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

April 18, 2019

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

RE: Closure Request
James Ranch Unit 29 SWD Tank Battery
Remediation Permit Numbers 2RP-2726 and 2RP-4833
Eddy County, New Mexico

Dear Mr. Billings:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following report detailing the soil sampling activities at the James Ranch Unit (JRU) 29 Salt Water Disposal (SWD) Tank Battery (Site) in Unit K, Section 36, Township 22 South, Range 30 East, in Eddy County, New Mexico (Figure 1). The Site is located on same pad as the producing JRU #29 well. The purpose of the soil sampling activities was to assess impacts to soil after two separate events caused the release of produced water in the same area of the caliche well pad.

The first release was discovered on December 25, 2014, and was the result of a truck driver failing to control fluids while unloading at the Site. Approximately 97 barrels (bbls) of produced water were released and impacted approximately 14,500 square feet of the tank battery and well pad. A vacuum truck was used to recover the free standing fluid; approximately 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 6, 2015, and was assigned Remediation Permit (RP) Number 2RP-2726 (Attachment 1).

The second release was discovered on June 20, 2018, and was the result of gland bolts on the water transfer pump being sheared off due to vibration. Approximately 1,852.5 bbls of produced water were released. The majority of the released fluids remained within the lined containment; however, approximately 2.5 bbls of overspray impacted the surface of the well pad. A vacuum truck was used to recover the free standing fluid; approximately 1,850 bbls of produced water were recovered from the lined containment. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 on June 27, 2018, and was assigned RP Number 2RP-4833 (Attachment 1).

One of the releases occurred while the facility was operated by the previous operator; however, XTO is the current operator and is committed to addressing any releases that remain unresolved. Since both releases affected the same area of the pad, soil sampling activities were completed to

assess and close both releases simultaneously. The 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 release is categorized as a Tier III site in the Compliance Agreement, meaning remediation of the release began before prior to August 14, 2018, the effective date of 19.15.29 NMAC, however remediation was ongoing. Based on the results of the 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 is the United States Geological Survey (USGS) well 321936103503401 23S.30E.02.44414, located approximately 7,494 feet southwest of the Site, with a depth to groundwater of 260.75 feet bgs and a total depth of 320 feet bgs. The water well is approximately 55 feet lower in elevation than the Site. The nearest continuously flowing water or significant watercourse to the Site is a dry wash located approximately 7,038 ft 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. The Site is located in a medium karst zone. Based on these criteria, the following NMOCD Table 1 closure criteria were applied: 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.

PRELIMINARY SOIL SAMPLING ACTIVITIES

On August 1, 2018, an LTE scientist collected six preliminary soil samples (SS01 through SS06) around the perimeter of the pad to confirm the release did not impact the surrounding pasture. The soil sample locations, depicted on Figure 2, were selected based on information provided on the initial Form C-141s and field observations. To eliminate the effects from weathering and natural degradation of contaminants at the ground surface, the soil samples were collected from each sample location from a depth of 1 foot bgs. The soil samples were screened for volatile aromatic hydrocarbons and chlorides using a photo-ionization detector (PID) and Hach® chloride QuanTab® test strips. The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler, method of analysis, and immediately placed on ice. The soil samples were shipped at 4 degrees Celsius (°C) under strict chain-of-custody procedures to

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

DELINEATION SOIL SAMPLING ACTIVITIES

On August 1, 2018, LTE personnel were at the Site to oversee potholing activities to assess the vertical extent of impacted soil in the release area. Potholes PH01 through PH05 were advanced in the release area via backhoe to depths ranging from 4 feet to 9 feet bgs. Soil was field screened in the potholes using a PID and Hach® chloride QuanTab® test strips. Delineation soil samples were collected for laboratory analysis from each pothole PH01 through PH05. Five soil samples (PH01, PH01A, PH01B, PH01C, and PH01D) were collected from pothole PH01 from depths ranging from 4 feet to 8 feet bgs; six soil samples (PH02, PH02A, PH02B, PH02C, PH02D and PH02E) were collected from pothole PH02 from depths ranging from 4 feet to 9 feet bgs; three soil samples (PH04, PH04A, and PH04B) were collected from pothole PH04 from depths ranging from 4 feet to 6 feet bgs; and one soil sample was collected from each pothole PH03 and PH05 from a depth of 4 feet bgs.

During March 2019, LTE personnel returned to the Site to further assess the lateral and vertical extent of impacted soil in the release area via potholing. Potholes PH06 through PH10 were advanced in the release area via backhoe to depths ranging from 4 feet to 13.5 feet bgs. Soil was field screened in the potholes using a PID and Hach® chloride QuanTab® test strips. Two delineation soil samples were collected for laboratory analysis from each pothole PH06 through PH10 from depths ranging from 1 foot to 13.5 feet bgs. Soil samples PH06 and PH06A were collected from pothole PH06 from depths of 9 feet and 13 feet bgs; soil samples PH07 and PH07A were collected from pothole PH07 from depths of 1 foot and 6 feet bgs; soil samples PH08 and PH08A were collected from pothole PH08 from depths of 1 foot and 13.5 feet bgs; soil samples PH09 and PH09A were collected from pothole PH09 from depths of 1 foot and 5 feet bgs; and soil samples PH10 and PH10A were collected from pothole PH10 from depths of 1 foot and 4 feet bgs.

The pothole soil samples were collected, handled, and analyzed as described above and submitted to Xenco in Midland, Texas. The potholes were backfilled with the soil removed; no soil was removed from the Site for disposal. The pothole soil sample locations and depths are presented on Figure 3 and soil sample logs are included in Attachment 2.

ANALYTICAL RESULTS

Laboratory analytical results indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the NMOCD Table 1 closure criteria in preliminary soil samples SS01 through SS06 collected at 1 foot bgs. Additionally, chloride concentrations were below 600 mg/kg in soil

samples SS01 through SS05, collected from the pasture area surrounding the pad. The laboratory analytical results confirmed that the release events did not impact the surrounding pasture land.

Laboratory analytical results indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the NMOCD Table 1 closure criteria in all delineation soil samples collected from potholes PH01 through PH10 from depths ranging from 1 foot to 13.5 feet bgs. Based on the laboratory analytical results, no soil excavation was required. Laboratory analytical results are presented on Figure 2 and Figure 3 and summarized in Table 1, and the complete laboratory analytical reports are included as Attachment 3.

CONCLUSIONS

Preliminary soil samples SS01 through SS06 and delineation soil samples from potholes PH01 through PH10 were collected in and around the release area to determine if any impacted soil remained in place as a result of the two release events. Laboratory analytical results indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the NMOCD Table 1 closure criteria in all soil samples. Initial response efforts and natural degradation have mitigated impacts at the Site. XTO requests no further action for RP numbers 2RP-2726 and 2RP-4833. An updated NMOCD Form C-141 for each release is included as Attachment 1. A photographic log of the Site is included as Attachment 4.

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

Sincerely,
LT ENVIRONMENTAL, INC.

Adrian Baker
Project Geologist

Ashley L. Ager, P.G.
Senior Geologist

cc: Kyle Littrell, XTO
Michael Bratcher, NMOCD
Robert Hamlet, NMOCD
Ryan Mann, State Land Office

Attachments:

Figure 1 Site Location Map
Figure 2 Preliminary Soil Sample Locations

Figure 3 Delineation Soil Sample Locations
Table 1 Soil Analytical Results
Attachment 1 Initial/Final NMOCD Form C-141 (2RP-2726 and 2RP-4833)
Attachment 2 Soil Sample Logs
Attachment 3 Laboratory Analytical Reports
Attachment 4 Photographic Log

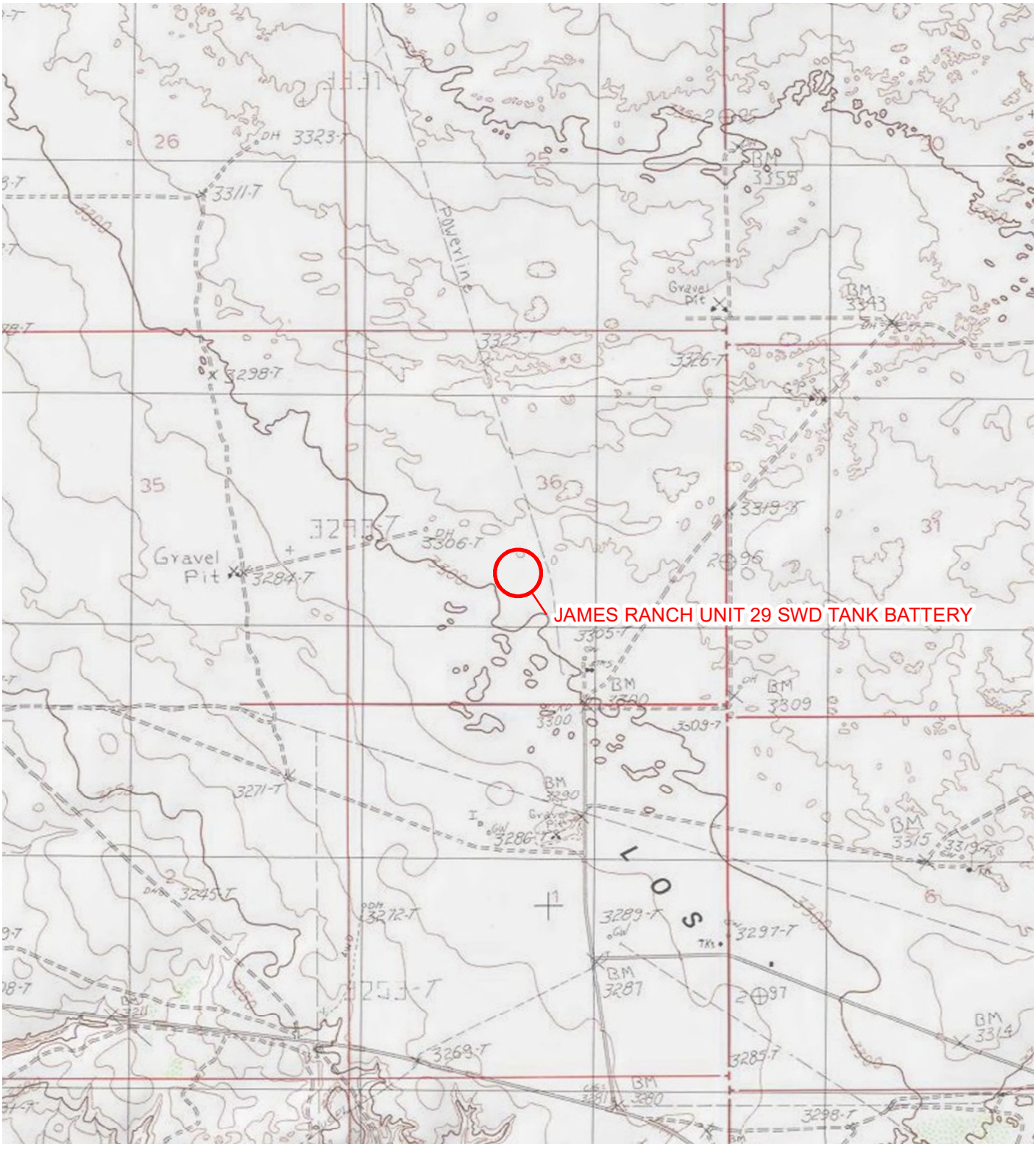

IMAGE COURTESY OF ESRI/USGS

LEGEND

SITE LOCATION

0 2,000 4,000

Feet

N

NEW MEXICO

NOTE: REMEDIATION PERMIT NUMBERS 2RP-4833 & 2RP-2726

FIGURE 1
SITE LOCATION MAP
JAMES RANCH UNIT 29 SWD TANK BATTERY
UNIT K SEC 36 T22S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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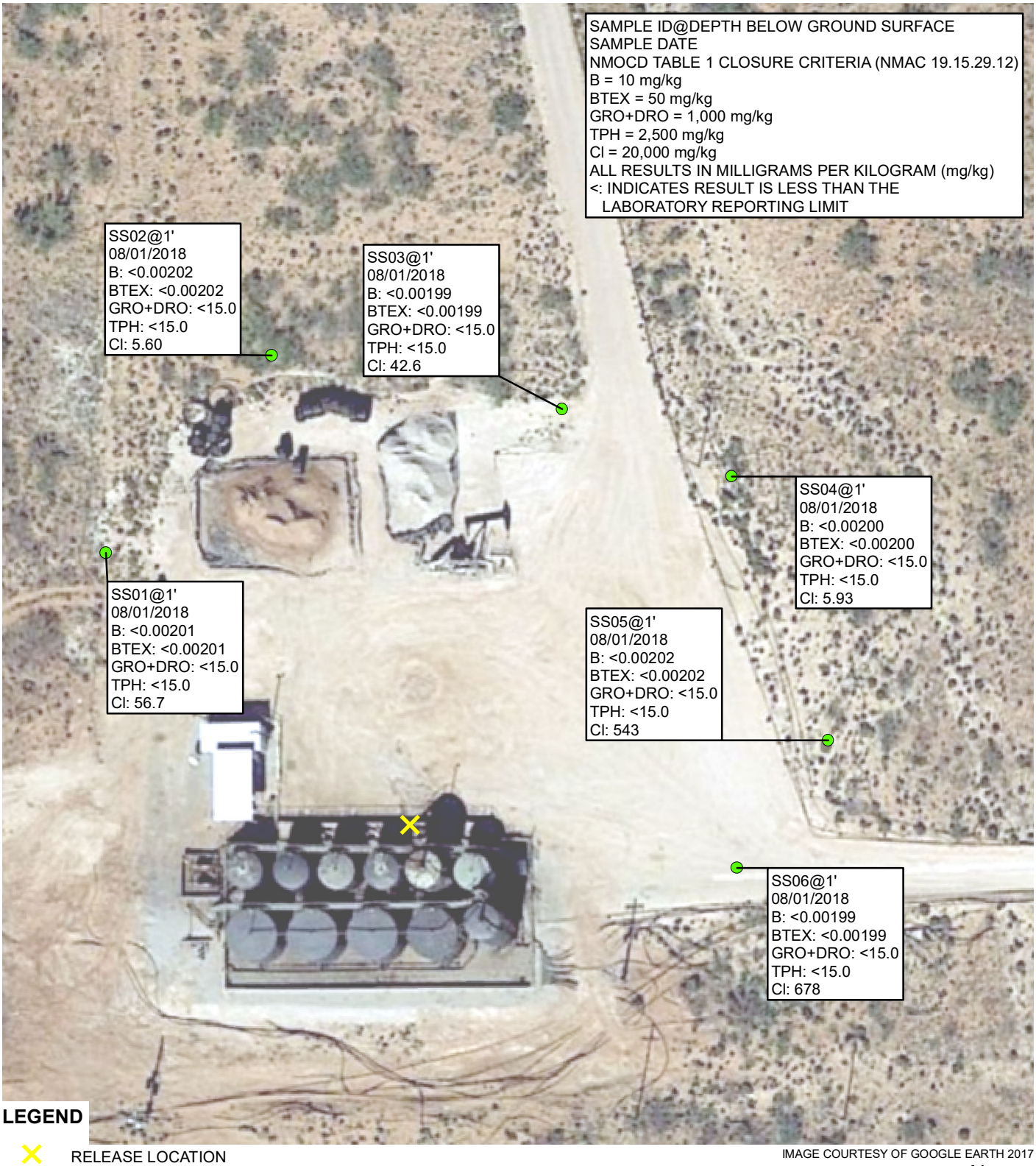

