

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
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State of New Mexico
Energy Minerals and Natural Resources

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

JUN 14 2016

RECEIVED

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

nAB1611674117

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: BOPCO, L.P. 260737	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	540	North	2300	East	Eddy

Latitude 32.369037° Longitude -103.867859°

NATURE OF RELEASE

Type of Release: Crude Oil and Produced Water	Volume of Release: 0.5 bbl oil, 9 bbls PW	Volume Recovered: 0 bbl
Source of Release: Test Heater	Date and Hour of Occurrence: 6/9/2016 time unknown	Date and Hour of Discovery: 6/9/2016 7 pm
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom? N/A	
By Whom? N/A	Date and Hour N/A	
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.*
A manway gasket failed on the test heater unit. Unit was drained and isolated for repair.

Describe Area Affected and Cleanup Action Taken.*
The leak affected 4,056 sq. ft. of caliche pad, most of which was an overspray.

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: Amy Ruth

Printed Name: Amy C. Ruth

Title: EHS Remediation Specialist

E-mail Address: ACRuth@basspet.com

Date: 6/14/2016 Phone: 432-661-0571

OIL CONSERVATION DIVISION

Approved by Environmental Specialist: Signed By Mike Bratcher

Approval Date: 6/14/16 Expiration Date: N/A

Conditions of Approval:
Remediation per O.C.D. Rules & Guidelines ☐
SUBMIT REMEDIATION PROPOSAL NO LATER THAN: 7/15/16

2RP-3744

* 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-3744
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-3744
Contact mailing address 522 W. Mermod, Suite 704 Carlsbad, NM 88220	

Location of Release Source

Latitude 32.369037 Longitude -103.867859
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Legg Federal Tank Battery	Site Type Exploration and Production
Date Release Discovered 6/9/2016	API# *(if applicable)* 30-015-04734

Unit Letter	Section	Township	Range	County
B	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) 0.5	Volume Recovered (bbls) 0
☒ Produced Water	Volume Released (bbls) 9	Volume Recovered (bbls) 0
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

A manway gasket failed on the test heater unit. Unit was drained and isolated for repair. The leak affected 4,056 sq. ft. of caliche pad. most of which was an overspray.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-3744
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?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

Initial Response

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

☒ 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: 2/8/2019

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-3744
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.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-3744
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: 2/8/2019

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

OCD Only

Received by: Date:

Incident ID	
District RP	2RP-3744
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: 2/8/2019

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: Ashley Maxwell Date: 3/22/2023

Printed Name: Ashley Maxwell Title: Environmental Specialist

ATTACHMENT 2: LABORATORY ANALYTICAL REPORTS

Analytical Report 575938

for

LT Environmental, Inc.

Project Manager: Adrian Baker

Legg Federal Tank Battery/30-015-04734

16-FEB-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-17-23), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab code: TX01468):
Texas (T104704295-17-15), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-17-13)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

16-FEB-18

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

Reference: XENCO Report No(s): **575938**
Legg Federal Tank Battery/30-015-04734
Project Address: NM

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 575938. 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. 575938 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
Odessa Laboratory Director

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

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

Sample Cross Reference 575938

LT Environmental, Inc., Arvada, CO

Legg Federal Tank Battery/30-015-04734

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS1	S	02-08-18 09:26	6 In	575938-001
SS2	S	02-08-18 09:28	6 In	575938-002
SS3	S	02-08-18 09:32	6 In	575938-003
SS4	S	02-08-18 09:35	6 In	575938-004
SS5	S	02-08-18 09:38	6 In	575938-005
SS6	S	02-08-18 09:41	6 In	575938-006
SS7	S	02-08-18 09:44	6 In	575938-007
SS8	S	02-08-18 09:47	6 In	575938-008

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Legg Federal Tank Battery/30-015-04734

Project ID:
Work Order Number(s): *575938*

Report Date: *16-FEB-18*
Date Received: *02/08/2018*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3041062 BTEX by EPA 8021B
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 575938-005.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 575938

LT Environmental, Inc., Arvada, CO

Project Name: Legg Federal Tank Battery/30-015-04734

Project Id:

Contact: Adrian Baker

Project Location: NM

Date Received in Lab: Thu Feb-08-18 05:35 pm

Report Date: 16-FEB-18

Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	575938-001		575938-002		575938-003		575938-004		575938-005		575938-006	
	Field Id:	SS1		SS2		SS3		SS4		SS5		SS6	
	Depth:	6- In		6- In		6- In		6- In		6- In		6- In	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Feb-08-18 09:26		Feb-08-18 09:28		Feb-08-18 09:32		Feb-08-18 09:35		Feb-08-18 09:38		Feb-08-18 09:41	
BTEX by EPA 8021B	**Extracted:**	Feb-12-18 12:00		Feb-12-18 12:00		Feb-12-18 12:00		Feb-12-18 12:00		Feb-12-18 12:00		Feb-12-18 12:00	
	Analyzed:	Feb-12-18 21:52		Feb-12-18 23:08		Feb-12-18 22:11		Feb-12-18 22:30		Feb-12-18 22:49		Feb-13-18 00:05	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00199	0.00199	<0.00201	0.00201	<0.00202	0.00202	<0.00200	0.00200	<0.00198	0.00198	<0.00202	0.00202
Toluene		<0.00199	0.00199	<0.00201	0.00201	<0.00202	0.00202	<0.00200	0.00200	0.00288	0.00198	<0.00202	0.00202
Ethylbenzene		<0.00199	0.00199	<0.00201	0.00201	<0.00202	0.00202	0.00212	0.00200	0.0337	0.00198	<0.00202	0.00202
m,p-Xylenes		<0.00398	0.00398	<0.00402	0.00402	<0.00403	0.00403	0.00472	0.00399	0.0414	0.00397	<0.00403	0.00403
o-Xylene		<0.00199	0.00199	<0.00201	0.00201	<0.00202	0.00202	<0.00200	0.00200	<0.00198	0.00198	<0.00202	0.00202
Total Xylenes		<0.00199	0.00199	<0.00201	0.00201	<0.00202	0.00202	0.00472	0.00200	0.0414	0.00198	<0.00202	0.00202
Total BTEX		<0.00199	0.00199	<0.00201	0.00201	<0.00202	0.00202	0.00684	0.00200	0.0780	0.00198	<0.00202	0.00202
Inorganic Anions by EPA 300	**Extracted:**	Feb-15-18 15:00		Feb-15-18 15:00		Feb-15-18 15:00		Feb-15-18 15:00		Feb-15-18 15:00		Feb-15-18 15:00	
	Analyzed:	Feb-15-18 17:46		Feb-15-18 17:57		Feb-15-18 18:03		Feb-15-18 18:08		Feb-15-18 18:13		Feb-15-18 18:19	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		266	4.98	2240	24.8	6.10	4.97	15.4	4.99	<4.98	4.98	298	4.93
TPH by SW8015 Mod	**Extracted:**	Feb-10-18 13:00		Feb-10-18 13:00		Feb-10-18 13:00		Feb-10-18 13:00		Feb-10-18 13:00		Feb-10-18 13:00	
	Analyzed:	Feb-11-18 23:45		Feb-12-18 08:21		Feb-12-18 00:26		Feb-12-18 00:47		Feb-12-18 01:07		Feb-12-18 01:28	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<74.9	74.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	457	74.8	<15.0	15.0
Diesel Range Organics (DRO)		8530	74.9	4160	15.0	64.2	15.0	232	15.0	11100	74.8	44.6	15.0
Oil Range Hydrocarbons (ORO)		1410	74.9	743	15.0	<15.0	15.0	39.2	15.0	1760	74.8	33.2	15.0
Total TPH		9940	74.9	4900	15.0	64.2	15.0	271	15.0	13300	74.8	77.8	15.0

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

Jessica Kramer
Odessa Laboratory Director

Final 1.000

Certificate of Analysis Summary 575938

LT Environmental, Inc., Arvada, CO

Project Name: Legg Federal Tank Battery/30-015-04734

Project Id:

Contact: Adrian Baker

Project Location: NM

Date Received in Lab: Thu Feb-08-18 05:35 pm

Report Date: 16-FEB-18

Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	575938-007		575938-008					
	Field Id:	SS7		SS8					
	Depth:	6- In		6- In					
	Matrix:	SOIL		SOIL					
	Sampled:	Feb-08-18 09:44		Feb-08-18 09:47					
BTEX by EPA 8021B	***Extracted:***	Feb-12-18 12:00		Feb-12-18 12:00					
	Analyzed:	Feb-13-18 00:25		Feb-13-18 00:44					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00200	0.00200	<0.00200	0.00200				
Toluene		<0.00200	0.00200	<0.00200	0.00200				
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200				
m,p-Xylenes		<0.00401	0.00401	<0.00399	0.00399				
o-Xylene		<0.00200	0.00200	<0.00200	0.00200				
Total Xylenes		<0.00200	0.00200	<0.00200	0.00200				
Total BTEX		<0.00200	0.00200	<0.00200	0.00200				
Inorganic Anions by EPA 300	***Extracted:***	Feb-15-18 15:00		Feb-15-18 15:00					
	Analyzed:	Feb-15-18 18:24		Feb-15-18 18:41					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		8.48	4.93	22.8	4.94				
TPH by SW8015 Mod	***Extracted:***	Feb-10-18 13:00		Feb-10-18 13:00					
	Analyzed:	Feb-12-18 01:49		Feb-12-18 02:09					
	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				
Oil Range Hydrocarbons (ORO)		<15.0	15.0	<15.0	15.0				
Total TPH		<15.0	15.0	<15.0	15.0				

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

Jessica Kramer
Odessa Laboratory Director

Final 1.000

Certificate of Analytical Results 575938

LT Environmental, Inc., Arvada, CO

Legg Federal Tank Battery/30-015-04734

Sample Id:	**SS1**	Matrix:	Soil	Date Received:	02.08.18 17.35
Lab Sample Id:	575938-001	Date Collected:	02.08.18 09.26	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	LRI			% Moisture:	
Analyst:	LRI	Date Prep:	02.15.18 15.00	Basis:	Wet Weight
Seq Number:	3041189				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**266**	4.98	mg/kg	02.15.18 17.46		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.10.18 13.00	Basis:	Wet Weight
Seq Number:	3040800				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<74.9	74.9	mg/kg	02.11.18 23.45	U	5
Diesel Range Organics (DRO)	C10C28DRO	**8530**	74.9	mg/kg	02.11.18 23.45		5
Oil Range Hydrocarbons (ORO)	PHCG2835	**1410**	74.9	mg/kg	02.11.18 23.45		5
Total TPH	PHC635	**9940**	74.9	mg/kg	02.11.18 23.45		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	02.11.18 23.45	
o-Terphenyl	84-15-1	93	%	70-135	02.11.18 23.45	

Certificate of Analytical Results 575938

LT Environmental, Inc., Arvada, CO

Legg Federal Tank Battery/30-015-04734

Sample Id:	**SS1**	Matrix:	Soil	Date Received:	02.08.18 17.35
Lab Sample Id:	575938-001	Date Collected:	02.08.18 09.26	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	02.12.18 12.00	Basis:	Wet Weight
Seq Number:	3041062				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.12.18 21.52	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.12.18 21.52	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.12.18 21.52	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.12.18 21.52	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.12.18 21.52	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	02.12.18 21.52	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.12.18 21.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	93	%	80-120	02.12.18 21.52	
1,4-Difluorobenzene	540-36-3	83	%	80-120	02.12.18 21.52	

Certificate of Analytical Results 575938

LT Environmental, Inc., Arvada, CO

Legg Federal Tank Battery/30-015-04734

Sample Id:	**SS2**	Matrix:	Soil	Date Received:	02.08.18 17.35
Lab Sample Id:	575938-002	Date Collected:	02.08.18 09.28	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	LRI			% Moisture:	
Analyst:	LRI	Date Prep:	02.15.18 15.00	Basis:	Wet Weight
Seq Number:	3041189				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2240**	24.8	mg/kg	02.15.18 17.57		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.10.18 13.00	Basis:	Wet Weight
Seq Number:	3040800				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.12.18 08.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	**4160**	15.0	mg/kg	02.12.18 08.21		1
Oil Range Hydrocarbons (ORO)	PHCG2835	**743**	15.0	mg/kg	02.12.18 08.21		1
Total TPH	PHC635	**4900**	15.0	mg/kg	02.12.18 08.21		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	02.12.18 08.21	
o-Terphenyl	84-15-1	95	%	70-135	02.12.18 08.21	

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LT Environmental, Inc., Arvada, CO

Legg Federal Tank Battery/30-015-04734

Sample Id:	**SS2**	Matrix:	Soil	Date Received:	02.08.18 17.35
Lab Sample Id:	575938-002	Date Collected:	02.08.18 09.28	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	02.12.18 12.00	Basis:	Wet Weight
Seq Number:	3041062				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	02.12.18 23.08	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	02.12.18 23.08	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	02.12.18 23.08	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	02.12.18 23.08	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	02.12.18 23.08	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	02.12.18 23.08	U	1
Total BTEX		<0.00201	0.00201	mg/kg	02.12.18 23.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	80-120	02.12.18 23.08	
1,4-Difluorobenzene	540-36-3	84	%	80-120	02.12.18 23.08	