LEGEND

RELEASE LOCATION

PRELIMINARY SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE STANDARDS

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-4833 & 2RP-2726

IMAGE COURTESY OF GOOGLE EARTH 2017

0 60 120
Feet

N

FIGURE 2
PRELIMINARY SOIL SAMPLE LOCATIONS
JAMES RANCH UNIT 29 SWD TANK BATTERY
UNIT K SEC 36 T22S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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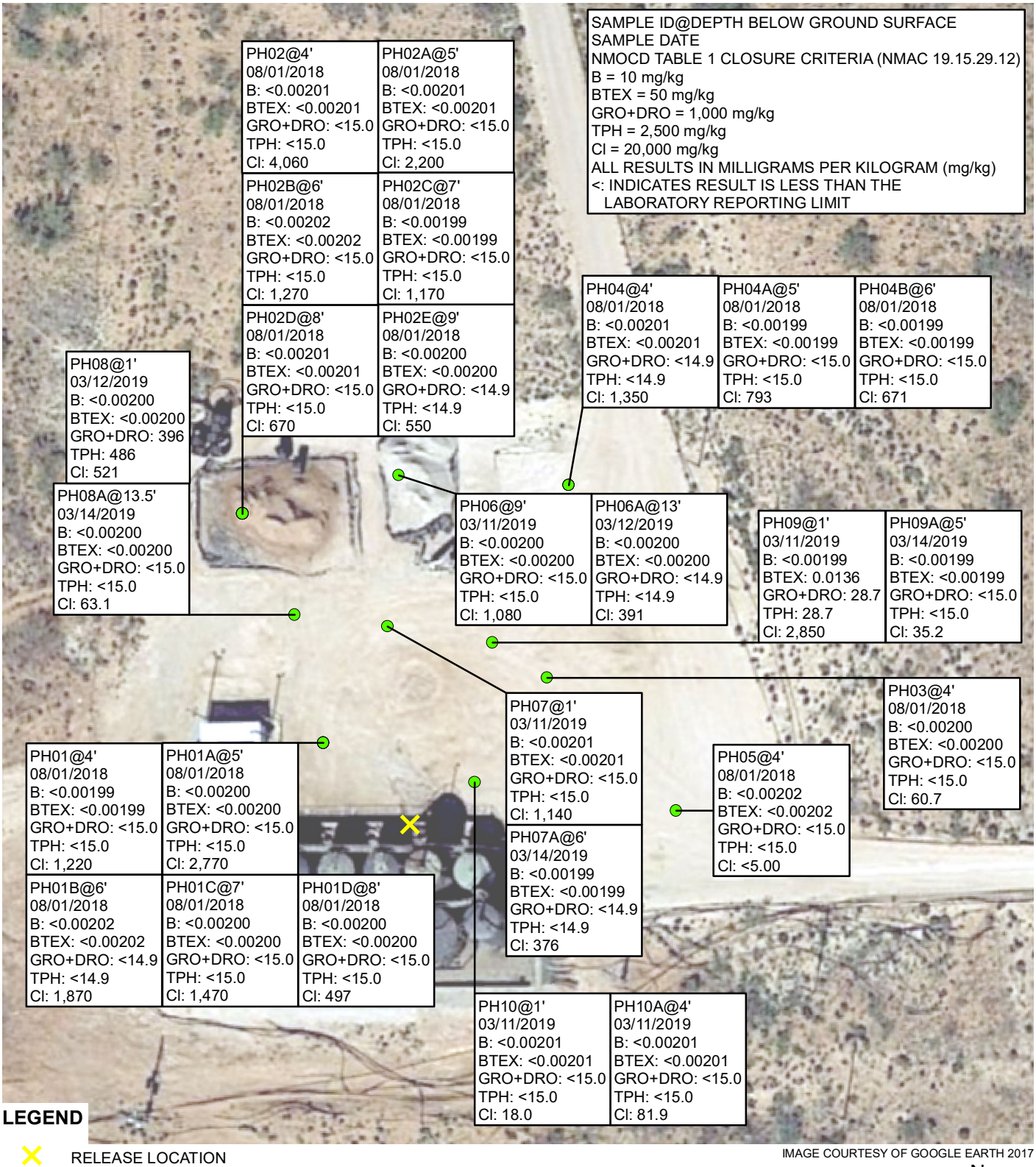

LEGEND

RELEASE LOCATION

DELINEATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE STANDARDS

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-4833 & 2RP-2726

IMAGE COURTESY OF GOOGLE EARTH 2017

0 60 120
Feet

N

FIGURE 3
DELINEATION SOIL SAMPLE LOCATIONS
JAMES RANCH UNIT 29 SWD TANK BATTERY
UNIT K SEC 36 T22S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012918135_JAMES RANCH UNIT 29 SWD BATTERY_4833\012918135_FIG03_DELINEATION SS_2018_4833_2726.mxd

TABLE 1
SOIL ANALYTICAL RESULTS

JAMES RANCH UNIT 29 SWD TANK BATTERY
REMEDIATION PERMIT NUMBERS 2RP-2726 and 2RP-4833
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)
PH01	4	08/01/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	1,220
PH01A	5	08/01/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	2,770
PH01B	6	08/01/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<14.9	<14.9	<14.9	<14.9	<14.9	1,870
PH01C	7	08/01/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	1,470
PH01D	8	08/01/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	497
PH02	4	08/01/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	4,060
PH02A	5	08/01/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	2,200
PH02B	6	08/01/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	1,270
PH02C	7	08/01/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	1,170
PH02D	8	08/01/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	670
PH02E	9	08/01/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	550
PH03	4	08/01/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	60.7
PH04	4	08/01/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<14.9	<14.9	<14.9	<14.9	<14.9	1,350
PH04A	5	08/01/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	793
PH04B	6	08/01/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	671
PH05	4	08/01/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	<5.00
SS01	1	08/01/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	56.7
SS02	1	08/01/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	5.60
SS03	1	08/01/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	42.6
SS04	1	08/01/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	5.93
SS05	1	08/01/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	543
SS06	1	08/01/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	678
PH06	9	03/11/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	1,080
PH07	1	03/11/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	1,140
PH09	1	03/11/2019	<0.00199	<0.00199	<0.00199	0.0136	0.0136	<15.0	28.7	<15.0	28.7	28.7	2,850
PH10	1	03/11/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	18.0
PH10A	4	03/11/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	81.9

TABLE 1 (Continued)
SOIL ANALYTICAL RESULTS

JAMES RANCH UNIT 29 SWD BATTERY (API FOR JRU #29 WELL)
REMEDIATION PERMIT NUMBERS 2RP-2726 and 2RP-4833
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)
PH06A	13	03/12/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	391
PH08	1	03/12/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	396	90.2	396	486	521
PH07A	6	03/14/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<14.9	<14.9	<14.9	<14.9	<14.9	376
PH08A	13.5	03/14/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	63.1
PH09A	5	03/14/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	35.2
NMOCD Table 1 Closure Criteria			10	NE	NE	NE	50	NE	NE	NE	1,000	2,500	20,000

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

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

State of New Mexico
Energy Minerals and Natural Resources

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

NM OIL CONSERVATION
ARTESIA DISTRICT
JAN 06 2015
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

nAB1501255875 2H0137

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: BOPCO, L.P.	Contact: Tony Savoie
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 575-887-7329
Facility Name: JRU-29 SWD Tank Battery, on the Pad with the producing well.	Facility Type: Exploration and Production

Surface Owner: State of N.M.	Mineral Owner: State of N.M.	API No. 30-015-27735

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County:
K	36	22S	30E	1980	South	2310	West	Eddy

Latitude N 32.346493 **Longitude** W 103.835563

NATURE OF RELEASE

Type of Release: Produced water	Volume of Release: 97 bbls.	Volume Recovered: 3 bbls.
Source of Release: Unknown truck dumped fluid or left the truck load line valve open.	Date and Hour of Occurrence: 12/25/14 Time unknown	Date and Hour of Discovery: 12/25/14 at about 5:30 a.m.
Was Immediate Notice Given? ☐ Yes ☒ No ☐ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
The produced water was assumed to have come from BOPCO operations but has not been confirmed. The spill was a result of an unknown truck driver failed to control fluids while unloading or parked at the BOPCO SWD Tank Battery.
An investigation is underway. Attached is a record of events and findings to-date.

Describe Area Affected and Cleanup Action Taken.*
The spill impacted approximately 14,500 sq.ft. of Tank Battery/well pad. A vacuum truck recovered approximately 3 bbls of fluid upon discovery.
The pad area had a significant rain event after the release and prior to EH&S site review.
The spill area will be cleaned up in accordance to the NMOCD 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: 1/6/15 Phone: 432-556-8730

OIL CONSERVATION DIVISION

Signed By Mike Bratcher

Approved by Environmental Specialist:

Approval Date: 1/12/15 Expiration Date: N/A

Conditions of Approval: Attached ☐

Remediation per O.C.D. Rules & Guidelines
SUBMIT REMEDIATION PROPOSAL NO
LATER THAN: 2/12/15

2RP-2726

* 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-2726
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 # *(assigned by OCD)*
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.346493 Longitude -103.835563
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: JRU-29 SWD Tank Battery, on the Pad with the producing well.	Site Type Exploration and Production Well
Date Release Discovered 12/25/2014	API# *(if applicable)* 30-015-27735

Unit Letter	Section	Township	Range	County
K	36	22S	30E	Eddy

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

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)	
☒ Produced Water	Volume Released (bbls) 97	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

The produced water was assumed to have come from BOPCO operations but has not been confirmed. The spill was a result of an unknown truck driver who failed to control fluids while unloading or parked at the BOPCO SWD Tank Battery. The spill impacted approximately 14,500 square feet of Tank Battery/well pad. A vacuum truck recovered approximately 3 bbls of fluid upon discovery. The pad area had a significant rain event after the release and prior to EH&S review.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-2726
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? An unauthorized release of a volume of 25 barrels or more
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? No.	

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: 4/22/2019

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-2726
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-2726
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: 4/22/2019

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-2726
Facility ID	
Application ID	

Closure

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

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

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

☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

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

☒ Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E Coordinator

Signature: Date: 4/22/2019

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: Bradford Billings Date: 11/18/2019

Printed Name: Bradford Billings Title: E.Spec.A

Site and both RP's are closable. However, site will need rstoration on pad when no longer in use.

Bradford Billings

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

JUN 27 2018

DISTRICT II-ARTESIA O.C.D.

Form C-141
Revised April 3, 2017

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

Release Notification and Corrective Action

nAB1817956367 18000200737

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: XTO Energy	Contact: Kyle Littrell
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No: 432-221-7331
Facility Name: James Ranch Unit 29 SWD Battery (API for JRU #29 well)	Facility Type: Exploration and Production

Surface Owner: State	Mineral Owner: State	API No: 30-015-27735

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	36	22S	30E	1845	South	2160	West	Eddy

Latitude 32.346401 **Longitude** -103.835822 NAD83

NATURE OF RELEASE

Type of Release Produced water	Volume of Release 1852.5 bbl produced water	Volume Recovered 1850 bbl produced water
Source of Release Transfer pump	Date and Hour of Occurrence 6/20/2018, AM	Date and Hour of Discovery 6/20/2018, 4:00 AM
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher and Crystal Weaver (NMOCD), Ryan Mann (SLO)	
By Whom? Amy Ruth	Date and Hour: 6/20/2018, 2:56 PM	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

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

Describe Cause of Problem and Remedial Action Taken.*
Gland bolts on water transfer pump sheared off due to vibration, causing a release of fluid. The bolts were replaced and the pump was repaired.

Describe Area Affected and Cleanup Action Taken.*
The majority of the fluid was contained within impervious lined containment, with approximately 2.5bbl of overspray impacting the pad. Vacuum trucks were dispatched and recovered 1850bbl from the lined containment. An environmental contractor has been retained to assist with remediation efforts.

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

Signature:

Printed Name: Kyle Littrell

Title: Environmental Coordinator

E-mail Address: Kyle_Littrell@xtoenergy.com

Date: 6/27/2018 Phone: 432-221-7331

OIL CONSERVATION DIVISION

Signed By

Approved by Environmental Specialist:

Approval Date: 6/27/18 Expiration Date: N/A

Conditions of Approval: See attached

Attached ☒ RP4833

* 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-4833
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 # *(assigned by OCD)*
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.346401 Longitude -103.835822
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: James Ranch Unit 29 SWD Battery (API for JRU #29 well)	Site Type Exploration and Production
Date Release Discovered 6/20/2018	API# *(if applicable)* 30-015-27735

Unit Letter	Section	Township	Range	County
K	36	22S	30E	Eddy

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

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)	
☒ Produced Water	Volume Released (bbls) 1852.5	Volume Recovered (bbls) 1850
	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

Gland bolts on water transfer pump sheared off due to vibration, causing a release of fluid. The bolts were replaced, and the pump was repaired. The majority of the fluid was contained within impervious lined containment, with approximately 2.5 bbls of overspray impacting the pad. Vacuum trucks were dispatched and recovered 1850 bbls from the lined containment.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-4833
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? An unauthorized release of a volume of 25 barrels or more
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 and Crystal Weaver (NMOCD) and Ryan Mann (SLO) by email on 6/20/2018.	