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LT Environmental, Inc., Arvada, CO

Legg Federal Tank Battery/30-015-04734

Sample Id:	**SS3**	Matrix:	Soil	Date Received:	02.08.18 17.35
Lab Sample Id:	575938-003	Date Collected:	02.08.18 09.32	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	LRI			% Moisture:	
Analyst:	LRI	Date Prep:	02.15.18 15.00	Basis:	Wet Weight
Seq Number:	3041189				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**6.10**	4.97	mg/kg	02.15.18 18.03		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.10.18 13.00	Basis:	Wet Weight
Seq Number:	3040800				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.12.18 00.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	**64.2**	15.0	mg/kg	02.12.18 00.26		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	02.12.18 00.26	U	1
Total TPH	PHC635	**64.2**	15.0	mg/kg	02.12.18 00.26		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	02.12.18 00.26	
o-Terphenyl	84-15-1	107	%	70-135	02.12.18 00.26	

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LT Environmental, Inc., Arvada, CO

Legg Federal Tank Battery/30-015-04734

Sample Id:	**SS3**	Matrix:	Soil	Date Received:	02.08.18 17.35
Lab Sample Id:	575938-003	Date Collected:	02.08.18 09.32	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	02.12.18 12.00	Basis:	Wet Weight
Seq Number:	3041062				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	02.12.18 22.11	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	02.12.18 22.11	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	02.12.18 22.11	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	02.12.18 22.11	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	02.12.18 22.11	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	02.12.18 22.11	U	1
Total BTEX		<0.00202	0.00202	mg/kg	02.12.18 22.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	82	%	80-120	02.12.18 22.11	
4-Bromofluorobenzene	460-00-4	104	%	80-120	02.12.18 22.11	

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LT Environmental, Inc., Arvada, CO

Legg Federal Tank Battery/30-015-04734

Sample Id:	**SS4**	Matrix:	Soil	Date Received:	02.08.18 17.35
Lab Sample Id:	575938-004	Date Collected:	02.08.18 09.35	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	LRI			% Moisture:	
Analyst:	LRI	Date Prep:	02.15.18 15.00	Basis:	Wet Weight
Seq Number:	3041189				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**15.4**	4.99	mg/kg	02.15.18 18.08		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.10.18 13.00	Basis:	Wet Weight
Seq Number:	3040800				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.12.18 00.47	U	1
Diesel Range Organics (DRO)	C10C28DRO	**232**	15.0	mg/kg	02.12.18 00.47		1
Oil Range Hydrocarbons (ORO)	PHCG2835	**39.2**	15.0	mg/kg	02.12.18 00.47		1
Total TPH	PHC635	**271**	15.0	mg/kg	02.12.18 00.47		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	121	%	70-135	02.12.18 00.47	
o-Terphenyl	84-15-1	119	%	70-135	02.12.18 00.47	

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LT Environmental, Inc., Arvada, CO

Legg Federal Tank Battery/30-015-04734

Sample Id:	**SS4**	Matrix:	Soil	Date Received:	02.08.18 17.35
Lab Sample Id:	575938-004	Date Collected:	02.08.18 09.35	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	02.12.18 12.00	Basis:	Wet Weight
Seq Number:	3041062				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.12.18 22.30	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.12.18 22.30	U	1
Ethylbenzene	100-41-4	**0.00212**	0.00200	mg/kg	02.12.18 22.30		1
m,p-Xylenes	179601-23-1	**0.00472**	0.00399	mg/kg	02.12.18 22.30		1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.12.18 22.30	U	1
Total Xylenes	1330-20-7	**0.00472**	0.00200	mg/kg	02.12.18 22.30		1
Total BTEX		**0.00684**	0.00200	mg/kg	02.12.18 22.30		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	84	%	80-120	02.12.18 22.30	
4-Bromofluorobenzene	460-00-4	110	%	80-120	02.12.18 22.30	

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LT Environmental, Inc., Arvada, CO

Legg Federal Tank Battery/30-015-04734

Sample Id:	**SS5**	Matrix:	Soil	Date Received:	02.08.18 17.35
Lab Sample Id:	575938-005	Date Collected:	02.08.18 09.38	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	LRI			% Moisture:	
Analyst:	LRI	Date Prep:	02.15.18 15.00	Basis:	Wet Weight
Seq Number:	3041189				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.98	4.98	mg/kg	02.15.18 18.13	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.10.18 13.00	Basis:	Wet Weight
Seq Number:	3040800				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**457**	74.8	mg/kg	02.12.18 01.07		5
Diesel Range Organics (DRO)	C10C28DRO	**11100**	74.8	mg/kg	02.12.18 01.07		5
Oil Range Hydrocarbons (ORO)	PHCG2835	**1760**	74.8	mg/kg	02.12.18 01.07		5
Total TPH	PHC635	**13300**	74.8	mg/kg	02.12.18 01.07		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	127	%	70-135	02.12.18 01.07	
o-Terphenyl	84-15-1	114	%	70-135	02.12.18 01.07	

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LT Environmental, Inc., Arvada, CO

Legg Federal Tank Battery/30-015-04734

Sample Id:	**SS5**	Matrix:	Soil	Date Received:	02.08.18 17.35
Lab Sample Id:	575938-005	Date Collected:	02.08.18 09.38	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	02.12.18 12.00	Basis:	Wet Weight
Seq Number:	3041062				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	02.12.18 22.49	U	1
Toluene	108-88-3	**0.00288**	0.00198	mg/kg	02.12.18 22.49		1
Ethylbenzene	100-41-4	**0.0337**	0.00198	mg/kg	02.12.18 22.49		1
m,p-Xylenes	179601-23-1	**0.0414**	0.00397	mg/kg	02.12.18 22.49		1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	02.12.18 22.49	U	1
Total Xylenes	1330-20-7	**0.0414**	0.00198	mg/kg	02.12.18 22.49		1
Total BTEX		**0.0780**	0.00198	mg/kg	02.12.18 22.49		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	81	%	80-120	02.12.18 22.49	
4-Bromofluorobenzene	460-00-4	166	%	80-120	02.12.18 22.49	**

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LT Environmental, Inc., Arvada, CO

Legg Federal Tank Battery/30-015-04734

Sample Id:	**SS6**	Matrix:	Soil	Date Received:	02.08.18 17.35
Lab Sample Id:	575938-006	Date Collected:	02.08.18 09.41	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	LRI			% Moisture:	
Analyst:	LRI	Date Prep:	02.15.18 15.00	Basis:	Wet Weight
Seq Number:	3041189				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**298**	4.93	mg/kg	02.15.18 18.19		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.10.18 13.00	Basis:	Wet Weight
Seq Number:	3040800				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.12.18 01.28	U	1
Diesel Range Organics (DRO)	C10C28DRO	**44.6**	15.0	mg/kg	02.12.18 01.28		1
Oil Range Hydrocarbons (ORO)	PHCG2835	**33.2**	15.0	mg/kg	02.12.18 01.28		1
Total TPH	PHC635	**77.8**	15.0	mg/kg	02.12.18 01.28		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	02.12.18 01.28	
o-Terphenyl	84-15-1	104	%	70-135	02.12.18 01.28	

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LT Environmental, Inc., Arvada, CO

Legg Federal Tank Battery/30-015-04734

Sample Id:	**SS6**	Matrix:	Soil	Date Received:	02.08.18 17.35
Lab Sample Id:	575938-006	Date Collected:	02.08.18 09.41	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	02.12.18 12.00	Basis:	Wet Weight
Seq Number:	3041062				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	02.13.18 00.05	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	02.13.18 00.05	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	02.13.18 00.05	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	02.13.18 00.05	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	02.13.18 00.05	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	02.13.18 00.05	U	1
Total BTEX		<0.00202	0.00202	mg/kg	02.13.18 00.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	109	%	80-120	02.13.18 00.05	
1,4-Difluorobenzene	540-36-3	86	%	80-120	02.13.18 00.05	

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LT Environmental, Inc., Arvada, CO

Legg Federal Tank Battery/30-015-04734

Sample Id:	**SS7**	Matrix:	Soil	Date Received:	02.08.18 17.35
Lab Sample Id:	575938-007	Date Collected:	02.08.18 09.44	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	LRI			% Moisture:	
Analyst:	LRI	Date Prep:	02.15.18 15.00	Basis:	Wet Weight
Seq Number:	3041189				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8.48**	4.93	mg/kg	02.15.18 18.24		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.10.18 13.00	Basis:	Wet Weight
Seq Number:	3040800				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.12.18 01.49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.12.18 01.49	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	02.12.18 01.49	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.12.18 01.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	02.12.18 01.49	
o-Terphenyl	84-15-1	109	%	70-135	02.12.18 01.49	

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LT Environmental, Inc., Arvada, CO

Legg Federal Tank Battery/30-015-04734

Sample Id:	**SS7**	Matrix:	Soil	Date Received:	02.08.18 17.35
Lab Sample Id:	575938-007	Date Collected:	02.08.18 09.44	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	02.12.18 12.00	Basis:	Wet Weight
Seq Number:	3041062				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.13.18 00.25	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.13.18 00.25	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.13.18 00.25	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	02.13.18 00.25	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.13.18 00.25	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.13.18 00.25	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.13.18 00.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	109	%	80-120	02.13.18 00.25	
1,4-Difluorobenzene	540-36-3	86	%	80-120	02.13.18 00.25	

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LT Environmental, Inc., Arvada, CO

Legg Federal Tank Battery/30-015-04734

Sample Id:	**SS8**	Matrix:	Soil	Date Received:	02.08.18 17.35
Lab Sample Id:	575938-008	Date Collected:	02.08.18 09.47	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	LRI			% Moisture:	
Analyst:	LRI	Date Prep:	02.15.18 15.00	Basis:	Wet Weight
Seq Number:	3041189				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**22.8**	4.94	mg/kg	02.15.18 18.41		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.10.18 13.00	Basis:	Wet Weight
Seq Number:	3040800				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.12.18 02.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.12.18 02.09	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	02.12.18 02.09	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.12.18 02.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	02.12.18 02.09	
o-Terphenyl	84-15-1	113	%	70-135	02.12.18 02.09	

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LT Environmental, Inc., Arvada, CO

Legg Federal Tank Battery/30-015-04734

Sample Id:	**SS8**	Matrix:	Soil	Date Received:	02.08.18 17.35
Lab Sample Id:	575938-008	Date Collected:	02.08.18 09.47	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	02.12.18 12.00	Basis:	Wet Weight
Seq Number:	3041062				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.13.18 00.44	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.13.18 00.44	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.13.18 00.44	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.13.18 00.44	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.13.18 00.44	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.13.18 00.44	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.13.18 00.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	80-120	02.13.18 00.44	
1,4-Difluorobenzene	540-36-3	82	%	80-120	02.13.18 00.44	

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

+ NELAC certification not offered for this compound.

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

QC Summary 575938

LT Environmental, Inc.

Legg Federal Tank Battery/30-015-04734

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3041189 — Matrix: Solid — Date Prep: 02.15.18
MB Sample Id: 7639188-1-BLK — LCS Sample Id: 7639188-1-BKS — LCSD Sample Id: 7639188-1-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	262	105	255	102	90-110	3	20	mg/kg	02.15.18 21:37	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3041189 — Matrix: Soil — Date Prep: 02.15.18
Parent Sample Id: 575815-002 — MS Sample Id: 575815-002 S — MSD Sample Id: 575815-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	22.2	250	292	108	280	103	90-110	4	20	mg/kg	02.15.18 21:54	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3041189 — Matrix: Soil — Date Prep: 02.15.18
Parent Sample Id: 575937-005 — MS Sample Id: 575937-005 S — MSD Sample Id: 575937-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.98	249	265	106	268	108	90-110	1	20	mg/kg	02.15.18 17:35	

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3040800 — Matrix: Solid — Date Prep: 02.10.18
MB Sample Id: 7638965-1-BLK — LCS Sample Id: 7638965-1-BKS — LCSD Sample Id: 7638965-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	1010	101	1030	103	70-135	2	35	mg/kg	02.11.18 17:53	
Diesel Range Organics (DRO)	<15.0	1000	1130	113	1100	110	70-135	3	35	mg/kg	02.11.18 17:53	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	102		114		114		70-135	%	02.11.18 17:53
o-Terphenyl	105		113		108		70-135	%	02.11.18 17:53

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
E = MSD/LCSD Result

QC Summary 575938

LT Environmental, Inc.