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: 4/22/2019

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-4833
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-4833
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: 4/22/2019

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-4833
Facility ID	
Application ID	

Closure

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

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

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

☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

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

☒ Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E Coordinator

Signature: Date: 4/22/2019

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: Bradford Billings Date: 11/18/2019

Printed Name: Bradford Billings Title: E. Spec.A

NOTE: Site and both RP's are closed, however, pad will need restoration when no longer in use.

Bradford Billings

ATTACHMENT 2: SOIL SAMPLE LOGS

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

Identifier: PH21	Date: 8/1/2018	
Project Name: ~~Remuda North~~ JRU 29	RP Number: ~~2RP-~~	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: ~~MAW~~	Method: ~~Backhoe~~
Lat/Long: ~~32.27535, -103.94429~~	Field Screening: ~~PID~~	Hole Diameter: ~~NA~~ 2' / Total Depth: 8'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
9:00 dry	1427	2.1	N		0–1	4'	S	red/brown sand, clay
9:10 dry	24102	3.1	N		2	5'	S	tan caliche
9:20 dry	2848	1.7	N		3	6'	S	tan caliche
9:30 dry	16851	0.5	N		4	7'	S	tan caliche
9:35 dry	447	0.8	N		5	8'	S	tan caliche to red sand
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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

Identifier: PH02	Date: 8/11/2015
Project Name: ~~Remuda North~~	RP Number: ~~2RP-~~
Logged By: ~~MAW~~	Method: ~~Backhoe~~
Hole Diameter: ~~NA~~ 2'	Total Depth: 9'
Lat/Long: ~~32.27535, -103.94429~~	Field Screening: ~~PID~~

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

	Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
9:40	dry	3788	3.4	N		0–1	4'		tan/brown caliche
9:55	dry	>1112	2.1	N		2	5'		tan/brown caliche
10:00	dry	3788	4.6	N		3	6'		tan/brown caliche
10:10	dry	1222	1.6	N		4	7'		tan/brown caliche
10:20	dry	696	6.1	N		5	8'		tan/brown caliche
10:30	dry	416	4.6	N		6	9'		tan/brown caliche
						7			
						8			
						9			
						10			
						11			
						12			

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

Identifier: PH03	Date: 8/1/2018
Project Name: JRU-29	RP Number:
Logged By: Robert M.	Method: Pothole
Hole Diameter: 2ft	Total Depth: 4'
Lat/Long:	Field Screening:

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

	Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
0950	dry	<128	1.1	N		0–1	1'	S	Clayey Sand PG-MG Brown
0955	dry	580	2.0	N		2	2'	S	Clayey Sand PG-MG Brown
1000	dry	312	1.7	N		3	3'	S	Caliche semi composite trace sand/root white/Pink
1005	dry	312	1.1	N		4	4'	S	Caliche semi Composite trace Sand white/Pink
						5			
						6			
						7			
						8			
						9			
						10			
						11			
						12			

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

Identifier: PH04	Date: 8/11/2018		
Project Name: ~~Remuda North~~ JKU 29	RP Number: ~~2RP~~		
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: ~~MAW~~	Method: ~~Backhoe~~	
Lat/Long: ~~32.27535, -103.94429~~	Field Screening: ~~PID~~	Hole Diameter: ~~NA~~	Total Depth: 6'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
10:55 dry	1120	3.9	N		0–1	41		tan/brown caliche
					1–2	51		tan/brown caliche
11:10 dry	880	3.7	N		2–3	6'		tan/brown caliche
11:20 dry	480	3.0	N		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: PH05	Date: 8/1/2018
Project Name: JRV-29	RP Number:
Logged By: Robert M.	Method: Pothole
Hole Diameter: 2ft	Total Depth: 4'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening:

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1225 dry	381	0.2	N		0–1	1'	S	Clayey sand PG Brown
1225 dry	<128	0.1	N		2	2'	S	Clayey Sand PG reddish Brown
1225 dry	<128	0.1	N		3	3'	S	Clayey Sand PG reddish Brown
1225 dry	<128	0.1	N		4	4'	S	Caliche trace Sand Brown/white
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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

Identifier: ~~PHOT~~ PH06	Date: 03/11/19
Project Name: JRU-29	RP Number:
Logged By: Robert M.	Method: Pot hole
Lat/Long:	Field Screening:
Hole Diameter: 2'	Total Depth:

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1240 dry	196	0.2	N		0 1	1'	S	Clayey sand PG-MG Reddish Brown
1245 dry	196	0.2	N		2	2'	S	Clayey Sand PG reddish brown
1250 dry	580	0.2	N		3	3'	S	Clayey Sand PG reddish brown
1255 dry	852	0.3	N		4	4'	S	Caliche semi composite white/Pink
1340 dry	1224	9.5	N		5	5'	S	Caliche semi composite white/Pink
1350 dry	1224	4.6	N		6	7'	S	Caliche trace sand semi composite white
~~1410~~ 1410 dry	732	16.3	N		7	9'	S	Clayey Sand MG Reddish Brown
~~1420~~ 1420 dry	580	8.2	N		8	12'	S	Caliche trace sand semi composite white
~~1100~~ 1105 dry 03/12/19	492	6.9	N			13'	S	Caliche trace sand semi Composite white light Brown
					9 10 11 12			

3/14/19

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Identifier: ~~PH06~~ PH07	Date: 03/11/19
Project Name: JRU-29	RP Number:
LITHOLOGIC / SOIL SAMPLING LOG Logged By: Robert M.	Method: Pot hole
Lat/Long:	Field Screening: Hole Diameter: 2ft Total Depth:

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1300 dry	448	0.5	N		0–1	1'	S	Silty sand Brown PG
1305 dry	368	0.4	N		2	2'	S	~~Sandy~~ Clayey sand Brown red PG
1310 dry	586	0.3	N		3	3'	S	Caliche semi composite white
1315 dry	628	0.4	N		4	4'	S	Caliche semi composite White/Pink
1510 dry	580	0.4	N		5	5'	S	Caliche semi composite white
0925 dry	224	0.4	N		6	6'	S	Caliche semi composite White
					7			
					8			
					9			
					10			
					11			
					12			

PG

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Identifier: PH08	Date: 03/14/19
Project Name: JRV-29	RP Number:
Logged By: Robert M.	Method: Pot hole
Hole Diameter: 2ft	Total Depth: 13.5'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening:

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
dry	580	1.9	N		0–1	1'	S	Silty sand PG-MG Brown
dry	368	0.8	N		2	2'	S	Sandy Clay PG Brown red
dry	1240	1.6	N		3	3'	S	Caliche Semi composite Pink/white
dry	1240	1.4	N		4	4'	S	Caliche Semi composite Pink/white
dry	1240	0.4	N		5	5'	S	Caliche trace sand semi composite Pink/white
dry	1240	0.6			6–7	7'	S	Clayey sand PG-MG Brown red
dry	1150	0.5	N		8	8'	S	Sandy Clay PG-MG red Brown
dry	860	0.4	N		9	9'	S	Sandy Clay PG-MG red Brown
dry	860	1.4	N		10–11	11'	S	Clayey sand PG red Brown
dry	580	1.6	N		12	12'	S	Sandy Clay PG-MG red Brown
dry	198	0.5	N			13.5'	S	Clay trace sand red Brown PG

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Identifier: PH09	Date: 03/11/19
Project Name: JRU-29	RP Number:
Logged By: Robert M	Method: Pothole
Hole Diameter: 21+	Total Depth:

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening:

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1532 dry	1760	0.3	N		0	1'	S	Sand trace caliche MG
1535 dry	536	0.2	N		2	2'	S	Clayey Sand PG
1540 dry	736	0.2	N		3	3'	S	Clayey Sand PG
1545 dry	492	0.2	N		4	4'	S	Caliche sm: composite white/pink
03/14/19 1010 dry	262	3.5	N		5	5'		
					6			
					7			
					8			
					9			
					10			
					11			
					12			

LT Environmental, Inc.
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Compliance · Engineering · Remediation

Identifier: PH1D	Date: 03/11/19
Project Name: JRV-29	RP Number:
Logged By: Robert M.	Method: Pothole
Hole Diameter: 2ft	Total Depth: 4ft

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening:

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1555 dry	732	0.1	N		0–1	1'	S	Silty sand Brown PG
1600 dry	580	0.4	N		1–2	2'	S	Sand trace Clay PG
1605 dry	580	0.3	N		2–3	3'	S	Clayey Sand PG Reddish Brown
1610 dry	224	0.6	N		3–4	4'	S	Caliche trace Sand Brown White semi composite
					4–5			
					5–6			
					6–7			
					7–8			
					8–9			
					9–10			
					10–11			
					11–12			

ATTACHMENT 3: LABORATORY ANALYTICAL REPORTS

Analytical Report 594619

for

LT Environmental, Inc.

Project Manager: Adrian Baker

JRU 29

09-AUG-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-26), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab Code: TX00158): Texas (T104704400-18-15)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)

09-AUG-18

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

Reference: XENCO Report No(s): **594619**
JRU 29
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) 594619. 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. 594619 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Sample Cross Reference 594619

LT Environmental, Inc., Arvada, CO

JRU 29

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH01	S	08-01-18 09:00	4 ft	594619-001
PH01A	S	08-01-18 09:10	5 ft	594619-002
PH01B	S	08-01-18 09:20	6 ft	594619-003
PH01C	S	08-01-18 09:30	7 ft	594619-004
PH01D	S	08-01-18 09:35	8 ft	594619-005
PH02	S	08-01-18 09:40	4 ft	594619-006
PH02A	S	08-01-18 09:55	5 ft	594619-007
PH02B	S	08-01-18 10:00	6 ft	594619-008
PH02C	S	08-01-18 10:10	7 ft	594619-009
PH02D	S	08-01-18 10:20	8 ft	594619-010
PH02E	S	08-01-18 10:30	9 ft	594619-011
PH03	S	08-01-18 10:40	4 ft	594619-012
PH04	S	08-01-18 10:55	4 ft	594619-013
PH04A	S	08-01-18 11:10	5 ft	594619-014
PH04B	S	08-01-18 11:20	6 ft	594619-015
PH05	S	08-01-18 11:30	4 ft	594619-016
SS01	S	08-01-18 11:55	1 ft	594619-017
SS02	S	08-01-18 12:10	1 ft	594619-018
SS03	S	08-01-18 12:30	1 ft	594619-019
SS04	S	08-01-18 12:45	1 ft	594619-020
SS05	S	08-01-18 13:00	1 ft	594619-021
SS06	S	08-01-18 13:10	1 ft	594619-022

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3059054 Inorganic Anions by EPA 300
Lab Sample ID 594619-012 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 594619-007, -008, -009, -010, -011, -012, -013, -014, -015, -016, -017, -018, -019, -020, -021.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3059255 Inorganic Anions by EPA 300
Lab Sample ID 594668-005 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 594619-022.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3059258 BTEX by EPA 8021B
Lab Sample ID 594619-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 594619-001, -002, -003, -004, -005, -006, -007, -008, -009, -010.
The Laboratory Control Sample for Toluene, Benzene, m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3059262 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 594619

LT Environmental, Inc., Arvada, CO

Project Name: JRU 29

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

Date Received in Lab: Fri Aug-03-18 10:55 am
Report Date: 09-AUG-18
Project Manager: Jessica Kramer

Analysis Requested	*Lab Id:*	594619-001		594619-002		594619-003		594619-004		594619-005		594619-006	
	Field Id:	PH01		PH01A		PH01B		PH01C		PH01D		PH02	
	Depth:	4- ft		5- ft		6- ft		7- ft		8- ft		4- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-01-18 09:00		Aug-01-18 09:10		Aug-01-18 09:20		Aug-01-18 09:30		Aug-01-18 09:35		Aug-01-18 09:40	
BTEX by EPA 8021B	*Extracted:*	Aug-07-18 10:08		Aug-07-18 10:08		Aug-07-18 10:08		Aug-07-18 10:08		Aug-07-18 10:08		Aug-07-18 10:08	
	Analyzed:	** ** ** **		Aug-07-18 10:52		Aug-07-18 11:12		Aug-07-18 10:11		Aug-07-18 10:32		Aug-07-18 11:33	
	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	<0.00200	0.00200	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201
Toluene		<0.00199	0.00199	<0.00200	0.00200	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201
Ethylbenzene		<0.00199	0.00199	<0.00200	0.00200	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201
m,p-Xylenes		<0.00398	0.00398	<0.00401	0.00401	<0.00403	0.00403	<0.00399	0.00399	<0.00400	0.00400	<0.00402	0.00402
o-Xylene		<0.00199	0.00199	<0.00200	0.00200	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201
Total Xylenes		<0.00199	0.00199	<0.00200	0.00200	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201
Total BTEX		<0.00199	0.00199	<0.00200	0.00200	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201
Inorganic Anions by EPA 300	*Extracted:*	Aug-06-18 17:20		Aug-06-18 17:20		Aug-06-18 17:20		Aug-06-18 17:20		Aug-06-18 17:20		Aug-06-18 17:20	
	Analyzed:	Aug-07-18 09:19		Aug-07-18 09:26		Aug-07-18 09:32		Aug-07-18 09:39		Aug-07-18 09:46		Aug-07-18 09:52	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		1220	5.00	2770	25.0	1870	24.9	1470	24.9	497	24.8	4060	25.0
TPH by SW8015 Mod	*Extracted:*	Aug-05-18 10:00		Aug-05-18 10:00		Aug-05-18 10:00		Aug-05-18 10:00		Aug-05-18 10:00		Aug-05-18 10:00	
	Analyzed:	Aug-05-18 19:40		Aug-05-18 20:39		Aug-05-18 20:58		Aug-05-18 21:18		Aug-05-18 21:37		Aug-05-18 21:57	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0
Oil Range Hydrocarbons (ORO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 594619

LT Environmental, Inc., Arvada, CO

Project Name: JRU 29

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

Date Received in Lab: Fri Aug-03-18 10:55 am
Report Date: 09-AUG-18
Project Manager: Jessica Kramer

Analysis Requested	*Lab Id:*	594619-007		594619-008		594619-009		594619-010		594619-011		594619-012	
	Field Id:	PH02A		PH02B		PH02C		PH02D		PH02E		PH03	
	Depth:	5- ft		6- ft		7- ft		8- ft		9- ft		4- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-01-18 09:55		Aug-01-18 10:00		Aug-01-18 10:10		Aug-01-18 10:20		Aug-01-18 10:30		Aug-01-18 10:40	
BTEX by EPA 8021B	*Extracted:*	Aug-07-18 10:08		Aug-07-18 10:08		Aug-07-18 10:08		Aug-07-18 10:08		Aug-07-18 16:00		Aug-07-18 16:00	
	Analyzed:	Aug-07-18 11:54		Aug-07-18 12:15		Aug-07-18 18:37		Aug-07-18 18:59		Aug-07-18 21:45		Aug-07-18 22:06	
	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	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200
Toluene		<0.00201	0.00201	<0.00202	0.00202	<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200
Ethylbenzene		<0.00201	0.00201	<0.00202	0.00202	<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200
m,p-Xylenes		<0.00402	0.00402	<0.00404	0.00404	<0.00398	0.00398	<0.00402	0.00402	<0.00399	0.00399	<0.00401	0.00401
o-Xylene		<0.00201	0.00201	<0.00202	0.00202	<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200
Total Xylenes		<0.00201	0.00201	<0.00202	0.00202	<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200
Total BTEX		<0.00201	0.00201	<0.00202	0.00202	<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200
Inorganic Anions by EPA 300	*Extracted:*	Aug-06-18 17:15		Aug-06-18 17:15		Aug-06-18 17:15		Aug-06-18 17:15		Aug-06-18 17:15		Aug-06-18 17:15	
	Analyzed:	Aug-06-18 21:38		Aug-06-18 21:44		Aug-06-18 20:31		Aug-06-18 21:51		Aug-06-18 21:58		Aug-06-18 22:04	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		2200	25.0	1270	25.0	1170	4.95	670	4.98	550	5.00	60.7	4.95
TPH by SW8015 Mod	*Extracted:*	Aug-05-18 10:00		Aug-05-18 10:00		Aug-05-18 10:00		Aug-05-18 10:00		Aug-05-18 10:00		Aug-05-18 10:00	
	Analyzed:	Aug-05-18 22:17		Aug-05-18 22:36		Aug-05-18 22:56		Aug-05-18 23:15		Aug-06-18 00:15		Aug-06-18 00:35	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0
Oil Range Hydrocarbons (ORO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0
Total TPH		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 594619

LT Environmental, Inc., Arvada, CO

Project Name: JRU 29

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

Date Received in Lab: Fri Aug-03-18 10:55 am
Report Date: 09-AUG-18
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	594619-013		594619-014		594619-015		594619-016		594619-017		594619-018	
	Field Id:	PH04		PH04A		PH04B		PH05		SS01		SS02	
	Depth:	4- ft		5- ft		6- ft		4- ft		1- ft		1- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-01-18 10:55		Aug-01-18 11:10		Aug-01-18 11:20		Aug-01-18 11:30		Aug-01-18 11:55		Aug-01-18 12:10	
BTEX by EPA 8021B	***Extracted:***	Aug-07-18 16:00		Aug-07-18 16:00		Aug-07-18 16:00		Aug-07-18 16:00		Aug-07-18 16:00		Aug-07-18 16:00	
	Analyzed:	Aug-07-18 22:27		Aug-07-18 22:48		Aug-07-18 23:08		Aug-07-18 23:29		Aug-07-18 23:50		Aug-08-18 00:10	
	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	<0.00199	0.00199	<0.00199	0.00199	<0.00202	0.00202	<0.00201	0.00201	<0.00202	0.00202
Toluene		<0.00201	0.00201	<0.00199	0.00199	<0.00199	0.00199	<0.00202	0.00202	<0.00201	0.00201	<0.00202	0.00202
Ethylbenzene		<0.00201	0.00201	<0.00199	0.00199	<0.00199	0.00199	<0.00202	0.00202	<0.00201	0.00201	<0.00202	0.00202
m,p-Xylenes		<0.00402	0.00402	<0.00398	0.00398	<0.00398	0.00398	<0.00403	0.00403	<0.00402	0.00402	<0.00404	0.00404
o-Xylene		<0.00201	0.00201	<0.00199	0.00199	<0.00199	0.00199	<0.00202	0.00202	<0.00201	0.00201	<0.00202	0.00202
Total Xylenes		<0.00201	0.00201	<0.00199	0.00199	<0.00199	0.00199	<0.00202	0.00202	<0.00201	0.00201	<0.00202	0.00202
Total BTEX		<0.00201	0.00201	<0.00199	0.00199	<0.00199	0.00199	<0.00202	0.00202	<0.00201	0.00201	<0.00202	0.00202
Inorganic Anions by EPA 300	***Extracted:***	Aug-06-18 17:15		Aug-06-18 17:15		Aug-06-18 17:15		Aug-06-18 17:15		Aug-06-18 17:15		Aug-06-18 17:15	
	Analyzed:	Aug-06-18 22:24		Aug-06-18 22:31		Aug-06-18 22:51		Aug-06-18 22:58		Aug-06-18 23:04		Aug-06-18 23:11	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		1350	25.0	793	4.98	671	4.99	<5.00	5.00	56.7	4.99	5.60	5.00
TPH by SW8015 Mod	***Extracted:***	Aug-05-18 10:00		Aug-05-18 10:00		Aug-05-18 10:00		Aug-05-18 10:00		Aug-05-18 10:00		Aug-05-18 10:00	
	Analyzed:	Aug-06-18 00:54		Aug-06-18 01:14		Aug-06-18 01:33		Aug-06-18 01:53		Aug-06-18 02:13		Aug-06-18 02:33	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Oil Range Hydrocarbons (ORO)		<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 594619

LT Environmental, Inc., Arvada, CO

Project Name: JRU 29

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

Date Received in Lab: Fri Aug-03-18 10:55 am
Report Date: 09-AUG-18
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	594619-019		594619-020		594619-021		594619-022					
	Field Id:	SS03		SS04		SS05		SS06					
	Depth:	1- ft		1- ft		1- ft		1- ft					
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	Aug-01-18 12:30		Aug-01-18 12:45		Aug-01-18 13:00		Aug-01-18 13:10					
BTEX by EPA 8021B	***Extracted:***	Aug-07-18 16:00		Aug-07-18 16:00		Aug-07-18 16:00		Aug-07-18 16:00					
	Analyzed:	Aug-08-18 00:31		Aug-08-18 02:14		Aug-08-18 02:35		Aug-08-18 02:55					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00199	0.00199	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199				
Toluene		<0.00199	0.00199	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199				
Ethylbenzene		<0.00199	0.00199	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199				
m,p-Xylenes		<0.00398	0.00398	<0.00399	0.00399	<0.00404	0.00404	<0.00398	0.00398				
o-Xylene		<0.00199	0.00199	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199				
Total Xylenes		<0.00199	0.00199	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199				
Total BTEX		<0.00199	0.00199	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199				
Inorganic Anions by EPA 300	***Extracted:***	Aug-06-18 17:15		Aug-06-18 17:15		Aug-06-18 17:15		Aug-07-18 08:30					
	Analyzed:	Aug-06-18 23:18		Aug-06-18 23:24		Aug-06-18 23:31		Aug-07-18 12:06					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		42.6	5.00	5.93	4.96	543	4.98	678	5.00				
TPH by SW8015 Mod	***Extracted:***	Aug-05-18 10:00		Aug-05-18 10:00		Aug-04-18 09:00		Aug-04-18 09:00					
	Analyzed:	Aug-06-18 02:53		Aug-06-18 03:13		Aug-04-18 16:23		Aug-04-18 17:22					
	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	<15.0	15.0	<15.0	15.0	<15.0	15.0				
Oil Range Hydrocarbons (ORO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0				
Total TPH		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0				

Jessica Kramer
Project Assistant

Certificate of Analytical Results 594619

LT Environmental, Inc., Arvada, CO

JRU 29

Sample Id:	**PH01**	Matrix:	Soil	Date Received:	08.03.18 10.55
Lab Sample Id:	594619-001	Date Collected:	08.01.18 09.00	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	08.06.18 17.20	Basis:	Wet Weight
Seq Number:	3059160				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1220**	5.00	mg/kg	08.07.18 09.19		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.05.18 10.00	Basis:	Wet Weight
Seq Number:	3059062				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.05.18 19.40	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.05.18 19.40	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.05.18 19.40	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.05.18 19.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	08.05.18 19.40	
o-Terphenyl	84-15-1	91	%	70-135	08.05.18 19.40	

Certificate of Analytical Results 594619

LT Environmental, Inc., Arvada, CO

JRU 29

Sample Id:	**PH01**	Matrix:	Soil	Date Received:	08.03.18 10.55
Lab Sample Id:	594619-001	Date Collected:	08.01.18 09.00	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.07.18 10.08	Basis:	Wet Weight
Seq Number:	3059258				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.07.18 09.09	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.07.18 09.09	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.07.18 09.09	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.07.18 09.09	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.07.18 09.09	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.07.18 09.09	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.07.18 09.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	95	%	70-130	08.07.18 09.09	
1,4-Difluorobenzene	540-36-3	114	%	70-130	08.07.18 09.09	

Certificate of Analytical Results 594619

LT Environmental, Inc., Arvada, CO

JRU 29

Sample Id:	**PH01A**	Matrix:	Soil	Date Received:	08.03.18 10.55
Lab Sample Id:	594619-002	Date Collected:	08.01.18 09.10	Sample Depth:	5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	08.06.18 17.20	Basis:	Wet Weight
Seq Number:	3059160				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2770**	25.0	mg/kg	08.07.18 09.26		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.05.18 10.00	Basis:	Wet Weight
Seq Number:	3059062				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.05.18 20.39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.05.18 20.39	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.05.18 20.39	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.05.18 20.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	08.05.18 20.39	
o-Terphenyl	84-15-1	91	%	70-135	08.05.18 20.39	

Certificate of Analytical Results 594619

LT Environmental, Inc., Arvada, CO

JRU 29

Sample Id:	**PH01A**	Matrix:	Soil	Date Received:	08.03.18 10.55
Lab Sample Id:	594619-002	Date Collected:	08.01.18 09.10	Sample Depth:	5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.07.18 10.08	Basis:	Wet Weight
Seq Number:	3059258				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.07.18 10.52	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.07.18 10.52	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.07.18 10.52	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.07.18 10.52	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.07.18 10.52	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.07.18 10.52	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.07.18 10.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	08.07.18 10.52	
4-Bromofluorobenzene	460-00-4	103	%	70-130	08.07.18 10.52	

Certificate of Analytical Results 594619

LT Environmental, Inc., Arvada, CO

JRU 29

Sample Id:	**PH01B**	Matrix:	Soil	Date Received:	08.03.18 10.55
Lab Sample Id:	594619-003	Date Collected:	08.01.18 09.20	Sample Depth:	6 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	08.06.18 17.20	Basis:	Wet Weight
Seq Number:	3059160				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1870**	24.9	mg/kg	08.07.18 09.32		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.05.18 10.00	Basis:	Wet Weight
Seq Number:	3059062				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	08.05.18 20.58	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	08.05.18 20.58	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	08.05.18 20.58	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	08.05.18 20.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	08.05.18 20.58	
o-Terphenyl	84-15-1	90	%	70-135	08.05.18 20.58	

Certificate of Analytical Results 594619

LT Environmental, Inc., Arvada, CO

JRU 29

Sample Id:	**PH01B**	Matrix:	Soil	Date Received:	08.03.18 10.55
Lab Sample Id:	594619-003	Date Collected:	08.01.18 09.20	Sample Depth:	6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.07.18 10.08	Basis:	Wet Weight
Seq Number:	3059258				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	08.07.18 11.12	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	08.07.18 11.12	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	08.07.18 11.12	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	08.07.18 11.12	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	08.07.18 11.12	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	08.07.18 11.12	U	1
Total BTEX		<0.00202	0.00202	mg/kg	08.07.18 11.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	08.07.18 11.12	
4-Bromofluorobenzene	460-00-4	98	%	70-130	08.07.18 11.12	

LT Environmental, Inc., Arvada, CO

JRU 29

Sample Id:	**PH01C**	Matrix:	Soil	Date Received:	08.03.18 10.55
Lab Sample Id:	594619-004	Date Collected:	08.01.18 09.30	Sample Depth:	7 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	08.06.18 17.20	Basis:	Wet Weight
Seq Number:	3059160				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1470**	24.9	mg/kg	08.07.18 09.39		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.05.18 10.00	Basis:	Wet Weight
Seq Number:	3059062				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.05.18 21.18	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.05.18 21.18	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.05.18 21.18	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.05.18 21.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	08.05.18 21.18	
o-Terphenyl	84-15-1	91	%	70-135	08.05.18 21.18	

Certificate of Analytical Results 594619

LT Environmental, Inc., Arvada, CO

JRU 29

Sample Id:	**PH01C**	Matrix:	Soil	Date Received:	08.03.18 10.55
Lab Sample Id:	594619-004	Date Collected:	08.01.18 09.30	Sample Depth:	7 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.07.18 10.08	Basis:	Wet Weight
Seq Number:	3059258				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.07.18 10.11	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.07.18 10.11	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.07.18 10.11	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.07.18 10.11	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.07.18 10.11	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.07.18 10.11	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.07.18 10.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	112	%	70-130	08.07.18 10.11	
4-Bromofluorobenzene	460-00-4	109	%	70-130	08.07.18 10.11	