Legg Federal Tank Battery/30-015-04734

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3040800 — Matrix: Soil — Date Prep: 02.10.18
Parent Sample Id: 575590-001 — MS Sample Id: 575590-001 S — MSD Sample Id: 575590-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	999	815	82	840	84	70-135	3	35	mg/kg	02.11.18 18:55	
Diesel Range Organics (DRO)	<15.0	999	920	92	969	97	70-135	5	35	mg/kg	02.11.18 18:55	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	95		91		70-135	%	02.11.18 18:55
o-Terphenyl	85		93		70-135	%	02.11.18 18:55

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3041062 — Matrix: Solid — Date Prep: 02.12.18
MB Sample Id: 7639131-1-BLK — LCS Sample Id: 7639131-1-BKS — LCSD Sample Id: 7639131-1-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	0.0994	0.0876	88	0.0964	96	70-130	10	35	mg/kg	02.12.18 18:04	
Toluene	<0.00199	0.0994	0.0912	92	0.101	101	70-130	10	35	mg/kg	02.12.18 18:04	
Ethylbenzene	<0.00199	0.0994	0.101	102	0.111	111	71-129	9	35	mg/kg	02.12.18 18:04	
m,p-Xylenes	<0.00398	0.199	0.200	101	0.219	110	70-135	9	35	mg/kg	02.12.18 18:04	
o-Xylene	<0.00199	0.0994	0.0990	100	0.108	108	71-133	9	35	mg/kg	02.12.18 18:04	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	87		86		87		80-120	%	02.12.18 18:04
4-Bromofluorobenzene	100		113		113		80-120	%	02.12.18 18:04

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3041062 — Matrix: Soil — Date Prep: 02.12.18
Parent Sample Id: 575937-003 — MS Sample Id: 575937-003 S — MSD Sample Id: 575937-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.101	0.0745	74	0.0812	81	70-130	9	35	mg/kg	02.12.18 18:41	
Toluene	<0.00201	0.101	0.0753	75	0.0833	83	70-130	10	35	mg/kg	02.12.18 18:41	
Ethylbenzene	<0.00201	0.101	0.0826	82	0.0900	90	71-129	9	35	mg/kg	02.12.18 18:41	
m,p-Xylenes	<0.00402	0.201	0.163	81	0.177	89	70-135	8	35	mg/kg	02.12.18 18:41	
o-Xylene	<0.00201	0.101	0.0826	82	0.0871	87	71-133	5	35	mg/kg	02.12.18 18:41	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	89		90		80-120	%	02.12.18 18:41
4-Bromofluorobenzene	118		113		80-120	%	02.12.18 18:41

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

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

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

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

CHAIN OF CUSTODY

Page 1 Of 1

Revision 2016.1

XENCO LABORATORIES

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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 # 575938

Client / Reporting Information

Company Name / Branch: LTE / Permian
Company Address: 3300 N. A Street Bldg 1. Suite 103
Email: Abaker@LTENV.com Phone No: 432-704-5178
Project Contact: Adrian Baker
Samplers's Name: Aaron Willings

Project Information

Project Name/Number: Legg Federal Tank Battery / 30-015-04734
Project Location: NM
Invoice To: XTO Energy - Kyle Littrell
PO Number: 30-015-04734

Analytical Information

Btex Meth. 8021
TPH Meth. 8015
Chloride Meth. 300.1

Matrix Codes

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

No.	Field ID / Point of Collection	Collection: Sample Depth	Date	Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Field Comments
1	SS1	6"	2-8-18	9:26	S	1									
2	SS2			9:29											
3	SS3			9:32											
4	SS4			9:35											
5	SS5			9:38											
6	SS6			9:41											
7	SS7			9:44											
8	SS8			9:47											
9															
10															

NEW AZ

Turnaround Time (Business days)

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

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
- [ ] Level II Report with TRRP checklist

Notes:

Temp: 3.9 IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 3.7

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		2/8/18 1030	1	2	2/8/18 1735	2
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: X — Cooler Temp. — Thermo. Corr. Factor

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.

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 02/08/2018 05:35:00 PM

Work Order #: 575938

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)?	3.7
#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: Shawnee Smith Date: 02/09/2018
Shawnee Smith

Checklist reviewed by: Jessica Kramer Date: 02/09/2018
Jessica Kramer

Analytical Report 597514

for

LT Environmental, Inc.

Project Manager: Adrian Baker

LEGG Federal 001

06-SEP-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-27), 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 (T104704221-18-13)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-17)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-16)
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)

06-SEP-18

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

Reference: XENCO Report No(s): **597514**
LEGG Federal 001
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) 597514. 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. 597514 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

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

Sample Cross Reference 597514

LT Environmental, Inc., Arvada, CO

LEGG Federal 001

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS9	S	08-23-18 10:30	6 In	597514-001
SS10	S	08-23-18 10:35	6 In	597514-002
SS11	S	08-23-18 10:40	6 In	597514-003
SS12	S	08-23-18 11:00	6 In	597514-004
SS13	S	08-23-18 11:10	6 In	597514-005
SS14	S	08-23-18 13:35	6 In	597514-006
SS15	S	08-23-18 13:45	6 In	597514-007
SS16	S	08-23-18 15:30	6 In	597514-008

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: LEGG Federal 001

Project ID:
Work Order Number(s): *597514*

Report Date: *06-SEP-18*
Date Received: *08/29/2018*

Sample receipt non conformances and comments:

Per clients email, correct sample depth from 6' to 6" for sample 001 JKR 09/06/18 NEW VERSION GENERATED

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3062203 BTEX by EPA 8021B

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

Certificate of Analysis Summary 597514

LT Environmental, Inc., Arvada, CO

Project Name: LEGG Federal 001

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

Date Received in Lab: Wed Aug-29-18 03:50 pm
Report Date: 06-SEP-18
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	597514-001		597514-002		597514-003		597514-004		597514-005		597514-006	
	Field Id:	SS9		SS10		SS11		SS12		SS13		SS14	
	Depth:	6- In		6- In		6- In		6- In		6- In		6- In	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-23-18 10:30		Aug-23-18 10:35		Aug-23-18 10:40		Aug-23-18 11:00		Aug-23-18 11:10		Aug-23-18 13:35	
BTEX by EPA 8021B	*Extracted:*	Sep-05-18 09:30		Sep-05-18 09:30		Sep-05-18 09:30		Sep-05-18 09:30		Sep-05-18 09:30		Sep-05-18 09:30	
	Analyzed:	Sep-06-18 08:07		Sep-06-18 08:07		Sep-06-18 08:07		Sep-06-18 08:07		Sep-06-18 08:07		Sep-06-18 08:07	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00201	0.00201	<0.00202	0.00202	<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201
Toluene		<0.00201	0.00201	<0.00202	0.00202	<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201
Ethylbenzene		<0.00201	0.00201	<0.00202	0.00202	<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201
m,p-Xylenes		<0.00402	0.00402	<0.00404	0.00404	<0.00398	0.00398	<0.00403	0.00403	<0.00401	0.00401	<0.00402	0.00402
o-Xylene		<0.00201	0.00201	<0.00202	0.00202	<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201
Total Xylenes		<0.00201	0.00201	<0.00202	0.00202	<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201
Total BTEX		<0.00201	0.00201	<0.00202	0.00202	<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201
Inorganic Anions by EPA 300	*Extracted:*	Aug-31-18 10:45		Aug-31-18 10:45		Aug-31-18 10:45		Aug-31-18 10:45		Aug-31-18 10:45		Aug-31-18 10:45	
	Analyzed:	Aug-31-18 14:25		Aug-31-18 14:46		Aug-31-18 14:52		Aug-31-18 14:57		Aug-31-18 15:02		Aug-31-18 15:07	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		108	4.96	10.6	4.99	<4.96	4.96	944	4.98	546	5.00	23.8	5.00
TPH by SW8015 Mod	*Extracted:*	Aug-30-18 07:00		Aug-30-18 07:00		Aug-30-18 07:00		Aug-30-18 07:00		Aug-29-18 16:00		Aug-29-18 16:00	
	Analyzed:	Aug-30-18 12:50		Aug-30-18 13:10		Aug-30-18 13:30		Aug-30-18 13:49		Aug-29-18 21:47		Aug-29-18 22:07	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<74.7	74.7	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		418	15.0	67.2	15.0	657	15.0	7420	74.7	158	15.0	<15.0	15.0
Oil Range Hydrocarbons (ORO)		67.3	15.0	<15.0	15.0	83.7	15.0	455	74.7	<15.0	15.0	<15.0	15.0
Total TPH		485	15.0	67.2	15.0	741	15.0	7880	74.7	158	15.0	<15.0	15.0

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

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 597514

LT Environmental, Inc., Arvada, CO

Project Name: LEGG Federal 001

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

Date Received in Lab: Wed Aug-29-18 03:50 pm
Report Date: 06-SEP-18
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	597514-007		597514-008					
	Field Id:	SS15		SS16					
	Depth:	6- In		6- In					
	Matrix:	SOIL		SOIL					
	Sampled:	Aug-23-18 13:45		Aug-23-18 15:30					
BTEX by EPA 8021B	***Extracted:***	Sep-05-18 09:30		Sep-05-18 09:30					
	Analyzed:	Sep-06-18 08:07		Sep-06-18 08:07					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00200	0.00200	<0.00202	0.00202				
Toluene		<0.00200	0.00200	<0.00202	0.00202				
Ethylbenzene		<0.00200	0.00200	<0.00202	0.00202				
m,p-Xylenes		<0.00399	0.00399	<0.00404	0.00404				
o-Xylene		<0.00200	0.00200	<0.00202	0.00202				
Total Xylenes		<0.00200	0.00200	<0.00202	0.00202				
Total BTEX		<0.00200	0.00200	<0.00202	0.00202				
Inorganic Anions by EPA 300	***Extracted:***	Aug-31-18 10:45		Aug-31-18 10:45					
	Analyzed:	Aug-31-18 15:13		Aug-31-18 15:29					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		<4.99	4.99	11.6	4.95				
TPH by SW8015 Mod	***Extracted:***	Aug-29-18 16:00		Aug-29-18 16:00					
	Analyzed:	Aug-29-18 22:26		Aug-29-18 22:46					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0				
Diesel Range Organics (DRO)		18.7	15.0	1410	15.0				
Oil Range Hydrocarbons (ORO)		<15.0	15.0	27.4	15.0				
Total TPH		18.7	15.0	1440	15.0				

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

Jessica Kramer
Project Assistant

Certificate of Analytical Results 597514

LT Environmental, Inc., Arvada, CO

LEGG Federal 001

Sample Id:	**SS9**	Matrix:	Soil	Date Received:	08.29.18 15.50
Lab Sample Id:	597514-001	Date Collected:	08.23.18 10.30	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	08.31.18 10.45	Basis:	Wet Weight
Seq Number:	3061992				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**108**	4.96	mg/kg	08.31.18 14.25		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.30.18 07.00	Basis:	Wet Weight
Seq Number:	3061961				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.30.18 12.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	**418**	15.0	mg/kg	08.30.18 12.50		1
Oil Range Hydrocarbons (ORO)	PHCG2835	**67.3**	15.0	mg/kg	08.30.18 12.50		1
Total TPH	PHC635	**485**	15.0	mg/kg	08.30.18 12.50		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	08.30.18 12.50	
o-Terphenyl	84-15-1	116	%	70-135	08.30.18 12.50	

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LT Environmental, Inc., Arvada, CO

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Sample Id:	**SS9**	Matrix:	Soil	Date Received:	08.29.18 15.50
Lab Sample Id:	597514-001	Date Collected:	08.23.18 10.30	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	09.05.18 09.30	Basis:	Wet Weight
Seq Number:	3062203				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	09.06.18 08.07	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	09.06.18 08.07	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	09.06.18 08.07	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	09.06.18 08.07	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	09.06.18 08.07	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	09.06.18 08.07	U	1
Total BTEX		<0.00201	0.00201	mg/kg	09.06.18 08.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	88	%	70-130	09.06.18 08.07	
4-Bromofluorobenzene	460-00-4	96	%	70-130	09.06.18 08.07	

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LT Environmental, Inc., Arvada, CO

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Sample Id:	**SS10**	Matrix:	Soil	Date Received:	08.29.18 15.50
Lab Sample Id:	597514-002	Date Collected:	08.23.18 10.35	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	08.31.18 10.45	Basis:	Wet Weight
Seq Number:	3061992				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**10.6**	4.99	mg/kg	08.31.18 14.46		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.30.18 07.00	Basis:	Wet Weight
Seq Number:	3061961				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.30.18 13.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	**67.2**	15.0	mg/kg	08.30.18 13.10		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.30.18 13.10	U	1
Total TPH	PHC635	**67.2**	15.0	mg/kg	08.30.18 13.10		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	08.30.18 13.10	
o-Terphenyl	84-15-1	96	%	70-135	08.30.18 13.10	

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LT Environmental, Inc., Arvada, CO

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Sample Id:	**SS10**	Matrix:	Soil	Date Received:	08.29.18 15.50
Lab Sample Id:	597514-002	Date Collected:	08.23.18 10.35	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	09.05.18 09.30	Basis:	Wet Weight
Seq Number:	3062203				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	09.06.18 08.07	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	09.06.18 08.07	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	09.06.18 08.07	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	09.06.18 08.07	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	09.06.18 08.07	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	09.06.18 08.07	U	1
Total BTEX		<0.00202	0.00202	mg/kg	09.06.18 08.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	97	%	70-130	09.06.18 08.07	
4-Bromofluorobenzene	460-00-4	103	%	70-130	09.06.18 08.07	

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LT Environmental, Inc., Arvada, CO