Certificate of Analytical Results 594619

LT Environmental, Inc., Arvada, CO

JRU 29

Sample Id:	**PH01D**	Matrix:	Soil	Date Received:	08.03.18 10.55
Lab Sample Id:	594619-005	Date Collected:	08.01.18 09.35	Sample Depth:	8 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	08.06.18 17.20	Basis:	Wet Weight
Seq Number:	3059160				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**497**	24.8	mg/kg	08.07.18 09.46		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.05.18 10.00	Basis:	Wet Weight
Seq Number:	3059062				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.05.18 21.37	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.05.18 21.37	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.05.18 21.37	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.05.18 21.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	08.05.18 21.37	
o-Terphenyl	84-15-1	89	%	70-135	08.05.18 21.37	

Certificate of Analytical Results 594619

LT Environmental, Inc., Arvada, CO

JRU 29

Sample Id:	**PH01D**	Matrix:	Soil	Date Received:	08.03.18 10.55
Lab Sample Id:	594619-005	Date Collected:	08.01.18 09.35	Sample Depth:	8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.07.18 10.08	Basis:	Wet Weight
Seq Number:	3059258				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.07.18 10.32	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.07.18 10.32	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.07.18 10.32	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.07.18 10.32	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.07.18 10.32	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.07.18 10.32	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.07.18 10.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	08.07.18 10.32	
4-Bromofluorobenzene	460-00-4	99	%	70-130	08.07.18 10.32	

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JRU 29

Sample Id:	**PH02**	Matrix:	Soil	Date Received:	08.03.18 10.55
Lab Sample Id:	594619-006	Date Collected:	08.01.18 09.40	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	08.06.18 17.20	Basis:	Wet Weight
Seq Number:	3059160				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**4060**	25.0	mg/kg	08.07.18 09.52		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.05.18 10.00	Basis:	Wet Weight
Seq Number:	3059062				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.05.18 21.57	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.05.18 21.57	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.05.18 21.57	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.05.18 21.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	08.05.18 21.57	
o-Terphenyl	84-15-1	88	%	70-135	08.05.18 21.57	

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LT Environmental, Inc., Arvada, CO

JRU 29

Sample Id:	**PH02**	Matrix:	Soil	Date Received:	08.03.18 10.55
Lab Sample Id:	594619-006	Date Collected:	08.01.18 09.40	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.07.18 10.08	Basis:	Wet Weight
Seq Number:	3059258				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.07.18 11.33	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.07.18 11.33	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.07.18 11.33	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.07.18 11.33	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.07.18 11.33	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.07.18 11.33	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.07.18 11.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	08.07.18 11.33	
4-Bromofluorobenzene	460-00-4	98	%	70-130	08.07.18 11.33	

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JRU 29

Sample Id:	**PH02A**	Matrix:	Soil	Date Received:	08.03.18 10.55
Lab Sample Id:	594619-007	Date Collected:	08.01.18 09.55	Sample Depth:	5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	08.06.18 17.15	Basis:	Wet Weight
Seq Number:	3059054				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2200**	25.0	mg/kg	08.06.18 21.38		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.05.18 10.00	Basis:	Wet Weight
Seq Number:	3059062				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.05.18 22.17	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.05.18 22.17	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.05.18 22.17	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.05.18 22.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	08.05.18 22.17	
o-Terphenyl	84-15-1	88	%	70-135	08.05.18 22.17	

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JRU 29

Sample Id:	**PH02A**	Matrix:	Soil	Date Received:	08.03.18 10.55
Lab Sample Id:	594619-007	Date Collected:	08.01.18 09.55	Sample Depth:	5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.07.18 10.08	Basis:	Wet Weight
Seq Number:	3059258				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.07.18 11.54	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.07.18 11.54	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.07.18 11.54	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.07.18 11.54	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.07.18 11.54	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.07.18 11.54	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.07.18 11.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	108	%	70-130	08.07.18 11.54	
1,4-Difluorobenzene	540-36-3	105	%	70-130	08.07.18 11.54	

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LT Environmental, Inc., Arvada, CO

JRU 29

Sample Id:	**PH02B**	Matrix:	Soil	Date Received:	08.03.18 10.55
Lab Sample Id:	594619-008	Date Collected:	08.01.18 10.00	Sample Depth:	6 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	08.06.18 17.15	Basis:	Wet Weight
Seq Number:	3059054				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1270**	25.0	mg/kg	08.06.18 21.44		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.05.18 10.00	Basis:	Wet Weight
Seq Number:	3059062				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.05.18 22.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.05.18 22.36	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.05.18 22.36	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.05.18 22.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	08.05.18 22.36	
o-Terphenyl	84-15-1	87	%	70-135	08.05.18 22.36	

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LT Environmental, Inc., Arvada, CO

JRU 29

Sample Id:	**PH02B**	Matrix:	Soil	Date Received:	08.03.18 10.55
Lab Sample Id:	594619-008	Date Collected:	08.01.18 10.00	Sample Depth:	6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.07.18 10.08	Basis:	Wet Weight
Seq Number:	3059258				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	08.07.18 12.15	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	08.07.18 12.15	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	08.07.18 12.15	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	08.07.18 12.15	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	08.07.18 12.15	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	08.07.18 12.15	U	1
Total BTEX		<0.00202	0.00202	mg/kg	08.07.18 12.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	70-130	08.07.18 12.15	
1,4-Difluorobenzene	540-36-3	107	%	70-130	08.07.18 12.15	

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JRU 29

Sample Id:	**PH02C**	Matrix:	Soil	Date Received:	08.03.18 10.55
Lab Sample Id:	594619-009	Date Collected:	08.01.18 10.10	Sample Depth:	7 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	08.06.18 17.15	Basis:	Wet Weight
Seq Number:	3059054				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1170**	4.95	mg/kg	08.06.18 20.31		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.05.18 10.00	Basis:	Wet Weight
Seq Number:	3059062				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.05.18 22.56	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.05.18 22.56	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.05.18 22.56	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.05.18 22.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	08.05.18 22.56	
o-Terphenyl	84-15-1	89	%	70-135	08.05.18 22.56	

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JRU 29

Sample Id:	**PH02C**	Matrix:	Soil	Date Received:	08.03.18 10.55
Lab Sample Id:	594619-009	Date Collected:	08.01.18 10.10	Sample Depth:	7 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.07.18 10.08	Basis:	Wet Weight
Seq Number:	3059258				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.07.18 18.37	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.07.18 18.37	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.07.18 18.37	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.07.18 18.37	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.07.18 18.37	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.07.18 18.37	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.07.18 18.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	08.07.18 18.37	
1,4-Difluorobenzene	540-36-3	107	%	70-130	08.07.18 18.37	

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JRU 29

Sample Id:	**PH02D**	Matrix:	Soil	Date Received:	08.03.18 10.55
Lab Sample Id:	594619-010	Date Collected:	08.01.18 10.20	Sample Depth:	8 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	08.06.18 17.15	Basis:	Wet Weight
Seq Number:	3059054				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**670**	4.98	mg/kg	08.06.18 21.51		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.05.18 10.00	Basis:	Wet Weight
Seq Number:	3059062				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.05.18 23.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.05.18 23.15	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.05.18 23.15	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.05.18 23.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	08.05.18 23.15	
o-Terphenyl	84-15-1	88	%	70-135	08.05.18 23.15	

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JRU 29

Sample Id:	**PH02D**	Matrix:	Soil	Date Received:	08.03.18 10.55
Lab Sample Id:	594619-010	Date Collected:	08.01.18 10.20	Sample Depth:	8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.07.18 10.08	Basis:	Wet Weight
Seq Number:	3059258				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.07.18 18.59	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.07.18 18.59	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.07.18 18.59	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.07.18 18.59	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.07.18 18.59	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.07.18 18.59	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.07.18 18.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	97	%	70-130	08.07.18 18.59	
1,4-Difluorobenzene	540-36-3	106	%	70-130	08.07.18 18.59	

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JRU 29

Sample Id:	**PH02E**	Matrix:	Soil	Date Received:	08.03.18 10.55
Lab Sample Id:	594619-011	Date Collected:	08.01.18 10.30	Sample Depth:	9 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	08.06.18 17.15	Basis:	Wet Weight
Seq Number:	3059054				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**550**	5.00	mg/kg	08.06.18 21.58		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.05.18 10.00	Basis:	Wet Weight
Seq Number:	3059062				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	08.06.18 00.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	08.06.18 00.15	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	08.06.18 00.15	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	08.06.18 00.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	80	%	70-135	08.06.18 00.15	
o-Terphenyl	84-15-1	82	%	70-135	08.06.18 00.15	

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JRU 29

Sample Id:	**PH02E**	Matrix:	Soil	Date Received:	08.03.18 10.55
Lab Sample Id:	594619-011	Date Collected:	08.01.18 10.30	Sample Depth:	9 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.07.18 16.00	Basis:	Wet Weight
Seq Number:	3059262				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.07.18 21.45	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.07.18 21.45	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.07.18 21.45	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.07.18 21.45	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.07.18 21.45	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.07.18 21.45	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.07.18 21.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	08.07.18 21.45	
4-Bromofluorobenzene	460-00-4	102	%	70-130	08.07.18 21.45	

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JRU 29

Sample Id:	**PH03**	Matrix:	Soil	Date Received:	08.03.18 10.55
Lab Sample Id:	594619-012	Date Collected:	08.01.18 10.40	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	08.06.18 17.15	Basis:	Wet Weight
Seq Number:	3059054				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**60.7**	4.95	mg/kg	08.06.18 22.04		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.05.18 10.00	Basis:	Wet Weight
Seq Number:	3059062				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.06.18 00.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.06.18 00.35	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.06.18 00.35	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.06.18 00.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-135	08.06.18 00.35	
o-Terphenyl	84-15-1	83	%	70-135	08.06.18 00.35	

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JRU 29

Sample Id:	**PH03**	Matrix:	Soil	Date Received:	08.03.18 10.55
Lab Sample Id:	594619-012	Date Collected:	08.01.18 10.40	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.07.18 16.00	Basis:	Wet Weight
Seq Number:	3059262				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.07.18 22.06	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.07.18 22.06	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.07.18 22.06	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.07.18 22.06	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.07.18 22.06	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.07.18 22.06	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.07.18 22.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	70-130	08.07.18 22.06	
1,4-Difluorobenzene	540-36-3	107	%	70-130	08.07.18 22.06	

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JRU 29

Sample Id:	**PH04**	Matrix:	Soil	Date Received:	08.03.18 10.55
Lab Sample Id:	594619-013	Date Collected:	08.01.18 10.55	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	08.06.18 17.15	Basis:	Wet Weight
Seq Number:	3059054				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1350**	25.0	mg/kg	08.06.18 22.24		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.05.18 10.00	Basis:	Wet Weight
Seq Number:	3059062				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	08.06.18 00.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	08.06.18 00.54	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	08.06.18 00.54	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	08.06.18 00.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	08.06.18 00.54	
o-Terphenyl	84-15-1	89	%	70-135	08.06.18 00.54	

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LT Environmental, Inc., Arvada, CO

JRU 29

Sample Id:	**PH04**	Matrix:	Soil	Date Received:	08.03.18 10.55
Lab Sample Id:	594619-013	Date Collected:	08.01.18 10.55	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.07.18 16.00	Basis:	Wet Weight
Seq Number:	3059262				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.07.18 22.27	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.07.18 22.27	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.07.18 22.27	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.07.18 22.27	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.07.18 22.27	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.07.18 22.27	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.07.18 22.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	70-130	08.07.18 22.27	
1,4-Difluorobenzene	540-36-3	108	%	70-130	08.07.18 22.27	

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JRU 29

Sample Id:	**PH04A**	Matrix:	Soil	Date Received:	08.03.18 10.55
Lab Sample Id:	594619-014	Date Collected:	08.01.18 11.10	Sample Depth:	5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	08.06.18 17.15	Basis:	Wet Weight
Seq Number:	3059054				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**793**	4.98	mg/kg	08.06.18 22.31		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.05.18 10.00	Basis:	Wet Weight
Seq Number:	3059062				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.06.18 01.14	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.06.18 01.14	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.06.18 01.14	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.06.18 01.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	08.06.18 01.14	
o-Terphenyl	84-15-1	94	%	70-135	08.06.18 01.14	

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JRU 29

Sample Id:	**PH04A**	Matrix:	Soil	Date Received:	08.03.18 10.55
Lab Sample Id:	594619-014	Date Collected:	08.01.18 11.10	Sample Depth:	5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.07.18 16.00	Basis:	Wet Weight
Seq Number:	3059262				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.07.18 22.48	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.07.18 22.48	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.07.18 22.48	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.07.18 22.48	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.07.18 22.48	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.07.18 22.48	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.07.18 22.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	08.07.18 22.48	
1,4-Difluorobenzene	540-36-3	105	%	70-130	08.07.18 22.48	

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JRU 29

Sample Id:	**PH04B**	Matrix:	Soil	Date Received:	08.03.18 10.55
Lab Sample Id:	594619-015	Date Collected:	08.01.18 11.20	Sample Depth:	6 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	08.06.18 17.15	Basis:	Wet Weight
Seq Number:	3059054				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**671**	4.99	mg/kg	08.06.18 22.51		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.05.18 10.00	Basis:	Wet Weight
Seq Number:	3059062				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.06.18 01.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.06.18 01.33	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.06.18 01.33	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.06.18 01.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	08.06.18 01.33	
o-Terphenyl	84-15-1	89	%	70-135	08.06.18 01.33	

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JRU 29

Sample Id:	**PH04B**	Matrix:	Soil	Date Received:	08.03.18 10.55
Lab Sample Id:	594619-015	Date Collected:	08.01.18 11.20	Sample Depth:	6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.07.18 16.00	Basis:	Wet Weight
Seq Number:	3059262				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.07.18 23.08	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.07.18 23.08	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.07.18 23.08	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.07.18 23.08	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.07.18 23.08	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.07.18 23.08	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.07.18 23.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	08.07.18 23.08	
4-Bromofluorobenzene	460-00-4	108	%	70-130	08.07.18 23.08	

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JRU 29

Sample Id:	**PH05**	Matrix:	Soil	Date Received:	08.03.18 10.55
Lab Sample Id:	594619-016	Date Collected:	08.01.18 11.30	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	08.06.18 17.15	Basis:	Wet Weight
Seq Number:	3059054				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	08.06.18 22.58	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.05.18 10.00	Basis:	Wet Weight
Seq Number:	3059062				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.06.18 01.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.06.18 01.53	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.06.18 01.53	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.06.18 01.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	08.06.18 01.53	
o-Terphenyl	84-15-1	88	%	70-135	08.06.18 01.53	