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Sample Id:	**SS11**	Matrix:	Soil	Date Received:	08.29.18 15.50
Lab Sample Id:	597514-003	Date Collected:	08.23.18 10.40	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	08.31.18 10.45	Basis:	Wet Weight
Seq Number:	3061992				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	08.31.18 14.52	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.30.18 07.00	Basis:	Wet Weight
Seq Number:	3061961				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.30.18 13.30	U	1
Diesel Range Organics (DRO)	C10C28DRO	**657**	15.0	mg/kg	08.30.18 13.30		1
Oil Range Hydrocarbons (ORO)	PHCG2835	**83.7**	15.0	mg/kg	08.30.18 13.30		1
Total TPH	PHC635	**741**	15.0	mg/kg	08.30.18 13.30		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	08.30.18 13.30	
o-Terphenyl	84-15-1	104	%	70-135	08.30.18 13.30	

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LT Environmental, Inc., Arvada, CO

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Sample Id:	**SS11**	Matrix:	Soil	Date Received:	08.29.18 15.50
Lab Sample Id:	597514-003	Date Collected:	08.23.18 10.40	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	09.05.18 09.30	Basis:	Wet Weight
Seq Number:	3062203				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	09.06.18 08.07	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	09.06.18 08.07	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	09.06.18 08.07	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	09.06.18 08.07	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	09.06.18 08.07	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	09.06.18 08.07	U	1
Total BTEX		<0.00199	0.00199	mg/kg	09.06.18 08.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	96	%	70-130	09.06.18 08.07	
4-Bromofluorobenzene	460-00-4	87	%	70-130	09.06.18 08.07	

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LT Environmental, Inc., Arvada, CO

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Sample Id:	**SS12**	Matrix:	Soil	Date Received:	08.29.18 15.50
Lab Sample Id:	597514-004	Date Collected:	08.23.18 11.00	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	08.31.18 10.45	Basis:	Wet Weight
Seq Number:	3061992				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**944**	4.98	mg/kg	08.31.18 14.57		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.30.18 07.00	Basis:	Wet Weight
Seq Number:	3061961				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<74.7	74.7	mg/kg	08.30.18 13.49	U	5
Diesel Range Organics (DRO)	C10C28DRO	**7420**	74.7	mg/kg	08.30.18 13.49		5
Oil Range Hydrocarbons (ORO)	PHCG2835	**455**	74.7	mg/kg	08.30.18 13.49		5
Total TPH	PHC635	**7880**	74.7	mg/kg	08.30.18 13.49		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	08.30.18 13.49	
o-Terphenyl	84-15-1	102	%	70-135	08.30.18 13.49	

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LT Environmental, Inc., Arvada, CO

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Sample Id:	**SS12**	Matrix:	Soil	Date Received:	08.29.18 15.50
Lab Sample Id:	597514-004	Date Collected:	08.23.18 11.00	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	09.05.18 09.30	Basis:	Wet Weight
Seq Number:	3062203				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	09.06.18 08.07	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	09.06.18 08.07	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	09.06.18 08.07	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	09.06.18 08.07	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	09.06.18 08.07	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	09.06.18 08.07	U	1
Total BTEX		<0.00202	0.00202	mg/kg	09.06.18 08.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	70-130	09.06.18 08.07	
1,4-Difluorobenzene	540-36-3	83	%	70-130	09.06.18 08.07	

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LT Environmental, Inc., Arvada, CO

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Sample Id:	**SS13**	Matrix:	Soil	Date Received:	08.29.18 15.50
Lab Sample Id:	597514-005	Date Collected:	08.23.18 11.10	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	08.31.18 10.45	Basis:	Wet Weight
Seq Number:	3061992				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**546**	5.00	mg/kg	08.31.18 15.02		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.29.18 16.00	Basis:	Wet Weight
Seq Number:	3061706				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.29.18 21.47	U	1
Diesel Range Organics (DRO)	C10C28DRO	**158**	15.0	mg/kg	08.29.18 21.47		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.29.18 21.47	U	1
Total TPH	PHC635	**158**	15.0	mg/kg	08.29.18 21.47		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	08.29.18 21.47	
o-Terphenyl	84-15-1	97	%	70-135	08.29.18 21.47	

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LT Environmental, Inc., Arvada, CO

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Sample Id:	**SS13**	Matrix:	Soil	Date Received:	08.29.18 15.50
Lab Sample Id:	597514-005	Date Collected:	08.23.18 11.10	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	09.05.18 09.30	Basis:	Wet Weight
Seq Number:	3062203				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.06.18 08.07	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.06.18 08.07	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.06.18 08.07	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	09.06.18 08.07	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.06.18 08.07	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.06.18 08.07	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.06.18 08.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	90	%	70-130	09.06.18 08.07	
1,4-Difluorobenzene	540-36-3	80	%	70-130	09.06.18 08.07	

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LT Environmental, Inc., Arvada, CO

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Sample Id:	**SS14**	Matrix:	Soil	Date Received:	08.29.18 15.50
Lab Sample Id:	597514-006	Date Collected:	08.23.18 13.35	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	08.31.18 10.45	Basis:	Wet Weight
Seq Number:	3061992				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**23.8**	5.00	mg/kg	08.31.18 15.07		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.29.18 16.00	Basis:	Wet Weight
Seq Number:	3061706				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.29.18 22.07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.29.18 22.07	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.29.18 22.07	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.29.18 22.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	08.29.18 22.07	
o-Terphenyl	84-15-1	98	%	70-135	08.29.18 22.07	

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LT Environmental, Inc., Arvada, CO

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Sample Id:	**SS14**	Matrix:	Soil	Date Received:	08.29.18 15.50
Lab Sample Id:	597514-006	Date Collected:	08.23.18 13.35	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	09.05.18 09.30	Basis:	Wet Weight
Seq Number:	3062203				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	09.06.18 08.07	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	09.06.18 08.07	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	09.06.18 08.07	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	09.06.18 08.07	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	09.06.18 08.07	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	09.06.18 08.07	U	1
Total BTEX		<0.00201	0.00201	mg/kg	09.06.18 08.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	93	%	70-130	09.06.18 08.07	
4-Bromofluorobenzene	460-00-4	75	%	70-130	09.06.18 08.07	

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LT Environmental, Inc., Arvada, CO

LEGG Federal 001

Sample Id:	**SS15**	Matrix:	Soil	Date Received:	08.29.18 15.50
Lab Sample Id:	597514-007	Date Collected:	08.23.18 13.45	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	08.31.18 10.45	Basis:	Wet Weight
Seq Number:	3061992				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	08.31.18 15.13	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.29.18 16.00	Basis:	Wet Weight
Seq Number:	3061706				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.29.18 22.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	**18.7**	15.0	mg/kg	08.29.18 22.26		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.29.18 22.26	U	1
Total TPH	PHC635	**18.7**	15.0	mg/kg	08.29.18 22.26		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	08.29.18 22.26	
o-Terphenyl	84-15-1	103	%	70-135	08.29.18 22.26	

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LT Environmental, Inc., Arvada, CO

LEGG Federal 001

Sample Id:	**SS15**	Matrix:	Soil	Date Received:	08.29.18 15.50
Lab Sample Id:	597514-007	Date Collected:	08.23.18 13.45	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	09.05.18 09.30	Basis:	Wet Weight
Seq Number:	3062203				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.06.18 08.07	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.06.18 08.07	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.06.18 08.07	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	09.06.18 08.07	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.06.18 08.07	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.06.18 08.07	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.06.18 08.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	97	%	70-130	09.06.18 08.07	
4-Bromofluorobenzene	460-00-4	109	%	70-130	09.06.18 08.07	

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LT Environmental, Inc., Arvada, CO

LEGG Federal 001

Sample Id:	**SS16**	Matrix:	Soil	Date Received:	08.29.18 15.50
Lab Sample Id:	597514-008	Date Collected:	08.23.18 15.30	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	08.31.18 10.45	Basis:	Wet Weight
Seq Number:	3061992				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**11.6**	4.95	mg/kg	08.31.18 15.29		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.29.18 16.00	Basis:	Wet Weight
Seq Number:	3061706				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.29.18 22.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	**1410**	15.0	mg/kg	08.29.18 22.46		1
Oil Range Hydrocarbons (ORO)	PHCG2835	**27.4**	15.0	mg/kg	08.29.18 22.46		1
Total TPH	PHC635	**1440**	15.0	mg/kg	08.29.18 22.46		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	08.29.18 22.46	
o-Terphenyl	84-15-1	113	%	70-135	08.29.18 22.46	

Certificate of Analytical Results 597514

LT Environmental, Inc., Arvada, CO

LEGG Federal 001

Sample Id:	**SS16**	Matrix:	Soil	Date Received:	08.29.18 15.50
Lab Sample Id:	597514-008	Date Collected:	08.23.18 15.30	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	09.05.18 09.30	Basis:	Wet Weight
Seq Number:	3062203				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	09.06.18 08.07	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	09.06.18 08.07	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	09.06.18 08.07	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	09.06.18 08.07	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	09.06.18 08.07	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	09.06.18 08.07	U	1
Total BTEX		<0.00202	0.00202	mg/kg	09.06.18 08.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	96	%	70-130	09.06.18 08.07	
4-Bromofluorobenzene	460-00-4	99	%	70-130	09.06.18 08.07	

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 597514

LT Environmental, Inc.

LEGG Federal 001

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3061992 — Matrix: Solid — Date Prep: 08.31.18
MB Sample Id: 7661490-1-BLK — LCS Sample Id: 7661490-1-BKS — LCSD Sample Id: 7661490-1-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	262	105	262	105	90-110	0	20	mg/kg	08.31.18 13:43	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3061992 — Matrix: Soil — Date Prep: 08.31.18
Parent Sample Id: 597513-003 — MS Sample Id: 597513-003 S — MSD Sample Id: 597513-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.852	248	253	102	245	99	90-110	3	20	mg/kg	08.31.18 13:58	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3061992 — Matrix: Soil — Date Prep: 08.31.18
Parent Sample Id: 597514-007 — MS Sample Id: 597514-007 S — MSD Sample Id: 597514-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.857	250	241	96	240	96	90-110	0	20	mg/kg	08.31.18 15:18	

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3061706 — Matrix: Solid — Date Prep: 08.29.18
MB Sample Id: 7661422-1-BLK — LCS Sample Id: 7661422-1-BKS — LCSD Sample Id: 7661422-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	942	94	911	91	70-135	3	20	mg/kg	08.29.18 15:09	
Diesel Range Organics (DRO)	<8.13	1000	1020	102	981	98	70-135	4	20	mg/kg	08.29.18 15:09	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	96		118		113		70-135	%	08.29.18 15:09
o-Terphenyl	102		111		108		70-135	%	08.29.18 15:09

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 597514

LT Environmental, Inc.

LEGG Federal 001

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3061961 — Matrix: Solid — Date Prep: 08.30.18
MB Sample Id: 7661540-1-BLK — LCS Sample Id: 7661540-1-BKS — LCSD Sample Id: 7661540-1-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	843	84	842	84	70-135	0	20	mg/kg	08.30.18 09:30	
Diesel Range Organics (DRO)	<8.13	1000	874	87	868	87	70-135	1	20	mg/kg	08.30.18 09:30	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	85		116		117		70-135	%	08.30.18 09:30
o-Terphenyl	92		98		106		70-135	%	08.30.18 09:30

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3061706 — Matrix: Soil — Date Prep: 08.29.18
Parent Sample Id: 597209-004 — MS Sample Id: 597209-004 S — MSD Sample Id: 597209-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	998	904	91	878	88	70-135	3	20	mg/kg	08.29.18 17:10	
Diesel Range Organics (DRO)	<8.11	998	974	98	945	95	70-135	3	20	mg/kg	08.29.18 17:10	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	120		114		70-135	%	08.29.18 17:10
o-Terphenyl	106		104		70-135	%	08.29.18 17:10

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3061961 — Matrix: Soil — Date Prep: 08.30.18
Parent Sample Id: 597513-001 — MS Sample Id: 597513-001 S — MSD Sample Id: 597513-001 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	847	85	864	86	70-135	2	20	mg/kg	08.30.18 10:31	
Diesel Range Organics (DRO)	<8.12	999	886	89	906	91	70-135	2	20	mg/kg	08.30.18 10:31	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	119		122		70-135	%	08.30.18 10:31
o-Terphenyl	100		106		70-135	%	08.30.18 10:31

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 597514

LT Environmental, Inc.

LEGG Federal 001

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3062203 — Matrix: Solid — Date Prep: 09.05.18
MB Sample Id: 7661720-1-BLK — LCS Sample Id: 7661720-1-BKS — LCSD Sample Id: 7661720-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.101	0.0841	83	0.0870	86	70-130	3	35	mg/kg	09.05.18 16:26	
Toluene	<0.00201	0.101	0.0879	87	0.0919	91	70-130	4	35	mg/kg	09.05.18 16:26	
Ethylbenzene	<0.00201	0.101	0.108	107	0.114	113	70-130	5	35	mg/kg	09.05.18 16:26	
m,p-Xylenes	<0.00402	0.201	0.203	101	0.215	106	70-130	6	35	mg/kg	09.05.18 16:26	
o-Xylene	<0.00201	0.101	0.0952	94	0.102	101	70-130	7	35	mg/kg	09.05.18 16:26	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	90		84		89		70-130	%	09.05.18 16:26
4-Bromofluorobenzene	95		86		100		70-130	%	09.05.18 16:26

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3062203 — Matrix: Soil — Date Prep: 09.05.18
Parent Sample Id: 597513-001 — MS Sample Id: 597513-001 S — MSD Sample Id: 597513-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.0834	84	0.0788	79	70-130	6	35	mg/kg	09.05.18 16:26	
Toluene	<0.00199	0.0996	0.0830	83	0.0782	78	70-130	6	35	mg/kg	09.05.18 16:26	
Ethylbenzene	<0.00199	0.0996	0.0972	98	0.0911	91	70-130	6	35	mg/kg	09.05.18 16:26	
m,p-Xylenes	<0.00398	0.199	0.180	90	0.168	84	70-130	7	35	mg/kg	09.05.18 16:26	
o-Xylene	<0.00199	0.0996	0.0841	84	0.0784	78	70-130	7	35	mg/kg	09.05.18 16:26	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	90		89		70-130	%	09.05.18 16:26
4-Bromofluorobenzene	94		89		70-130	%	09.05.18 16:26

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

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Dallas Texas (214-902-0300)

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Phoenix, Arizona (480-355-0900)

www.xenco.com

CHAIN OF CUSTODY

Page 1 Of 1

Xenco Quote #

Xenco Job # 597514

Client / Reporting Information

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

Company Address: 3300 North "A" Street, Building 1, Unit #103, Midland, TX 79705

Email: Abaker@ltenv.com

Phone No: (432) 704-5178

Project Contact: Adrian Baker

Samplers's Name Joseph S. Hernandez

Project Information

Project Name/Number: LEGG FEDERAL 001

Project Location: Carlsbad, NM

Invoice To: XTO Energy - Kyle Littrell

PO Number: 2RP-2761, 2RP-3634, 2RP-3741, 2RP-3744

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 EPA 8020	TPH EPA 8015	Chloride 300.1	Field Comments
1	SS9	6"	8/23/18	1030	S	1								X	X	X	X	
2	SS10	6"		1035	S	1								X	X	X	X	
3	SS11	6"		1040	S	1								X	X	X	X	
4	SS12	6"		1100	S	1								X	X	X	X	
5	SS13	6"		1110	S	1								X	X	X	X	
6	SS14	6"		1335	S	1								X	X	X	X	
7	SS15	6"		1345	S	1								X	X	X	X	
8	SS16	6"		1530	S	1								X	X	X	X	
9																		
10																		

8/24/18

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 #

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

	Date Time:			Date Time:	
Relinquished by Sampler: 1	8.29.18	Received By: 1	Relinquished By: 2		Received By: 2
Relinquished by: 3	15:50	Received By: 3	Relinquished By: 4		Received By: 4
Relinquished by: 5		Received By: 5	Custody Seal #	Preserved where applicable	On Ice: ☐ Cooler Temp. 14.6 Thermo. Corr. Factor 0.0

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.

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 08/29/2018 03:50:00 PM

Work Order #: 597514

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)?	14.6
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Shawnee Gomez Date: 08/29/2018

Shawnee Gomez

Checklist reviewed by: Jessica Kramer Date: 08/30/2018

Jessica Kramer

Analytical Report 597513

for

LT Environmental, Inc.

Project Manager: Adrian Baker

Legg Federal 001

06-SEP-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-27), 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 (T104704221-18-13)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-17)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-16)
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)

06-SEP-18

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

Reference: XENCO Report No(s): **597513**
Legg Federal 001
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) 597513. 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. 597513 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.
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Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

Sample Cross Reference 597513

LT Environmental, Inc., Arvada, CO

Legg Federal 001

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS17	S	08-24-18 10:00	6 In	597513-001
SS18	S	08-24-18 10:15	6 In	597513-002
SS20	S	08-24-18 11:50	6 In	597513-003
SS21	S	08-24-18 13:37	6 In	597513-004
SS22	S	08-24-18 14:15	6 In	597513-005
SS5A	S	08-24-18 15:05	1 ft	597513-006

Version: 1.%

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Legg Federal 001

Project ID:
Work Order Number(s): *597513*

Report Date: *06-SEP-18*
Date Received: *08/29/2018*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3062203 BTEX by EPA 8021B

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

Certificate of Analysis Summary 597513

LT Environmental, Inc., Arvada, CO

Project Name: Legg Federal 001

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

Date Received in Lab: Wed Aug-29-18 03:50 pm
Report Date: 06-SEP-18
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	597513-001		597513-002		597513-003		597513-004		597513-005		597513-006	
	Field Id:	SS17		SS18		SS20		SS21		SS22		SS5A	
	Depth:	6- In		6- In		6- In		6- In		6- In		1- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-24-18 10:00		Aug-24-18 10:15		Aug-24-18 11:50		Aug-24-18 13:37		Aug-24-18 14:15		Aug-24-18 15:05	
BTEX by EPA 8021B	*Extracted:*	Sep-05-18 09:30		Sep-05-18 09:30		Sep-05-18 09:30		Sep-05-18 09:30		Sep-05-18 09:30		Sep-05-18 09:30	
	Analyzed:	Sep-05-18 16:26		Sep-06-18 08:07		Sep-06-18 08:07		Sep-06-18 08:07		Sep-06-18 08:07		Sep-06-18 08:07	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00198	0.00198	<0.00199	0.00199	<0.00200	0.00200	<0.00202	0.00202	<0.00200	0.00200	<0.00198	0.00198
Toluene		<0.00198	0.00198	<0.00199	0.00199	<0.00200	0.00200	0.00870	0.00202	<0.00200	0.00200	<0.00198	0.00198
Ethylbenzene		<0.00198	0.00198	<0.00199	0.00199	<0.00200	0.00200	0.0127	0.00202	<0.00200	0.00200	<0.00198	0.00198
m,p-Xylenes		<0.00397	0.00397	<0.00398	0.00398	<0.00399	0.00399	0.0538	0.00403	<0.00401	0.00401	<0.00397	0.00397
o-Xylene		<0.00198	0.00198	<0.00199	0.00199	<0.00200	0.00200	0.00774	0.00202	<0.00200	0.00200	<0.00198	0.00198
Total Xylenes		<0.00198	0.00198	<0.00199	0.00199	<0.00200	0.00200	0.0615	0.00202	<0.00200	0.00200	<0.00198	0.00198
Total BTEX		<0.00198	0.00198	<0.00199	0.00199	<0.00200	0.00200	0.0829	0.00202	<0.00200	0.00200	<0.00198	0.00198
Inorganic Anions by EPA 300	*Extracted:*	Aug-31-18 09:00		Aug-31-18 09:00		Aug-31-18 10:45		Aug-31-18 10:45		Aug-31-18 10:45		Aug-31-18 10:45	
	Analyzed:	Aug-31-18 12:13		Aug-31-18 13:21		Aug-31-18 13:53		Aug-31-18 14:09		Aug-31-18 14:14		Aug-31-18 14:20	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		<4.95	4.95	64.6	5.00	<4.96	4.96	80.4	4.95	<5.00	5.00	<4.95	4.95
TPH by SW8015 Mod	*Extracted:*	Aug-30-18 07:00		Aug-30-18 07:00		Aug-30-18 07:00		Aug-30-18 07:00		Aug-30-18 07:00		Aug-30-18 07:00	
	Analyzed:	Aug-30-18 10:11		Aug-30-18 11:11		Aug-30-18 11:31		Aug-30-18 11:51		Aug-30-18 12:10		Aug-30-18 12:30	
	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	148	15.0	<15.0	15.0	<14.9	14.9
Diesel Range Organics (DRO)		<15.0	15.0	181	15.0	<14.9	14.9	2360	15.0	45.8	15.0	<14.9	14.9
Oil Range Hydrocarbons (ORO)		<15.0	15.0	38.3	15.0	<14.9	14.9	70.7	15.0	<15.0	15.0	<14.9	14.9
Total TPH		<15.0	15.0	219	15.0	<14.9	14.9	2580	15.0	45.8	15.0	<14.9	14.9

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

Version: 1.%

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analytical Results 597513

LT Environmental, Inc., Arvada, CO

Legg Federal 001

Sample Id:	**SS17**	Matrix:	Soil	Date Received:	08.29.18 15.50
Lab Sample Id:	597513-001	Date Collected:	08.24.18 10.00	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	08.31.18 09.00	Basis:	Wet Weight
Seq Number:	3061988				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	08.31.18 12.13	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.30.18 07.00	Basis:	Wet Weight
Seq Number:	3061961				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.30.18 10.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.30.18 10.11	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.30.18 10.11	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.30.18 10.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	08.30.18 10.11	
o-Terphenyl	84-15-1	102	%	70-135	08.30.18 10.11	

Certificate of Analytical Results 597513

LT Environmental, Inc., Arvada, CO

Legg Federal 001

Sample Id:	**SS17**	Matrix:	Soil	Date Received:	08.29.18 15.50
Lab Sample Id:	597513-001	Date Collected:	08.24.18 10.00	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	09.05.18 09.30	Basis:	Wet Weight
Seq Number:	3062203				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	09.05.18 16.26	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	09.05.18 16.26	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	09.05.18 16.26	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	09.05.18 16.26	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	09.05.18 16.26	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	09.05.18 16.26	U	1
Total BTEX		<0.00198	0.00198	mg/kg	09.05.18 16.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	92	%	70-130	09.05.18 16.26	
1,4-Difluorobenzene	540-36-3	93	%	70-130	09.05.18 16.26	

Certificate of Analytical Results 597513

LT Environmental, Inc., Arvada, CO

Legg Federal 001

Sample Id:	**SS18**	Matrix:	Soil	Date Received:	08.29.18 15.50
Lab Sample Id:	597513-002	Date Collected:	08.24.18 10.15	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	08.31.18 09.00	Basis:	Wet Weight
Seq Number:	3061988				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**64.6**	5.00	mg/kg	08.31.18 13.21		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.30.18 07.00	Basis:	Wet Weight
Seq Number:	3061961				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.30.18 11.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	**181**	15.0	mg/kg	08.30.18 11.11		1
Oil Range Hydrocarbons (ORO)	PHCG2835	**38.3**	15.0	mg/kg	08.30.18 11.11		1
Total TPH	PHC635	**219**	15.0	mg/kg	08.30.18 11.11		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	08.30.18 11.11	
o-Terphenyl	84-15-1	93	%	70-135	08.30.18 11.11	

Certificate of Analytical Results 597513

LT Environmental, Inc., Arvada, CO

Legg Federal 001

Sample Id:	**SS18**	Matrix:	Soil	Date Received:	08.29.18 15.50
Lab Sample Id:	597513-002	Date Collected:	08.24.18 10.15	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	09.05.18 09.30	Basis:	Wet Weight
Seq Number:	3062203				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	09.06.18 08.07	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	09.06.18 08.07	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	09.06.18 08.07	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	09.06.18 08.07	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	09.06.18 08.07	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	09.06.18 08.07	U	1
Total BTEX		<0.00199	0.00199	mg/kg	09.06.18 08.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	92	%	70-130	09.06.18 08.07	
4-Bromofluorobenzene	460-00-4	128	%	70-130	09.06.18 08.07	

Certificate of Analytical Results 597513

LT Environmental, Inc., Arvada, CO

Legg Federal 001

Sample Id:	**SS20**	Matrix:	Soil	Date Received:	08.29.18 15.50
Lab Sample Id:	597513-003	Date Collected:	08.24.18 11.50	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	08.31.18 10.45	Basis:	Wet Weight
Seq Number:	3061992				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	08.31.18 13.53	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.30.18 07.00	Basis:	Wet Weight
Seq Number:	3061961				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	08.30.18 11.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	08.30.18 11.31	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	08.30.18 11.31	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	08.30.18 11.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	08.30.18 11.31	
o-Terphenyl	84-15-1	93	%	70-135	08.30.18 11.31	

Certificate of Analytical Results 597513

LT Environmental, Inc., Arvada, CO

Legg Federal 001

Sample Id:	**SS20**	Matrix:	Soil	Date Received:	08.29.18 15.50
Lab Sample Id:	597513-003	Date Collected:	08.24.18 11.50	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	09.05.18 09.30	Basis:	Wet Weight
Seq Number:	3062203				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.06.18 08.07	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.06.18 08.07	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.06.18 08.07	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	09.06.18 08.07	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.06.18 08.07	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.06.18 08.07	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.06.18 08.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	09.06.18 08.07	
4-Bromofluorobenzene	460-00-4	83	%	70-130	09.06.18 08.07	

Certificate of Analytical Results 597513

LT Environmental, Inc., Arvada, CO

Legg Federal 001

Sample Id:	**SS21**	Matrix:	Soil	Date Received:	08.29.18 15.50
Lab Sample Id:	597513-004	Date Collected:	08.24.18 13.37	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	08.31.18 10.45	Basis:	Wet Weight
Seq Number:	3061992				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**80.4**	4.95	mg/kg	08.31.18 14.09		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.30.18 07.00	Basis:	Wet Weight
Seq Number:	3061961				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**148**	15.0	mg/kg	08.30.18 11.51		1
Diesel Range Organics (DRO)	C10C28DRO	**2360**	15.0	mg/kg	08.30.18 11.51		1
Oil Range Hydrocarbons (ORO)	PHCG2835	**70.7**	15.0	mg/kg	08.30.18 11.51		1
Total TPH	PHC635	**2580**	15.0	mg/kg	08.30.18 11.51		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	08.30.18 11.51	
o-Terphenyl	84-15-1	129	%	70-135	08.30.18 11.51	