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JRU 29

Sample Id:	**PH05**	Matrix:	Soil	Date Received:	08.03.18 10.55
Lab Sample Id:	594619-016	Date Collected:	08.01.18 11.30	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.07.18 16.00	Basis:	Wet Weight
Seq Number:	3059262				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	08.07.18 23.29	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	08.07.18 23.29	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	08.07.18 23.29	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	08.07.18 23.29	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	08.07.18 23.29	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	08.07.18 23.29	U	1
Total BTEX		<0.00202	0.00202	mg/kg	08.07.18 23.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	08.07.18 23.29	
4-Bromofluorobenzene	460-00-4	107	%	70-130	08.07.18 23.29	

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JRU 29

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	08.03.18 10.55
Lab Sample Id:	594619-017	Date Collected:	08.01.18 11.55	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	08.06.18 17.15	Basis:	Wet Weight
Seq Number:	3059054				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**56.7**	4.99	mg/kg	08.06.18 23.04		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.05.18 10.00	Basis:	Wet Weight
Seq Number:	3059062				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.06.18 02.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.06.18 02.13	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.06.18 02.13	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.06.18 02.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	08.06.18 02.13	
o-Terphenyl	84-15-1	85	%	70-135	08.06.18 02.13	

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JRU 29

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	08.03.18 10.55
Lab Sample Id:	594619-017	Date Collected:	08.01.18 11.55	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.07.18 16.00	Basis:	Wet Weight
Seq Number:	3059262				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.07.18 23.50	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.07.18 23.50	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.07.18 23.50	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.07.18 23.50	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.07.18 23.50	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.07.18 23.50	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.07.18 23.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	08.07.18 23.50	
1,4-Difluorobenzene	540-36-3	103	%	70-130	08.07.18 23.50	

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JRU 29

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	08.03.18 10.55
Lab Sample Id:	594619-018	Date Collected:	08.01.18 12.10	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	08.06.18 17.15	Basis:	Wet Weight
Seq Number:	3059054				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**5.60**	5.00	mg/kg	08.06.18 23.11		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.05.18 10.00	Basis:	Wet Weight
Seq Number:	3059062				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.06.18 02.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.06.18 02.33	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.06.18 02.33	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.06.18 02.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	08.06.18 02.33	
o-Terphenyl	84-15-1	88	%	70-135	08.06.18 02.33	

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JRU 29

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	08.03.18 10.55
Lab Sample Id:	594619-018	Date Collected:	08.01.18 12.10	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.07.18 16.00	Basis:	Wet Weight
Seq Number:	3059262				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	08.08.18 00.10	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	08.08.18 00.10	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	08.08.18 00.10	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	08.08.18 00.10	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	08.08.18 00.10	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	08.08.18 00.10	U	1
Total BTEX		<0.00202	0.00202	mg/kg	08.08.18 00.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	124	%	70-130	08.08.18 00.10	
1,4-Difluorobenzene	540-36-3	89	%	70-130	08.08.18 00.10	

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JRU 29

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	08.03.18 10.55
Lab Sample Id:	594619-019	Date Collected:	08.01.18 12.30	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	08.06.18 17.15	Basis:	Wet Weight
Seq Number:	3059054				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**42.6**	5.00	mg/kg	08.06.18 23.18		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.05.18 10.00	Basis:	Wet Weight
Seq Number:	3059062				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.06.18 02.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.06.18 02.53	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.06.18 02.53	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.06.18 02.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	08.06.18 02.53	
o-Terphenyl	84-15-1	98	%	70-135	08.06.18 02.53	

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JRU 29

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	08.03.18 10.55
Lab Sample Id:	594619-019	Date Collected:	08.01.18 12.30	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.07.18 16.00	Basis:	Wet Weight
Seq Number:	3059262				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.08.18 00.31	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.08.18 00.31	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.08.18 00.31	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.08.18 00.31	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.08.18 00.31	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.08.18 00.31	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.08.18 00.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	08.08.18 00.31	
4-Bromofluorobenzene	460-00-4	104	%	70-130	08.08.18 00.31	

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JRU 29

Sample Id:	**SS04**	Matrix:	Soil	Date Received:	08.03.18 10.55
Lab Sample Id:	594619-020	Date Collected:	08.01.18 12.45	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	08.06.18 17.15	Basis:	Wet Weight
Seq Number:	3059054				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**5.93**	4.96	mg/kg	08.06.18 23.24		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.05.18 10.00	Basis:	Wet Weight
Seq Number:	3059062				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.06.18 03.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.06.18 03.13	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.06.18 03.13	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.06.18 03.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-135	08.06.18 03.13	
o-Terphenyl	84-15-1	81	%	70-135	08.06.18 03.13	

Certificate of Analytical Results 594619

LT Environmental, Inc., Arvada, CO

JRU 29

Sample Id:	**SS04**	Matrix:	Soil	Date Received:	08.03.18 10.55
Lab Sample Id:	594619-020	Date Collected:	08.01.18 12.45	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.07.18 16.00	Basis:	Wet Weight
Seq Number:	3059262				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.08.18 02.14	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.08.18 02.14	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.08.18 02.14	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.08.18 02.14	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.08.18 02.14	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.08.18 02.14	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.08.18 02.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	120	%	70-130	08.08.18 02.14	
1,4-Difluorobenzene	540-36-3	105	%	70-130	08.08.18 02.14	

LT Environmental, Inc., Arvada, CO

JRU 29

Sample Id:	**SS05**	Matrix:	Soil	Date Received:	08.03.18 10.55
Lab Sample Id:	594619-021	Date Collected:	08.01.18 13.00	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	08.06.18 17.15	Basis:	Wet Weight
Seq Number:	3059054				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**543**	4.98	mg/kg	08.06.18 23.31		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.04.18 09.00	Basis:	Wet Weight
Seq Number:	3058982				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.04.18 16.23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.04.18 16.23	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.04.18 16.23	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.04.18 16.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	08.04.18 16.23	
o-Terphenyl	84-15-1	87	%	70-135	08.04.18 16.23	

Certificate of Analytical Results 594619

LT Environmental, Inc., Arvada, CO

JRU 29

Sample Id:	**SS05**	Matrix:	Soil	Date Received:	08.03.18 10.55
Lab Sample Id:	594619-021	Date Collected:	08.01.18 13.00	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.07.18 16.00	Basis:	Wet Weight
Seq Number:	3059262				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	08.08.18 02.35	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	08.08.18 02.35	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	08.08.18 02.35	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	08.08.18 02.35	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	08.08.18 02.35	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	08.08.18 02.35	U	1
Total BTEX		<0.00202	0.00202	mg/kg	08.08.18 02.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	08.08.18 02.35	
4-Bromofluorobenzene	460-00-4	106	%	70-130	08.08.18 02.35	

Certificate of Analytical Results 594619

LT Environmental, Inc., Arvada, CO

JRU 29

Sample Id:	**SS06**	Matrix:	Soil	Date Received:	08.03.18 10.55
Lab Sample Id:	594619-022	Date Collected:	08.01.18 13.10	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	08.07.18 08.30	Basis:	Wet Weight
Seq Number:	3059255				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**678**	5.00	mg/kg	08.07.18 12.06		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.04.18 09.00	Basis:	Wet Weight
Seq Number:	3058982				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.04.18 17.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.04.18 17.22	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.04.18 17.22	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.04.18 17.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	08.04.18 17.22	
o-Terphenyl	84-15-1	87	%	70-135	08.04.18 17.22	

Certificate of Analytical Results 594619

LT Environmental, Inc., Arvada, CO

JRU 29

Sample Id:	**SS06**	Matrix:	Soil	Date Received:	08.03.18 10.55
Lab Sample Id:	594619-022	Date Collected:	08.01.18 13.10	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.07.18 16.00	Basis:	Wet Weight
Seq Number:	3059262				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.08.18 02.55	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.08.18 02.55	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.08.18 02.55	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.08.18 02.55	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.08.18 02.55	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.08.18 02.55	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.08.18 02.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	08.08.18 02.55	
4-Bromofluorobenzene	460-00-4	100	%	70-130	08.08.18 02.55	

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 594619

LT Environmental, Inc.

JRU 29

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3059054 Matrix: Solid Date Prep: 08.06.18
MB Sample Id: 7659866-1-BLK LCS Sample Id: 7659866-1-BKS LCSD Sample Id: 7659866-1-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	258	103	257	103	90-110	0	20	mg/kg	08.06.18 20:17	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3059160 Matrix: Solid Date Prep: 08.06.18
MB Sample Id: 7659867-1-BLK LCS Sample Id: 7659867-1-BKS LCSD Sample Id: 7659867-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	265	106	263	105	90-110	1	20	mg/kg	08.07.18 04:25	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3059255 Matrix: Solid Date Prep: 08.07.18
MB Sample Id: 7659929-1-BLK LCS Sample Id: 7659929-1-BKS LCSD Sample Id: 7659929-1-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	242	97	245	98	90-110	1	20	mg/kg	08.07.18 11:52	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3059054 Matrix: Soil Date Prep: 08.06.18
Parent Sample Id: 594619-009 MS Sample Id: 594619-009 S MSD Sample Id: 594619-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1170	248	1370	81	1370	81	90-110	0	20	mg/kg	08.06.18 20:37	X

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3059054 Matrix: Soil Date Prep: 08.06.18
Parent Sample Id: 594619-012 MS Sample Id: 594619-012 S MSD Sample Id: 594619-012 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	60.7	248	311	101	309	100	90-110	1	20	mg/kg	08.06.18 22:11	

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 594619

LT Environmental, Inc.

JRU 29

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3059160 Matrix: Soil Date Prep: 08.06.18
Parent Sample Id: 594415-001 MS Sample Id: 594415-001 S MSD Sample Id: 594415-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	62.7	249	324	105	328	107	90-110	1	20	mg/kg	08.07.18 06:18	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3059160 Matrix: Soil Date Prep: 08.06.18
Parent Sample Id: 594577-001 MS Sample Id: 594577-001 S MSD Sample Id: 594577-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	14.3	250	276	105	275	104	90-110	0	20	mg/kg	08.07.18 04:45	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3059255 Matrix: Soil Date Prep: 08.07.18
Parent Sample Id: 594619-022 MS Sample Id: 594619-022 S MSD Sample Id: 594619-022 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	678	250	898	88	901	89	90-110	0	20	mg/kg	08.07.18 12:12	X

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3059255 Matrix: Soil Date Prep: 08.07.18
Parent Sample Id: 594668-005 MS Sample Id: 594668-005 S MSD Sample Id: 594668-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1060	250	1260	80	1260	80	90-110	0	20	mg/kg	08.07.18 13:46	X

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3058982 Matrix: Solid Date Prep: 08.04.18
MB Sample Id: 7659797-1-BLK LCS Sample Id: 7659797-1-BKS LCSD Sample Id: 7659797-1-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)	4.91	1000	965	97	901	90	70-135	7	20	mg/kg	08.04.18 12:04	
Diesel Range Organics (DRO)	2.55	1000	1010	101	937	94	70-135	7	20	mg/kg	08.04.18 12:04	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	96		124		125		70-135	%	08.04.18 12:04
o-Terphenyl	101		110		108		70-135	%	08.04.18 12:04

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

QC Summary 594619

LT Environmental, Inc.

JRU 29

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3059062 Matrix: Solid Date Prep: 08.05.18
MB Sample Id: 7659814-1-BLK LCS Sample Id: 7659814-1-BKS LCSD Sample Id: 7659814-1-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	920	92	913	91	70-135	1	20	mg/kg	08.05.18 19:01	
Diesel Range Organics (DRO)	<15.0	1000	960	96	944	94	70-135	2	20	mg/kg	08.05.18 19:01	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	94		128		127		70-135	%	08.05.18 19:01
o-Terphenyl	100		103		107		70-135	%	08.05.18 19:01

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3058982 Matrix: Soil Date Prep: 08.04.18
Parent Sample Id: 594450-009 MS Sample Id: 594450-009 S MSD Sample Id: 594450-009 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)	15.7	998	882	87	881	87	70-135	0	20	mg/kg	08.04.18 13:03	
Diesel Range Organics (DRO)	3.05	998	938	94	984	98	70-135	5	20	mg/kg	08.04.18 13:03	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	121		127		70-135	%	08.04.18 13:03
o-Terphenyl	91		101		70-135	%	08.04.18 13:03

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3059062 Matrix: Soil Date Prep: 08.05.18
Parent Sample Id: 594619-001 MS Sample Id: 594619-001 S MSD Sample Id: 594619-001 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	998	857	86	864	87	70-135	1	20	mg/kg	08.05.18 19:59	
Diesel Range Organics (DRO)	<15.0	998	882	88	896	90	70-135	2	20	mg/kg	08.05.18 19:59	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	121		121		70-135	%	08.05.18 19:59
o-Terphenyl	102		101		70-135	%	08.05.18 19:59

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

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

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

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

QC Summary 594619

LT Environmental, Inc.