Certificate of Analytical Results 597513

LT Environmental, Inc., Arvada, CO

Legg Federal 001

Sample Id:	**SS21**	Matrix:	Soil	Date Received:	08.29.18 15.50
Lab Sample Id:	597513-004	Date Collected:	08.24.18 13.37	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	09.05.18 09.30	Basis:	Wet Weight
Seq Number:	3062203				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	09.06.18 08.07	U	1
Toluene	108-88-3	**0.00870**	0.00202	mg/kg	09.06.18 08.07		1
Ethylbenzene	100-41-4	**0.0127**	0.00202	mg/kg	09.06.18 08.07		1
m,p-Xylenes	179601-23-1	**0.0538**	0.00403	mg/kg	09.06.18 08.07		1
o-Xylene	95-47-6	**0.00774**	0.00202	mg/kg	09.06.18 08.07		1
Total Xylenes	1330-20-7	**0.0615**	0.00202	mg/kg	09.06.18 08.07		1
Total BTEX		**0.0829**	0.00202	mg/kg	09.06.18 08.07		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	124	%	70-130	09.06.18 08.07	
1,4-Difluorobenzene	540-36-3	88	%	70-130	09.06.18 08.07	

Certificate of Analytical Results 597513

LT Environmental, Inc., Arvada, CO

Legg Federal 001

Sample Id:	**SS22**	Matrix:	Soil	Date Received:	08.29.18 15.50
Lab Sample Id:	597513-005	Date Collected:	08.24.18 14.15	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	08.31.18 10.45	Basis:	Wet Weight
Seq Number:	3061992				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	08.31.18 14.14	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.30.18 07.00	Basis:	Wet Weight
Seq Number:	3061961				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.30.18 12.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	**45.8**	15.0	mg/kg	08.30.18 12.10		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.30.18 12.10	U	1
Total TPH	PHC635	**45.8**	15.0	mg/kg	08.30.18 12.10		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	08.30.18 12.10	
o-Terphenyl	84-15-1	97	%	70-135	08.30.18 12.10	

Certificate of Analytical Results 597513

LT Environmental, Inc., Arvada, CO

Legg Federal 001

Sample Id:	**SS22**	Matrix:	Soil	Date Received:	08.29.18 15.50
Lab Sample Id:	597513-005	Date Collected:	08.24.18 14.15	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	09.05.18 09.30	Basis:	Wet Weight
Seq Number:	3062203				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.06.18 08.07	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.06.18 08.07	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.06.18 08.07	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	09.06.18 08.07	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.06.18 08.07	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.06.18 08.07	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.06.18 08.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	95	%	70-130	09.06.18 08.07	
4-Bromofluorobenzene	460-00-4	83	%	70-130	09.06.18 08.07	

Certificate of Analytical Results 597513

LT Environmental, Inc., Arvada, CO

Legg Federal 001

Sample Id:	**SS5A**	Matrix:	Soil	Date Received:	08.29.18 15.50
Lab Sample Id:	597513-006	Date Collected:	08.24.18 15.05	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	08.31.18 10.45	Basis:	Wet Weight
Seq Number:	3061992				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	08.31.18 14.20	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.30.18 07.00	Basis:	Wet Weight
Seq Number:	3061961				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	08.30.18 12.30	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	08.30.18 12.30	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	08.30.18 12.30	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	08.30.18 12.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	08.30.18 12.30	
o-Terphenyl	84-15-1	96	%	70-135	08.30.18 12.30	

Certificate of Analytical Results 597513

LT Environmental, Inc., Arvada, CO

Legg Federal 001

Sample Id:	**SS5A**	Matrix:	Soil	Date Received:	08.29.18 15.50
Lab Sample Id:	597513-006	Date Collected:	08.24.18 15.05	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	09.05.18 09.30	Basis:	Wet Weight
Seq Number:	3062203				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	09.06.18 08.07	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	09.06.18 08.07	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	09.06.18 08.07	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	09.06.18 08.07	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	09.06.18 08.07	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	09.06.18 08.07	U	1
Total BTEX		<0.00198	0.00198	mg/kg	09.06.18 08.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	95	%	70-130	09.06.18 08.07	
1,4-Difluorobenzene	540-36-3	97	%	70-130	09.06.18 08.07	

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 597513

LT Environmental, Inc.

Legg Federal 001

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3061988 — Matrix: Solid — Date Prep: 08.31.18
MB Sample Id: 7661483-1-BLK — LCS Sample Id: 7661483-1-BKS — LCSD Sample Id: 7661483-1-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	259	104	258	103	90-110	0	20	mg/kg	08.31.18 10:43	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3061992 — Matrix: Solid — Date Prep: 08.31.18
MB Sample Id: 7661490-1-BLK — LCS Sample Id: 7661490-1-BKS — LCSD Sample Id: 7661490-1-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	262	105	262	105	90-110	0	20	mg/kg	08.31.18 13:43	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3061988 — Matrix: Soil — Date Prep: 08.31.18
Parent Sample Id: 597513-001 — MS Sample Id: 597513-001 S — MSD Sample Id: 597513-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.850	248	252	102	245	99	90-110	3	20	mg/kg	08.31.18 12:18	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3061988 — Matrix: Soil — Date Prep: 08.31.18
Parent Sample Id: 597555-002 — MS Sample Id: 597555-002 S — MSD Sample Id: 597555-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.852	248	252	102	252	102	90-110	0	20	mg/kg	08.31.18 11:04	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3061992 — Matrix: Soil — Date Prep: 08.31.18
Parent Sample Id: 597513-003 — MS Sample Id: 597513-003 S — MSD Sample Id: 597513-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.852	248	253	102	245	99	90-110	3	20	mg/kg	08.31.18 13:58	

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 597513

LT Environmental, Inc.

Legg Federal 001

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3061992 Matrix: Soil Date Prep: 08.31.18
Parent Sample Id: 597514-007 MS Sample Id: 597514-007 S MSD Sample Id: 597514-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.857	250	241	96	240	96	90-110	0	20	mg/kg	08.31.18 15:18	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3061961 Matrix: Solid Date Prep: 08.30.18
MB Sample Id: 7661540-1-BLK LCS Sample Id: 7661540-1-BKS LCSD Sample Id: 7661540-1-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	843	84	842	84	70-135	0	20	mg/kg	08.30.18 09:30	
Diesel Range Organics (DRO)	<8.13	1000	874	87	868	87	70-135	1	20	mg/kg	08.30.18 09:30	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	85		116		117		70-135	%	08.30.18 09:30
o-Terphenyl	92		98		106		70-135	%	08.30.18 09:30

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3061961 Matrix: Soil Date Prep: 08.30.18
Parent Sample Id: 597513-001 MS Sample Id: 597513-001 S MSD Sample Id: 597513-001 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	847	85	864	86	70-135	2	20	mg/kg	08.30.18 10:31	
Diesel Range Organics (DRO)	<8.12	999	886	89	906	91	70-135	2	20	mg/kg	08.30.18 10:31	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	119		122		70-135	%	08.30.18 10:31
o-Terphenyl	100		106		70-135	%	08.30.18 10:31

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 597513

LT Environmental, Inc.

Legg Federal 001

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3062203 — Matrix: Solid — Date Prep: 09.05.18
MB Sample Id: 7661720-1-BLK — LCS Sample Id: 7661720-1-BKS — LCSD Sample Id: 7661720-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.101	0.0841	83	0.0870	86	70-130	3	35	mg/kg	09.05.18 16:26	
Toluene	<0.00201	0.101	0.0879	87	0.0919	91	70-130	4	35	mg/kg	09.05.18 16:26	
Ethylbenzene	<0.00201	0.101	0.108	107	0.114	113	70-130	5	35	mg/kg	09.05.18 16:26	
m,p-Xylenes	<0.00402	0.201	0.203	101	0.215	106	70-130	6	35	mg/kg	09.05.18 16:26	
o-Xylene	<0.00201	0.101	0.0952	94	0.102	101	70-130	7	35	mg/kg	09.05.18 16:26	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	90		84		89		70-130	%	09.05.18 16:26
4-Bromofluorobenzene	95		86		100		70-130	%	09.05.18 16:26

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3062203 — Matrix: Soil — Date Prep: 09.05.18
Parent Sample Id: 597513-001 — MS Sample Id: 597513-001 S — MSD Sample Id: 597513-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.0834	84	0.0788	79	70-130	6	35	mg/kg	09.05.18 16:26	
Toluene	<0.00199	0.0996	0.0830	83	0.0782	78	70-130	6	35	mg/kg	09.05.18 16:26	
Ethylbenzene	<0.00199	0.0996	0.0972	98	0.0911	91	70-130	6	35	mg/kg	09.05.18 16:26	
m,p-Xylenes	<0.00398	0.199	0.180	90	0.168	84	70-130	7	35	mg/kg	09.05.18 16:26	
o-Xylene	<0.00199	0.0996	0.0841	84	0.0784	78	70-130	7	35	mg/kg	09.05.18 16:26	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	90		89		70-130	%	09.05.18 16:26
4-Bromofluorobenzene	94		89		70-130	%	09.05.18 16:26

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

XENCO LABORATORIES

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Phoenix, Arizona (480-355-0900)

www.xenco.com

CHAIN OF CUSTODY

Page 1 Of 1

Xenco Quote #

Xenco Job # 597513

Client / Reporting Information

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

Company Address: 3300 North "A" Street, Building 1, Unit #103, Midland, TX 79705

Email: Abaker@ltenv.com

Phone No: (432) 704-5178

Project Contact: Adrian Baker

Samplers's Name Joseph S. Hernandez

Project Information

Project Name/Number: LEGG FEDERAL 001

Project Location: Carlsbad, NM

Invoice To: XTO Energy - Kyle Littrell

PO Number: 2RP-2761, 2RP-3634, 2RP-3741, 2RP-3744

Analytical Information

BTEX EPA 8020

TPH EPA 8015

Chloride 300.1

Matrix Codes

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

No.	Field ID / Point of Collection	Collection: Sample Depth	Date	Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Field Comments
1	SS17	6"	8/24/18	1000	S	1								X	
2	SS18	6"		1015	S	1								X	
3	SS19	3'		1130	S	1								X	
4	SS20	6"		1150	S	1								X	
5	SS21	6"		1337	S	1								X	
6	SS22	6"		1415	S	1								X	
7	SS5A	1'		1505	S	1								X	
8															
9															
10															

8/24/18

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 #

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		8.29.18	1	2		2
3	Relinquished by:	Date Time: 15:50	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: Cooler Temp. 14.6 Thermo. Corr. Factor RS 0.0

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.

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 08/29/2018 03:50:00 PM

Work Order #: 597513

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)?	14.6
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Shawnee Gomez Date: 08/29/2018

Shawnee Gomez

Checklist reviewed by: Jessica Kramer Date: 08/30/2018

Jessica Kramer

Analytical Report 611800

for

LT Environmental, Inc.

Project Manager: Adrian Baker

Legg Federal 001

2RP-3744, 2761, 3741

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): **611800**
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) 611800. 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. 611800 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.
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A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

Sample Cross Reference 611800

LT Environmental, Inc., Arvada, CO

Legg Federal 001

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	01-16-19 09:50	1 ft	611800-001
FS02	S	01-16-19 10:15	1 ft	611800-002
FS03	S	01-16-19 10:35	1.5 ft	611800-003
FS04	S	01-16-19 10:35	1.5 ft	611800-004
FS05	S	01-16-19 11:10	3 ft	611800-005
FS06	S	01-16-19 11:25	1 ft	611800-006

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Legg Federal 001

Project ID: *2RP-3744, 2761, 3741*
Work Order Number(s): *611800*

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-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 611800

LT Environmental, Inc., Arvada, CO

Project Name: Legg Federal 001

Project Id: 2RP-3744, 2761, 3741
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:	611800-001		611800-002		611800-003		611800-004		611800-005		611800-006	
	Field Id:	FS01		FS02		FS03		FS04		FS05		FS06	
	Depth:	1- ft		1- ft		1.5- ft		1.5- ft		3- ft		1- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-16-19 09:50		Jan-16-19 10:15		Jan-16-19 10:35		Jan-16-19 10:35		Jan-16-19 11:10		Jan-16-19 11:25	
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		Jan-21-19 11:00		Jan-21-19 11:00	
	Analyzed:	Jan-21-19 19:07		Jan-21-19 19:28		Jan-21-19 19:49		Jan-21-19 20:11		Jan-21-19 20:33		Jan-21-19 20:54	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200
Toluene		<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200
Ethylbenzene		<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199	0.00370	0.00202	<0.00200	0.00200
m,p-Xylenes		<0.00401	0.00401	<0.00398	0.00398	<0.00402	0.00402	<0.00398	0.00398	0.00587	0.00403	<0.00401	0.00401
o-Xylene		<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199	0.00561	0.00202	<0.00200	0.00200
Total Xylenes		<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199	0.0115	0.00202	<0.00200	0.00200
Total BTEX		<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199	0.0152	0.00202	<0.00200	0.00200
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		Jan-21-19 11:30		Jan-21-19 11:30	
	Analyzed:	Jan-21-19 16:04		Jan-21-19 16:10		Jan-21-19 16:32		Jan-21-19 16:38		Jan-21-19 16:44		Jan-21-19 16:50	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		<4.99	4.99	<4.96	4.96	<5.00	5.00	<4.95	4.95	34.4	4.98	<4.99	4.99
TPH by SW8015 Mod	***Extracted:***	Jan-20-19 08:00		Jan-20-19 08:00		Jan-20-19 08:00		Jan-20-19 08:00		Jan-20-19 08:00		Jan-20-19 08:00	
	Analyzed:	Jan-20-19 16:13		Jan-20-19 16:34		Jan-20-19 13:53		Jan-20-19 14:13		Jan-20-19 14:33		Jan-20-19 14:53	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		195	15.0	<15.0	15.0	56.4	15.0	666	15.0	395	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	48.5	15.0	26.7	15.0	<15.0	15.0
Total TPH		195	15.0	<15.0	15.0	56.4	15.0	715	15.0	422	15.0	<15.0	15.0