JRU 29

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3059258 Matrix: Solid Date Prep: 08.07.18
MB Sample Id: 7659973-1-BLK LCS Sample Id: 7659973-1-BKS LCSD Sample Id: 7659973-1-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	0.103	103	0.109	108	70-130	6	35	mg/kg	08.07.18 07:05	
Toluene	<0.00200	0.100	0.0973	97	0.103	102	70-130	6	35	mg/kg	08.07.18 07:05	
Ethylbenzene	<0.00200	0.100	0.103	103	0.108	107	70-130	5	35	mg/kg	08.07.18 07:05	
m,p-Xylenes	<0.00401	0.200	0.208	104	0.218	108	70-130	5	35	mg/kg	08.07.18 07:05	
o-Xylene	<0.00200	0.100	0.100	100	0.105	104	70-130	5	35	mg/kg	08.07.18 07:05	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		118		118		70-130	%	08.07.18 07:05
4-Bromofluorobenzene	100		100		96		70-130	%	08.07.18 07:05

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3059262 Matrix: Solid Date Prep: 08.07.18
MB Sample Id: 7659975-1-BLK LCS Sample Id: 7659975-1-BKS LCSD Sample Id: 7659975-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.100	99	0.0970	97	70-130	3	35	mg/kg	08.07.18 19:39	
Toluene	<0.00202	0.101	0.0974	96	0.0930	93	70-130	5	35	mg/kg	08.07.18 19:39	
Ethylbenzene	<0.00202	0.101	0.105	104	0.0999	100	70-130	5	35	mg/kg	08.07.18 19:39	
m,p-Xylenes	<0.00404	0.202	0.216	107	0.205	102	70-130	5	35	mg/kg	08.07.18 19:39	
o-Xylene	<0.00202	0.101	0.104	103	0.0993	99	70-130	5	35	mg/kg	08.07.18 19:39	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	109		110		108		70-130	%	08.07.18 19:39
4-Bromofluorobenzene	98		107		99		70-130	%	08.07.18 19:39

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3059258 Matrix: Soil Date Prep: 08.07.18
Parent Sample Id: 594619-001 MS Sample Id: 594619-001 S MSD Sample Id: 594619-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.0672	67	0.0861	86	70-130	25	35	mg/kg	08.07.18 07:46	X
Toluene	<0.00200	0.0998	0.0635	64	0.0800	80	70-130	23	35	mg/kg	08.07.18 07:46	X
Ethylbenzene	<0.00200	0.0998	0.0660	66	0.0820	82	70-130	22	35	mg/kg	08.07.18 07:46	X
m,p-Xylenes	<0.00399	0.200	0.131	66	0.161	81	70-130	21	35	mg/kg	08.07.18 07:46	X
o-Xylene	<0.00200	0.0998	0.0644	65	0.0783	78	70-130	19	35	mg/kg	08.07.18 07:46	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	113		126		70-130	%	08.07.18 07:46
4-Bromofluorobenzene	99		104		70-130	%	08.07.18 07:46

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

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

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

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

QC Summary 594619

LT Environmental, Inc.

JRU 29

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

Seq Number: 3059262 Matrix: Soil Date Prep: 08.07.18

Parent Sample Id: 594668-007 MS Sample Id: 594668-007 S MSD Sample Id: 594668-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.0670	67	0.0318	32	70-130	71	35	mg/kg	08.07.18 20:21	XF
Toluene	<0.00199	0.0994	0.0606	61	0.0236	24	70-130	88	35	mg/kg	08.07.18 20:21	XF
Ethylbenzene	<0.00199	0.0994	0.0614	62	0.0166	17	70-130	115	35	mg/kg	08.07.18 20:21	XF
m,p-Xylenes	<0.00398	0.199	0.124	62	0.0308	15	70-130	120	35	mg/kg	08.07.18 20:21	XF
o-Xylene	<0.00199	0.0994	0.0586	59	0.0136	14	70-130	125	35	mg/kg	08.07.18 20:21	XF

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	124		106		70-130	%	08.07.18 20:21
4-Bromofluorobenzene	104		103		70-130	%	08.07.18 20:21

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

Page 1 Of 3

XENCO LABORATORIES

Setting the Standard since 1990

Stafford,Texas (281-240-4200)
Dallas Texas (214-902-0300)
San Antonio, Texas (210-509-3334)
Midland, Texas (432-704-5251)
Phoenix, Arizona (480-355-0900)
www.xenco.com

Xenco Quote #
Xenco Job # 594619

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: Ben Belitt

Project Information

Project Name/Number: JRU 29
Project Location: Carlsbad, NM
Invoice To: XTO Energy - Kyle Littrell
PO Number: ZRP-4833

Analytical Information

BTEX 8021 EPA
TPH 8015 EPA
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	PH01	4'	8/1/18	0900	S	1								X	
2	PH01A	5'		0910										X	
3	PH01B	6'		0920										X	
4	PH01C	7'		0930										X	
5	PH01D	8'		0935										X	
6	PH02	4'		0940										X	
7	PH02A	5'		0955										X	
8	PH02B	6'		1000										X	
9	PH02C	7'		1010										X	
10	PH02D	8'	↓	1020	↓	↓								X	

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 # 7728 8696 6368

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	Ben Belitt	8/1/18 15:58	Chase Pettus			
2				Chase Pettus	8/2/18 15:30	Katie Lee 8/3/18 10:55
3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
4						
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice ✓ Cooler Temp. 3.1 Thermo. Corr. Factor R80.0

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.

CHAIN OF CUSTODY

Page 2 Of 3

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Phoenix, Arizona (480-355-0900)

www.xenco.com

Xenco Quote #

Xenco Job # 594619

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: Ben Batilla

Project Information

Project Name/Number: JRU 29

Project Location: Carlsbad, NM

Invoice To: XTO Energy - Kyle Littrell

PO Number: 2RP-4833

Analytical Information

Matrix Codes

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

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	BTEX 8021	TPH EPA 8015	Chloride 300.1	Field Comments
1	PH02E	9'	8/1/18	1030	S	1								X	X	X	X	
2	PH03	4'		1040										X	X	X	X	
3	PH04	4'		1055										X	X	X	X	
4	PH04A	5'		1110										X	X	X	X	
5	PH04B	6'		1120										X	X	X	X	
6	PH05	4'		1130										X	X	X	X	
7	SS01	1'		1155										X	X	X	X	
8	SS02	1'		1210										X	X	X	X	
9	SS03	1'		1230										X	X	X	X	
10	SS04	1'	↓	1245	↓	↓								X	X	X	X	

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- ☐ Next Day EMERGENCY
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- ☐ 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 III Std QC+ Forms
- ☐ Level 3 (CLP Forms)
- ☐ TRRP Checklist
- ☐ Level IV (Full Data Pkg /raw data)
- ☐ TRRP Level IV
- ☐ UST / RG -411

Notes:

FED-EX / UPS: Tracking # 7728 8696 0368

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

	Relinquished by	Date Time	Received By	Relinquished By	Date Time	Received By
1		8/1/18 15:58				
2					8/2/18 15:30	8/3/18 10:55
3						
4						
5				Custody Seal #	Preserved where applicable	On Ice ✓

Cooler Temp. R8.3C

Thermo. Corr. Factor 0.0

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CHAIN OF CUSTODY

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Xenco Quote #

Xenco Job # 594619

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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: Ben Belill

Project Information

Project Name/Number: JRU29

Project Location: Carlsbad, NM

Invoice To: XTO Energy - Kyle Littrell

PO Number: 2RP-4833

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	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Field Comments
1	SS05	1'	8/1/18	1300	S	1								X	
2	SS06	1'	8/1/18	1310	S	1								X	
3															
4															
5															
6			8/1/18				BB								
7															
8															
9															
10															

Turnaround Time (Business days)

- [ ] Same Day TAT
- [x] 5 Day TAT
- [ ] Next Day EMERGENCY
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- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] TRRP Checklist

Notes:

FED-EX / UPS: Tracking # 7728 8696 6368

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

	Relinquished by Sampler / Relinquished by / Relinquished by	Date Time	Received By	Relinquished By	Date Time	Received By
1	Ben Belill	8/1/18 15:38	Chris Pulido			
2					8/2/18 15:30	Yesenia Luna 8/3/18 10:55
3						
4						
5				Custody Seal #	Preserved where applicable	On Ice ✓ Cooler Temp. 3.1 R 0.0 Thermo. Corr. Factor

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

ORIGIN ID:MAFA (806) 794-1296
XENCO
XENCO
1211 W. FLORIDA AVE
MIDLAND, TX 79701
UNITED STATES US

SHIP DATE: 02AUG18
ACTWGT: 43.00 LB
CAD: 101813706/INET4040
DIMS: 26x15x14 IN
BILL RECIPIENT

TO XENCO
XENCO
1211 W. FLORIDA AVE
MIDLAND TX 79701
(806) 794-1296
INV:
PO:
REF:
DEPT:

FedEx Express

J182918672201uv

552J1/3309/DCA5

FRI - 03 AUG 10:30A
PRIORITY OVERNIGHT

TRK# 0201 7728 8696 6368

41 MAFA

TX-US LBB 79701

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: 08/03/2018 10:55:00 AM

Work Order #: 594619

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)?	3.1
#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: 08/03/2018

Checklist reviewed by: Jessica Kramer Date: 08/03/2018

Analytical Report 617904

for

LT Environmental, Inc.

Project Manager: Adrian Baker

JRU-29

25-MAR-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), North Carolina (483)
Xenco-Lakeland: Florida (E84098)

25-MAR-19

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

Reference: XENCO Report No(s): **617904**
JRU-29
Project Address: ---

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) 617904. 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. 617904 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Sample Cross Reference 617904

LT Environmental, Inc., Arvada, CO

JRU-29

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH06	S	03-11-19 14:10	9 ft	617904-001
PH06A	S	03-12-19 11:00	13 ft	617904-002
PH07	S	03-11-19 13:00	1 ft	617904-003
PH07A	S	03-14-19 09:25	6 ft	617904-004
PH08	S	03-12-19 11:35	1 ft	617904-005
PH08A	S	03-14-19 08:45	13.5 ft	617904-006
PH09	S	03-11-19 15:30	1 ft	617904-007
PH09A	S	03-14-19 10:10	5 ft	617904-008
PH10	S	03-11-19 15:35	1 ft	617904-009
PH10A	S	03-11-19 16:10	4 ft	617904-010

CASE NARRATIVE

Client Name: LT Environmental, Inc.
Project Name: JRU-29

Project ID: ---
Work Order Number(s): *617904*

Report Date: *25-MAR-19*
Date Received: *03/18/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3083162 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.
Samples affected are: 617809-006 S,617809-006 SD.

Batch: LBA-3083180 BTEX by EPA 8021B
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.
Samples affected are: 617904-007 S,617904-005,617904-007.

Lab Sample ID 617904-007 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD).
Benzene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 617904-005, -006, -007, -008, -009, -010.
The Laboratory Control Sample for Benzene, m,p-Xylenes, o-Xylene is within laboratory Control Limits, therefore the data was accepted.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Benzene Relative Percent Difference (RPD) between matrix spike and duplicate was above quality control limits.
Samples in the analytical batch are: 617904-005, -006, -007, -008, -009, -010

Certificate of Analysis Summary 617904

LT Environmental, Inc., Arvada, CO

Project Name: JRU-29

Project Id: ---
Contact: Adrian Baker
Project Location: ---

Date Received in Lab: Mon Mar-18-19 07:45 am
Report Date: 25-MAR-19
Project Manager: Kalei Stout

Analysis Requested													
	Lab Id:	617904-001		617904-002		617904-003		617904-004		617904-005		617904-006	
	Field Id:	PH06		PH06A		PH07		PH07A		PH08		PH08A	
	Depth:	9- ft		13- ft		1- ft		6- ft		1- ft		13.5- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Mar-11-19 14:10		Mar-12-19 11:00		Mar-11-19 13:00		Mar-14-19 09:25		Mar-12-19 11:35		Mar-14-19 08:45	
BTEX by EPA 8021B	***Extracted:***	Mar-22-19 13:00		Mar-22-19 13:00		Mar-22-19 13:00		Mar-22-19 13:00		Mar-22-19 15:00		Mar-22-19 15:00	
	Analyzed:	Mar-23-19 05:35		Mar-23-19 05:54		Mar-23-19 06:13		Mar-23-19 06:32		Mar-23-19 09:58		Mar-23-19 10:17	
	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	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Toluene		<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
m,p-Xylenes		<0.00399	0.00399	<0.00400	0.00400	<0.00402	0.00402	<0.00398	0.00398	<0.00400	0.00400	<0.00401	0.00401
o-Xylene		<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Total Xylenes		<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Total BTEX		<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Inorganic Anions by EPA 300	***Extracted:***	Mar-18-19 13:00		Mar-18-19 13:00		Mar-18-19 13:00		Mar-18-19 13:00		Mar-18-19 13:00		Mar-18-19 13:00	
	Analyzed:	Mar-18-19 23:39		Mar-18-19 23:45		Mar-18-19 23:51		Mar-18-19 23:57		Mar-19-19 00:03		Mar-19-19 00:10	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		1080	4.97	391	4.95	1140	4.99	376	4.97	521	4.98	63.1	5.00
TPH by SW8015 Mod	***Extracted:***	Mar-21-19 16:00		Mar-21-19 16:00		Mar-21-19 16:00		Mar-21-19 16:00		Mar-21-19 16:00		Mar-21-19 16:00	
	Analyzed:	Mar-21-19 19:39		Mar-21-19 20:39		Mar-21-19 20:58		Mar-21-19 21:18		Mar-21-19 21:38		Mar-21-19 21:57	
	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	<14.9	14.9	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<14.9	14.9	<15.0	15.0	<14.9	14.9	396	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<14.9	14.9	<15.0	15.0	<14.9	14.9	90.2	15.0	<15.0	15.0
Total TPH		<15.0	15.0	<14.9	14.9	<15.0	15.0	<14.9	14.9	486	15.0	<15.0	15.0

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 617904

LT Environmental, Inc., Arvada, CO

Project Name: JRU-29

Project Id: ---
Contact: Adrian Baker
Project Location: ---

Date Received in Lab: Mon Mar-18-19 07:45 am
Report Date: 25-MAR-19
Project Manager: Kalei Stout