Jessica Kramer
Project Assistant

Certificate of Analytical Results 611800

LT Environmental, Inc., Arvada, CO

Legg Federal 001

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	01.18.19 11.15
Lab Sample Id:	611800-001	Date Collected:	01.16.19 09.50	Sample Depth:	1 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	<4.99	4.99	mg/kg	01.21.19 16.04	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 16.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	**195**	15.0	mg/kg	01.20.19 16.13		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.20.19 16.13	U	1
Total TPH	PHC635	**195**	15.0	mg/kg	01.20.19 16.13		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	01.20.19 16.13	
o-Terphenyl	84-15-1	106	%	70-135	01.20.19 16.13	

Certificate of Analytical Results 611800

LT Environmental, Inc., Arvada, CO

Legg Federal 001

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	01.18.19 11.15
Lab Sample Id:	611800-001	Date Collected:	01.16.19 09.50	Sample Depth:	1 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 19.07	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.21.19 19.07	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.21.19 19.07	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	01.21.19 19.07	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.21.19 19.07	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.21.19 19.07	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.21.19 19.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	90	%	70-130	01.21.19 19.07	
4-Bromofluorobenzene	460-00-4	103	%	70-130	01.21.19 19.07	

Certificate of Analytical Results 611800

LT Environmental, Inc., Arvada, CO

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Sample Id:	**FS02**	Matrix:	Soil	Date Received:	01.18.19 11.15
Lab Sample Id:	611800-002	Date Collected:	01.16.19 10.15	Sample Depth:	1 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 16.10	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 16.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.20.19 16.34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.20.19 16.34	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.20.19 16.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	01.20.19 16.34	
o-Terphenyl	84-15-1	101	%	70-135	01.20.19 16.34	

Certificate of Analytical Results 611800

LT Environmental, Inc., Arvada, CO

Legg Federal 001

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	01.18.19 11.15
Lab Sample Id:	611800-002	Date Collected:	01.16.19 10.15	Sample Depth:	1 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 19.28	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.21.19 19.28	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.21.19 19.28	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.21.19 19.28	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.21.19 19.28	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.21.19 19.28	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.21.19 19.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	107	%	70-130	01.21.19 19.28	
1,4-Difluorobenzene	540-36-3	93	%	70-130	01.21.19 19.28	

Certificate of Analytical Results 611800

LT Environmental, Inc., Arvada, CO

Legg Federal 001

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	01.18.19 11.15
Lab Sample Id:	611800-003	Date Collected:	01.16.19 10.35	Sample Depth:	1.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.21.19 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 16.32	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 13.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	**56.4**	15.0	mg/kg	01.20.19 13.53		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.20.19 13.53	U	1
Total TPH	PHC635	**56.4**	15.0	mg/kg	01.20.19 13.53		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	01.20.19 13.53	
o-Terphenyl	84-15-1	96	%	70-135	01.20.19 13.53	

Certificate of Analytical Results 611800

LT Environmental, Inc., Arvada, CO

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Sample Id:	**FS03**	Matrix:	Soil	Date Received:	01.18.19 11.15
Lab Sample Id:	611800-003	Date Collected:	01.16.19 10.35	Sample Depth:	1.5 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	<0.00201	0.00201	mg/kg	01.21.19 19.49	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.21.19 19.49	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.21.19 19.49	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.21.19 19.49	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.21.19 19.49	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	01.21.19 19.49	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.21.19 19.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	94	%	70-130	01.21.19 19.49	
4-Bromofluorobenzene	460-00-4	104	%	70-130	01.21.19 19.49	

Certificate of Analytical Results 611800

LT Environmental, Inc., Arvada, CO

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Sample Id:	**FS04**	Matrix:	Soil	Date Received:	01.18.19 11.15
Lab Sample Id:	611800-004	Date Collected:	01.16.19 10.35	Sample Depth:	1.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.21.19 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 16.38	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 14.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	**666**	15.0	mg/kg	01.20.19 14.13		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**48.5**	15.0	mg/kg	01.20.19 14.13		1
Total TPH	PHC635	**715**	15.0	mg/kg	01.20.19 14.13		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	01.20.19 14.13	
o-Terphenyl	84-15-1	122	%	70-135	01.20.19 14.13	

Certificate of Analytical Results 611800

LT Environmental, Inc., Arvada, CO

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Sample Id:	**FS04**	Matrix:	Soil	Date Received:	01.18.19 11.15
Lab Sample Id:	611800-004	Date Collected:	01.16.19 10.35	Sample Depth:	1.5 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 20.11	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.21.19 20.11	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.21.19 20.11	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.21.19 20.11	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.21.19 20.11	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.21.19 20.11	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.21.19 20.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	01.21.19 20.11	
1,4-Difluorobenzene	540-36-3	97	%	70-130	01.21.19 20.11	

Certificate of Analytical Results 611800

LT Environmental, Inc., Arvada, CO

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Sample Id:	**FS05**	Matrix:	Soil	Date Received:	01.18.19 11.15
Lab Sample Id:	611800-005	Date Collected:	01.16.19 11.10	Sample Depth:	3 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	**34.4**	4.98	mg/kg	01.21.19 16.44		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 14.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	**395**	15.0	mg/kg	01.20.19 14.33		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**26.7**	15.0	mg/kg	01.20.19 14.33		1
Total TPH	PHC635	**422**	15.0	mg/kg	01.20.19 14.33		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	01.20.19 14.33	
o-Terphenyl	84-15-1	102	%	70-135	01.20.19 14.33	

Certificate of Analytical Results 611800

LT Environmental, Inc., Arvada, CO

Legg Federal 001

Sample Id:	**FS05**	Matrix:	Soil	Date Received:	01.18.19 11.15
Lab Sample Id:	611800-005	Date Collected:	01.16.19 11.10	Sample Depth:	3 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 20.33	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.21.19 20.33	U	1
Ethylbenzene	100-41-4	**0.00370**	0.00202	mg/kg	01.21.19 20.33		1
m,p-Xylenes	179601-23-1	**0.00587**	0.00403	mg/kg	01.21.19 20.33		1
o-Xylene	95-47-6	**0.00561**	0.00202	mg/kg	01.21.19 20.33		1
Total Xylenes	1330-20-7	**0.0115**	0.00202	mg/kg	01.21.19 20.33		1
Total BTEX		**0.0152**	0.00202	mg/kg	01.21.19 20.33		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	97	%	70-130	01.21.19 20.33	
4-Bromofluorobenzene	460-00-4	109	%	70-130	01.21.19 20.33	

Certificate of Analytical Results 611800

LT Environmental, Inc., Arvada, CO

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Sample Id:	**FS06**	Matrix:	Soil	Date Received:	01.18.19 11.15
Lab Sample Id:	611800-006	Date Collected:	01.16.19 11.25	Sample Depth:	1 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	<4.99	4.99	mg/kg	01.21.19 16.50	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 14.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.20.19 14.53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.20.19 14.53	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.20.19 14.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	01.20.19 14.53	
o-Terphenyl	84-15-1	101	%	70-135	01.20.19 14.53	

Certificate of Analytical Results 611800

LT Environmental, Inc., Arvada, CO

Legg Federal 001

Sample Id:	**FS06**	Matrix:	Soil	Date Received:	01.18.19 11.15
Lab Sample Id:	611800-006	Date Collected:	01.16.19 11.25	Sample Depth:	1 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 20.54	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.21.19 20.54	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.21.19 20.54	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	01.21.19 20.54	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.21.19 20.54	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.21.19 20.54	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.21.19 20.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	70-130	01.21.19 20.54	
1,4-Difluorobenzene	540-36-3	93	%	70-130	01.21.19 20.54	

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 611800

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: 3076435 Matrix: Solid Date Prep: 01.20.19
MB Sample Id: 7670060-1-BLK LCS Sample Id: 7670060-1-BKS LCSD Sample Id: 7670060-1-BSD

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

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

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

QC Summary 611800

LT Environmental, Inc.

Legg Federal 001

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

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

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

Analytical Method: 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: 611800

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

Work Order Comments

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

Project Name:	Logg Federal 001	Turn Around	
Project Number:	2RP-3744, 2761, 3741	Routine	☒
P.O. Number:		Rush:	3 day
Sampler's Name:	Lynda Laumbach	Due Date:	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)
FS01	S	01/16/2019	9:50	1'ave	1	X	X	X
FS02	S		10:15	1'ave	1	X	X	X
FS03	S		10:35	1.5'ave	1	X	X	X
FS04	S		10:35	1.5'ave	1	X	X	X
FS05	S		11:10	3'ave	1	X	X	X
FS06	S		11:25	1'ave	1	X	X	X
	S							

Work Order Notes

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

Sample Comments

Composites
LL Sample
RM Sample

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 19:30	2		1/18/19 1115
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

7742 24392838

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 #: 611800

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 612380

for

LT Environmental, Inc.

Project Manager: Adrian Baker

Legg Federal 001

012918024

29-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)

29-JAN-19

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

Reference: XENCO Report No(s): **612380**
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) 612380. 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. 612380 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 612380

LT Environmental, Inc., Arvada, CO

Legg Federal 001

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS09A	S	01-21-19 10:30	4 ft	612380-001
SS11A	S	01-21-19 13:20	2 ft	612380-002
SS14A	S	01-21-19 12:10	4 ft	612380-003
FS07	S	01-21-19 14:50	0.67 ft	612380-004

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Legg Federal 001

Project ID: *012918024*
Work Order Number(s): *612380*

Report Date: *29-JAN-19*
Date Received: *01/24/2019*

Sample receipt non conformances and comments:

Per clients email, corrected sample name from SSHA to SS14A. NEW VERSION GENERATED. JK 01/29/19

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3076948 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 612380

LT Environmental, Inc., Arvada, CO

Project Name: Legg Federal 001

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

Date Received in Lab: Thu Jan-24-19 12:15 pm
Report Date: 29-JAN-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	612380-001		612380-002		612380-003		612380-004					
	Field Id:	SS09A		SS11A		SS14A		FS07					
	Depth:	4- ft		2- ft		4- ft		0.67- ft					
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	Jan-21-19 10:30		Jan-21-19 13:20		Jan-21-19 12:10		Jan-21-19 14:50					
BTEX by EPA 8021B	***Extracted:***	Jan-24-19 12:30		Jan-24-19 12:30		Jan-24-19 12:30		Jan-24-19 12:30					
	Analyzed:	Jan-24-19 19:46		Jan-24-19 20:07		Jan-24-19 20:29		Jan-24-19 21:54					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202				
Toluene		<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202				
Ethylbenzene		<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202				
m,p-Xylenes		<0.00398	0.00398	<0.00402	0.00402	<0.00399	0.00399	<0.00403	0.00403				
o-Xylene		<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202				
Total Xylenes		<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202				
Total BTEX		<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202				
Inorganic Anions by EPA 300	***Extracted:***	Jan-24-19 12:30		Jan-24-19 12:30		Jan-24-19 12:30		Jan-24-19 12:30					
	Analyzed:	Jan-24-19 17:43		Jan-24-19 17:49		Jan-24-19 17:56		Jan-24-19 18:02					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		21.0	4.98	<5.00	5.00	46.7	4.99	<4.97	4.97				
TPH by SW8015 Mod	***Extracted:***	Jan-24-19 14:00		Jan-24-19 14:00		Jan-24-19 14:00		Jan-24-19 14:00					
	Analyzed:	Jan-24-19 19:29		Jan-24-19 20:30		Jan-24-19 20:50		Jan-24-19 21:11					
	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)		<15.0	15.0	79.8	15.0	<15.0	15.0	22.0	15.0				
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	23.2	15.0	<15.0	15.0	<15.0	15.0				
Total TPH		<15.0	15.0	103	15.0	<15.0	15.0	22.0	15.0				

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

Jessica Kramer
Project Assistant

Final 1.001

Certificate of Analytical Results 612380

LT Environmental, Inc., Arvada, CO

Legg Federal 001

Sample Id:	**SS09A**	Matrix:	Soil	Date Received:	01.24.19 12.15
Lab Sample Id:	612380-001	Date Collected:	01.21.19 10.30	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.24.19 12.30	Basis:	Wet Weight
Seq Number:	3077011				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**21.0**	4.98	mg/kg	01.24.19 17.43		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	01.24.19 14.00	Basis:	Wet Weight
Seq Number:	3076974				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.24.19 19.29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.24.19 19.29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.24.19 19.29	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.24.19 19.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	01.24.19 19.29	
o-Terphenyl	84-15-1	90	%	70-135	01.24.19 19.29	

Certificate of Analytical Results 612380

LT Environmental, Inc., Arvada, CO

Legg Federal 001

Sample Id:	**SS09A**	Matrix:	Soil	Date Received:	01.24.19 12.15
Lab Sample Id:	612380-001	Date Collected:	01.21.19 10.30	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.24.19 12.30	Basis:	Wet Weight
Seq Number:	3076948				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.24.19 19.46	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.24.19 19.46	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.24.19 19.46	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.24.19 19.46	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.24.19 19.46	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.24.19 19.46	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.24.19 19.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	87	%	70-130	01.24.19 19.46	
4-Bromofluorobenzene	460-00-4	106	%	70-130	01.24.19 19.46	

Certificate of Analytical Results 612380

LT Environmental, Inc., Arvada, CO

Legg Federal 001

Sample Id:	**SS11A**	Matrix:	Soil	Date Received:	01.24.19 12.15
Lab Sample Id:	612380-002	Date Collected:	01.21.19 13.20	Sample Depth:	2 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.24.19 12.30	Basis:	Wet Weight
Seq Number:	3077011				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	01.24.19 17.49	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	01.24.19 14.00	Basis:	Wet Weight
Seq Number:	3076974				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.24.19 20.30	U	1
Diesel Range Organics (DRO)	C10C28DRO	**79.8**	15.0	mg/kg	01.24.19 20.30		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**23.2**	15.0	mg/kg	01.24.19 20.30		1
Total TPH	PHC635	**103**	15.0	mg/kg	01.24.19 20.30		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	01.24.19 20.30	
o-Terphenyl	84-15-1	94	%	70-135	01.24.19 20.30	

Certificate of Analytical Results 612380

LT Environmental, Inc., Arvada, CO

Legg Federal 001

Sample Id:	**SS11A**	Matrix:	Soil	Date Received:	01.24.19 12.15
Lab Sample Id:	612380-002	Date Collected:	01.21.19 13.20	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.24.19 12.30	Basis:	Wet Weight
Seq Number:	3076948				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.24.19 20.07	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.24.19 20.07	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.24.19 20.07	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.24.19 20.07	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.24.19 20.07	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	01.24.19 20.07	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.24.19 20.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	96	%	70-130	01.24.19 20.07	
1,4-Difluorobenzene	540-36-3	92	%	70-130	01.24.19 20.07	

Certificate of Analytical Results 612380

LT Environmental, Inc., Arvada, CO

Legg Federal 001

Sample Id:	**SS14A**	Matrix:	Soil	Date Received:	01.24.19 12.15
Lab Sample Id:	612380-003	Date Collected:	01.21.19 12.10	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.24.19 12.30	Basis:	Wet Weight
Seq Number:	3077011				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**46.7**	4.99	mg/kg	01.24.19 17.56		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	01.24.19 14.00	Basis:	Wet Weight
Seq Number:	3076974				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.24.19 20.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.24.19 20.50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.24.19 20.50	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.24.19 20.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	01.24.19 20.50	
o-Terphenyl	84-15-1	88	%	70-135	01.24.19 20.50	

Certificate of Analytical Results 612380

LT Environmental, Inc., Arvada, CO

Legg Federal 001

Sample Id:	**SS14A**	Matrix:	Soil	Date Received:	01.24.19 12.15
Lab Sample Id:	612380-003	Date Collected:	01.21.19 12.10	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.24.19 12.30	Basis:	Wet Weight
Seq Number:	3076948				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.24.19 20.29	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.24.19 20.29	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.24.19 20.29	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.24.19 20.29	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.24.19 20.29	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.24.19 20.29	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.24.19 20.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	70-130	01.24.19 20.29	
1,4-Difluorobenzene	540-36-3	94	%	70-130	01.24.19 20.29	

Certificate of Analytical Results 612380

LT Environmental, Inc., Arvada, CO

Legg Federal 001

Sample Id:	**FS07**	Matrix:	Soil	Date Received:	01.24.19 12.15
Lab Sample Id:	612380-004	Date Collected:	01.21.19 14.50	Sample Depth:	0.67 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.24.19 12.30	Basis:	Wet Weight
Seq Number:	3077011				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.97	4.97	mg/kg	01.24.19 18.02	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	01.24.19 14.00	Basis:	Wet Weight
Seq Number:	3076974				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.24.19 21.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	**22.0**	15.0	mg/kg	01.24.19 21.11		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.24.19 21.11	U	1
Total TPH	PHC635	**22.0**	15.0	mg/kg	01.24.19 21.11		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	01.24.19 21.11	
o-Terphenyl	84-15-1	96	%	70-135	01.24.19 21.11	

Certificate of Analytical Results 612380

LT Environmental, Inc., Arvada, CO

Legg Federal 001

Sample Id:	**FS07**	Matrix:	Soil	Date Received:	01.24.19 12.15
Lab Sample Id:	612380-004	Date Collected:	01.21.19 14.50	Sample Depth:	0.67 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.24.19 12.30	Basis:	Wet Weight
Seq Number:	3076948				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.24.19 21.54	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.24.19 21.54	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.24.19 21.54	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	01.24.19 21.54	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.24.19 21.54	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	01.24.19 21.54	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.24.19 21.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	97	%	70-130	01.24.19 21.54	
1,4-Difluorobenzene	540-36-3	92	%	70-130	01.24.19 21.54	

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 612380

LT Environmental, Inc.

Legg Federal 001

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3077011 — Matrix: Solid — Date Prep: 01.24.19
MB Sample Id: 7670433-1-BLK — LCS Sample Id: 7670433-1-BKS — LCSD Sample Id: 7670433-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	226	250	226	90	230	92	90-110	2	20	mg/kg	01.24.19 15:35	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3077011 — Matrix: Soil — Date Prep: 01.24.19
Parent Sample Id: 612382-001 — MS Sample Id: 612382-001 S — MSD Sample Id: 612382-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	139	250	409	108	385	98	90-110	6	20	mg/kg	01.24.19 18:20	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3077011 — Matrix: Soil — Date Prep: 01.24.19
Parent Sample Id: 612243-014 — MS Sample Id: 612243-014 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Chloride	457	248	646	76	90-110	mg/kg	01.24.19 16:51	X

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3076974 — Matrix: Solid — Date Prep: 01.24.19
MB Sample Id: 7670421-1-BLK — LCS Sample Id: 7670421-1-BKS — LCSD Sample Id: 7670421-1-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	950	95	898	90	70-135	6	20	mg/kg	01.24.19 14:14	
Diesel Range Organics (DRO)	<8.13	1000	1030	103	978	98	70-135	5	20	mg/kg	01.24.19 14:14	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	95		118		113		70-135	%	01.24.19 14:14
o-Terphenyl	98		111		111		70-135	%	01.24.19 14:14

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 612380

LT Environmental, Inc.

Legg Federal 001

Analytical Method: TPH by SW8015 Mod | Prep Method: TX1005P
Seq Number: 3076974 | Matrix: Soil | Date Prep: 01.24.19
Parent Sample Id: 611651-001 | MS Sample Id: 611651-001 S | MSD Sample Id: 611651-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	12.0	997	857	85	870	86	70-135	2	20	mg/kg	01.24.19 16:30	
Diesel Range Organics (DRO)	12.2	997	980	97	976	96	70-135	0	20	mg/kg	01.24.19 16:30	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	122		120		70-135	%	01.24.19 16:30
o-Terphenyl	111		109		70-135	%	01.24.19 16:30

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3076948 | Matrix: Solid | Date Prep: 01.24.19
MB Sample Id: 7670425-1-BLK | LCS Sample Id: 7670425-1-BKS | LCSD Sample Id: 7670425-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.118	118	0.112	112	70-130	5	35	mg/kg	01.24.19 15:07	
Toluene	<0.00200	0.100	0.103	103	0.0983	98	70-130	5	35	mg/kg	01.24.19 15:07	
Ethylbenzene	<0.00200	0.100	0.129	129	0.117	117	70-130	10	35	mg/kg	01.24.19 15:07	
m,p-Xylenes	<0.00401	0.200	0.241	121	0.235	118	70-130	3	35	mg/kg	01.24.19 15:07	
o-Xylene	<0.00200	0.100	0.125	125	0.110	110	70-130	13	35	mg/kg	01.24.19 15:07	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	97		116		128		70-130	%	01.24.19 15:07
4-Bromofluorobenzene	97		72		104		70-130	%	01.24.19 15:07

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3076948 | Matrix: Soil | Date Prep: 01.24.19
Parent Sample Id: 612242-001 | MS Sample Id: 612242-001 S | MSD Sample Id: 612242-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.103	102	0.125	125	70-130	19	35	mg/kg	01.24.19 15:49	
Toluene	<0.00202	0.101	0.0921	91	0.109	109	70-130	17	35	mg/kg	01.24.19 15:49	
Ethylbenzene	<0.00202	0.101	0.114	113	0.125	125	70-130	9	35	mg/kg	01.24.19 15:49	
m,p-Xylenes	<0.00403	0.202	0.226	112	0.249	125	70-130	10	35	mg/kg	01.24.19 15:49	
o-Xylene	<0.00202	0.101	0.107	106	0.118	118	70-130	10	35	mg/kg	01.24.19 15:49	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	120		124		70-130	%	01.24.19 15:49
4-Bromofluorobenzene	113		104		70-130	%	01.24.19 15:49

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

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

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

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

Chain of Custody

Work Order No: 612380

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 Litrell
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:		rmcafee@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 ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Legg Federal 001	Turn Around	
Project Number:	012918024	Routine ☐	
P.O. Number:	2RP-3744	Rush: 2 Day	
Sampler's Name:	Robert McAfee	Due Date: 01/25/19	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	0.3/0.2	Thermometer ID	IR8
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)
SS09 A	S	01/21/19	1030	4'	1	X	X	X
SS11 A			1320	2'		X	X	X
SS14 A			1210	4'		X	X	X
FS07			1450	0.67'		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	Robert McAfee	Timothy F. Elkins	1-23-19 / 12:52 Pm	2		1/24/19 1215
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

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: 01/24/2019 12:15:00 PM

Work Order #: 612380

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

Temperature Measuring device used : R8

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 01/24/2019
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 01/24/2019
Jessica Kramer

ATTACHMENT 3: SOIL SAMPLE LOGS

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

Identifier:	Date:
SS9	1/21/2019
Project Name:	RP Number:
Legg Federal 001	2RP-2761, 2RP-3741, 2RP-3744

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: RM	Method: Hand auger

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

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			CALICHE
								SILTY SAND, brown, poorly graded
M	< 128	0	N		1			
M	< 128	0	N		2			
M	< 128	0	N		3			SANDY CLAY, Red-brown, roots
M	< 128	0	N	SS9A	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:
SS11	1/21/2019
Project Name:	RP Number:
Legg Federal 001	2RP-2761, 2RP-3741, 2RP-3744

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: RM	Method: Hand auger

Lat/Long: 32.368532, -103.867647	Field Screening: PID	Hole Diameter: 3 inches	Total Depth: 2 feet bgs

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			CALICHE
							SM	SILTY SAND, brown, poorly graded, medium sand
M	< 128	0.4	N		1			
M	< 128	0.3	N	SS11A	2		SC	SAND, red-brown, poorly graded, some clay
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation	Identifier: SS14	Date: 1/21/2019
	Project Name: Legg Federal 001	RP Number: 2RP-2761, 2RP-3741, 2RP-3744
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: RM	Method: Hand auger
Lat/Long: 32.368532, -103.867647	Field Screening: PID	Hole Diameter: 3 inches / Total Depth: 4 feet bgs

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			CALICHE
							SM	SILTY SAND, brown, poorly graded, medium sand
M	< 128	0	N		1			
M	< 128	0	N		2		SC	SAND, red-brown, poorly graded, some clay
M	< 128	0	N		3			
M	< 128	0	N	SS14A	4		SC	SANDY CLAY, red-brown, roots
								Total Depth 4 feet bgs
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

ATTACHMENT 4: PHOTOGRAPHIC LOG

Southeast facing view of central excavation area.

Project: 012918024	XTO Energy, Inc. Legg Federal 001 Production Facility	LTE Advancing Opportunity
August 29, 2018	Photographic Log	

Northeast facing view of southern excavation.

Project: 012918024	XTO Energy, Inc. Legg Federal 001 Production Facility	LTE Advancing Opportunity
August 29, 2018	Photographic Log	

North facing view of northeast excavation.

Project: 012918024	XTO Energy, Inc. Legg Federal 001 Production Facility	LTE Advancing Opportunity
August 29, 2018	Photographic Log	

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1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
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811 S. First St., Artesia, NM 88210
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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 199355

CONDITIONS

Operator: BOPCO, L.P. 6401 Holiday Hill Rd Midland, TX 79707	OGRID: 260737
	Action Number: 199355
	Action Type: [IM-SD] Incident File Support Doc (ENV) (IM-BNF)

CONDITIONS

Created By	Condition	Condition Date
amaxwell	Closure approved. Release area will be subject to 19.15.29.13 RESTORATION, RECLAMATION AND RE-VEGETATION for the top 4 feet upon plug and abandonment.	3/22/2023