Analysis Requested													
	Lab Id:	617904-007		617904-008		617904-009		617904-010					
	Field Id:	PH09		PH09A		PH10		PH10A					
	Depth:	1- ft		5- ft		1- ft		4- ft					
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	Mar-11-19 15:30		Mar-14-19 10:10		Mar-11-19 15:35		Mar-11-19 16:10					
BTEX by EPA 8021B	***Extracted:***	Mar-22-19 15:00		Mar-22-19 15:00		Mar-22-19 15:00		Mar-22-19 15:00					
	Analyzed:	Mar-23-19 09:39		Mar-23-19 10:36		Mar-23-19 10:55		Mar-23-19 11:14					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00199	0.00199	<0.00199	0.00199	<0.00201	0.00201	<0.00201	0.00201				
Toluene		<0.00199	0.00199	<0.00199	0.00199	<0.00201	0.00201	<0.00201	0.00201				
Ethylbenzene		<0.00199	0.00199	<0.00199	0.00199	<0.00201	0.00201	<0.00201	0.00201				
m,p-Xylenes		0.0136	0.00398	<0.00398	0.00398	<0.00402	0.00402	<0.00402	0.00402				
o-Xylene		<0.00199	0.00199	<0.00199	0.00199	<0.00201	0.00201	<0.00201	0.00201				
Total Xylenes		0.0136	0.00199	<0.00199	0.00199	<0.00201	0.00201	<0.00201	0.00201				
Total BTEX		0.0136	0.00199	<0.00199	0.00199	<0.00201	0.00201	<0.00201	0.00201				
Inorganic Anions by EPA 300	***Extracted:***	Mar-18-19 13:00		Mar-18-19 15:30		Mar-18-19 15:30		Mar-18-19 15:30					
	Analyzed:	Mar-19-19 00:16		Mar-18-19 16:32		Mar-18-19 17:03		Mar-18-19 17:14					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		2850	25.0	35.2	4.95	18.0	4.99	81.9	4.97				
TPH by SW8015 Mod	***Extracted:***	Mar-21-19 16:00		Mar-21-19 16:00		Mar-21-19 16:00		Mar-21-19 16:00					
	Analyzed:	Mar-21-19 22:16		Mar-21-19 22:36		Mar-21-19 22:55		Mar-21-19 23:15					
	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)		28.7	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0				
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0				
Total TPH		28.7	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0				

Jessica Kramer
Project Assistant

Certificate of Analytical Results 617904

LT Environmental, Inc., Arvada, CO

JRU-29

Sample Id:	**PH06**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617904-001	Date Collected:	03.11.19 14.10	Sample Depth:	9 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 13.00	Basis:	Wet Weight
Seq Number:	3082546				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1080**	4.97	mg/kg	03.18.19 23.39		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.21.19 16.00	Basis:	Wet Weight
Seq Number:	3082947				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.21.19 19.39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.21.19 19.39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.21.19 19.39	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.21.19 19.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	03.21.19 19.39	
o-Terphenyl	84-15-1	97	%	70-135	03.21.19 19.39	

Certificate of Analytical Results 617904

LT Environmental, Inc., Arvada, CO

JRU-29

Sample Id:	**PH06**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617904-001	Date Collected:	03.11.19 14.10	Sample Depth:	9 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.22.19 13.00	Basis:	Wet Weight
Seq Number:	3083162				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.23.19 05.35	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.23.19 05.35	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.23.19 05.35	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	03.23.19 05.35	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.23.19 05.35	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.23.19 05.35	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.23.19 05.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	114	%	70-130	03.23.19 05.35	
4-Bromofluorobenzene	460-00-4	121	%	70-130	03.23.19 05.35	

Certificate of Analytical Results 617904

LT Environmental, Inc., Arvada, CO

JRU-29

Sample Id:	**PH06A**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617904-002	Date Collected:	03.12.19 11.00	Sample Depth:	13 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 13.00	Basis:	Wet Weight
Seq Number:	3082546				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**391**	4.95	mg/kg	03.18.19 23.45		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.21.19 16.00	Basis:	Wet Weight
Seq Number:	3082947				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	03.21.19 20.39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	03.21.19 20.39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	03.21.19 20.39	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	03.21.19 20.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	03.21.19 20.39	
o-Terphenyl	84-15-1	96	%	70-135	03.21.19 20.39	

Certificate of Analytical Results 617904

LT Environmental, Inc., Arvada, CO

JRU-29

Sample Id:	**PH06A**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617904-002	Date Collected:	03.12.19 11.00	Sample Depth:	13 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.22.19 13.00	Basis:	Wet Weight
Seq Number:	3083162				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.23.19 05.54	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.23.19 05.54	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.23.19 05.54	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	03.23.19 05.54	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.23.19 05.54	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.23.19 05.54	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.23.19 05.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	115	%	70-130	03.23.19 05.54	
4-Bromofluorobenzene	460-00-4	117	%	70-130	03.23.19 05.54	

Certificate of Analytical Results 617904

LT Environmental, Inc., Arvada, CO

JRU-29

Sample Id:	**PH07**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617904-003	Date Collected:	03.11.19 13.00	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 13.00	Basis:	Wet Weight
Seq Number:	3082546				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1140**	4.99	mg/kg	03.18.19 23.51		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.21.19 16.00	Basis:	Wet Weight
Seq Number:	3082947				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.21.19 20.58	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.21.19 20.58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.21.19 20.58	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.21.19 20.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	03.21.19 20.58	
o-Terphenyl	84-15-1	93	%	70-135	03.21.19 20.58	

Certificate of Analytical Results 617904

LT Environmental, Inc., Arvada, CO

JRU-29

Sample Id:	**PH07**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617904-003	Date Collected:	03.11.19 13.00	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.22.19 13.00	Basis:	Wet Weight
Seq Number:	3083162				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.23.19 06.13	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.23.19 06.13	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.23.19 06.13	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.23.19 06.13	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.23.19 06.13	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	03.23.19 06.13	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.23.19 06.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	115	%	70-130	03.23.19 06.13	
1,4-Difluorobenzene	540-36-3	116	%	70-130	03.23.19 06.13	

Certificate of Analytical Results 617904

LT Environmental, Inc., Arvada, CO

JRU-29

Sample Id:	**PH07A**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617904-004	Date Collected:	03.14.19 09.25	Sample Depth:	6 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 13.00	Basis:	Wet Weight
Seq Number:	3082546				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**376**	4.97	mg/kg	03.18.19 23.57		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.21.19 16.00	Basis:	Wet Weight
Seq Number:	3082947				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	03.21.19 21.18	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	03.21.19 21.18	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	03.21.19 21.18	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	03.21.19 21.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	03.21.19 21.18	
o-Terphenyl	84-15-1	99	%	70-135	03.21.19 21.18	

Certificate of Analytical Results 617904

LT Environmental, Inc., Arvada, CO

JRU-29

Sample Id:	**PH07A**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617904-004	Date Collected:	03.14.19 09.25	Sample Depth:	6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.22.19 13.00	Basis:	Wet Weight
Seq Number:	3083162				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.23.19 06.32	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.23.19 06.32	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.23.19 06.32	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.23.19 06.32	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.23.19 06.32	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.23.19 06.32	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.23.19 06.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	125	%	70-130	03.23.19 06.32	
1,4-Difluorobenzene	540-36-3	112	%	70-130	03.23.19 06.32	

Certificate of Analytical Results 617904

LT Environmental, Inc., Arvada, CO

JRU-29

Sample Id:	**PH08**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617904-005	Date Collected:	03.12.19 11.35	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 13.00	Basis:	Wet Weight
Seq Number:	3082546				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**521**	4.98	mg/kg	03.19.19 00.03		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.21.19 16.00	Basis:	Wet Weight
Seq Number:	3082947				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.21.19 21.38	U	1
Diesel Range Organics (DRO)	C10C28DRO	**396**	15.0	mg/kg	03.21.19 21.38		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**90.2**	15.0	mg/kg	03.21.19 21.38		1
Total TPH	PHC635	**486**	15.0	mg/kg	03.21.19 21.38		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	03.21.19 21.38	
o-Terphenyl	84-15-1	99	%	70-135	03.21.19 21.38	

Certificate of Analytical Results 617904

LT Environmental, Inc., Arvada, CO

JRU-29

Sample Id:	**PH08**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617904-005	Date Collected:	03.12.19 11.35	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.22.19 15.00	Basis:	Wet Weight
Seq Number:	3083180				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.23.19 09.58	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.23.19 09.58	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.23.19 09.58	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	03.23.19 09.58	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.23.19 09.58	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.23.19 09.58	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.23.19 09.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	182	%	70-130	03.23.19 09.58	**
1,4-Difluorobenzene	540-36-3	123	%	70-130	03.23.19 09.58	

Certificate of Analytical Results 617904

LT Environmental, Inc., Arvada, CO

JRU-29

Sample Id:	**PH08A**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617904-006	Date Collected:	03.14.19 08.45	Sample Depth:	13.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 13.00	Basis:	Wet Weight
Seq Number:	3082546				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**63.1**	5.00	mg/kg	03.19.19 00.10		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.21.19 16.00	Basis:	Wet Weight
Seq Number:	3082947				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.21.19 21.57	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.21.19 21.57	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.21.19 21.57	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.21.19 21.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	03.21.19 21.57	
o-Terphenyl	84-15-1	101	%	70-135	03.21.19 21.57	

Certificate of Analytical Results 617904

LT Environmental, Inc., Arvada, CO

JRU-29

Sample Id:	**PH08A**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617904-006	Date Collected:	03.14.19 08.45	Sample Depth:	13.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.22.19 15.00	Basis:	Wet Weight
Seq Number:	3083180				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.23.19 10.17	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.23.19 10.17	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.23.19 10.17	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	03.23.19 10.17	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.23.19 10.17	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.23.19 10.17	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.23.19 10.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	109	%	70-130	03.23.19 10.17	
4-Bromofluorobenzene	460-00-4	105	%	70-130	03.23.19 10.17	

Certificate of Analytical Results 617904

LT Environmental, Inc., Arvada, CO

JRU-29

Sample Id:	**PH09**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617904-007	Date Collected:	03.11.19 15.30	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 13.00	Basis:	Wet Weight
Seq Number:	3082546				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2850**	25.0	mg/kg	03.19.19 00.16		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.21.19 16.00	Basis:	Wet Weight
Seq Number:	3082947				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.21.19 22.16	U	1
Diesel Range Organics (DRO)	C10C28DRO	**28.7**	15.0	mg/kg	03.21.19 22.16		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.21.19 22.16	U	1
Total TPH	PHC635	**28.7**	15.0	mg/kg	03.21.19 22.16		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	03.21.19 22.16	
o-Terphenyl	84-15-1	94	%	70-135	03.21.19 22.16	

Certificate of Analytical Results 617904

LT Environmental, Inc., Arvada, CO

JRU-29

Sample Id:	**PH09**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617904-007	Date Collected:	03.11.19 15.30	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.22.19 15.00	Basis:	Wet Weight
Seq Number:	3083180				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.23.19 09.39	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.23.19 09.39	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.23.19 09.39	U	1
m,p-Xylenes	179601-23-1	**0.0136**	0.00398	mg/kg	03.23.19 09.39		1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.23.19 09.39	U	1
Total Xylenes	1330-20-7	**0.0136**	0.00199	mg/kg	03.23.19 09.39		1
Total BTEX		**0.0136**	0.00199	mg/kg	03.23.19 09.39		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	210	%	70-130	03.23.19 09.39	**
1,4-Difluorobenzene	540-36-3	123	%	70-130	03.23.19 09.39	

Certificate of Analytical Results 617904

LT Environmental, Inc., Arvada, CO

JRU-29

Sample Id:	**PH09A**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617904-008	Date Collected:	03.14.19 10.10	Sample Depth:	5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 15.30	Basis:	Wet Weight
Seq Number:	3082557				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**35.2**	4.95	mg/kg	03.18.19 16.32		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.21.19 16.00	Basis:	Wet Weight
Seq Number:	3082947				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.21.19 22.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.21.19 22.36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.21.19 22.36	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.21.19 22.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	03.21.19 22.36	
o-Terphenyl	84-15-1	114	%	70-135	03.21.19 22.36	

Certificate of Analytical Results 617904

LT Environmental, Inc., Arvada, CO

JRU-29

Sample Id:	**PH09A**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617904-008	Date Collected:	03.14.19 10.10	Sample Depth:	5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.22.19 15.00	Basis:	Wet Weight
Seq Number:	3083180				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.23.19 10.36	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.23.19 10.36	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.23.19 10.36	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.23.19 10.36	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.23.19 10.36	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.23.19 10.36	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.23.19 10.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	113	%	70-130	03.23.19 10.36	
4-Bromofluorobenzene	460-00-4	108	%	70-130	03.23.19 10.36	

Certificate of Analytical Results 617904

LT Environmental, Inc., Arvada, CO

JRU-29

Sample Id:	**PH10**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617904-009	Date Collected:	03.11.19 15.35	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 15.30	Basis:	Wet Weight
Seq Number:	3082557				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**18.0**	4.99	mg/kg	03.18.19 17.03		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.21.19 16.00	Basis:	Wet Weight
Seq Number:	3082947				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.21.19 22.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.21.19 22.55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.21.19 22.55	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.21.19 22.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	03.21.19 22.55	
o-Terphenyl	84-15-1	99	%	70-135	03.21.19 22.55	

Certificate of Analytical Results 617904

LT Environmental, Inc., Arvada, CO

JRU-29

Sample Id:	**PH10**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617904-009	Date Collected:	03.11.19 15.35	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.22.19 15.00	Basis:	Wet Weight
Seq Number:	3083180				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.23.19 10.55	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.23.19 10.55	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.23.19 10.55	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.23.19 10.55	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.23.19 10.55	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	03.23.19 10.55	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.23.19 10.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	113	%	70-130	03.23.19 10.55	
1,4-Difluorobenzene	540-36-3	114	%	70-130	03.23.19 10.55	

Certificate of Analytical Results 617904

LT Environmental, Inc., Arvada, CO

JRU-29

Sample Id:	**PH10A**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617904-010	Date Collected:	03.11.19 16.10	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 15.30	Basis:	Wet Weight
Seq Number:	3082557				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**81.9**	4.97	mg/kg	03.18.19 17.14		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.21.19 16.00	Basis:	Wet Weight
Seq Number:	3082947				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.21.19 23.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.21.19 23.15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.21.19 23.15	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.21.19 23.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	03.21.19 23.15	
o-Terphenyl	84-15-1	97	%	70-135	03.21.19 23.15	

Certificate of Analytical Results 617904

LT Environmental, Inc., Arvada, CO

JRU-29

Sample Id:	**PH10A**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617904-010	Date Collected:	03.11.19 16.10	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.22.19 15.00	Basis:	Wet Weight
Seq Number:	3083180				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.23.19 11.14	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.23.19 11.14	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.23.19 11.14	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.23.19 11.14	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.23.19 11.14	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	03.23.19 11.14	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.23.19 11.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	114	%	70-130	03.23.19 11.14	
1,4-Difluorobenzene	540-36-3	114	%	70-130	03.23.19 11.14	

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 617904

LT Environmental, Inc.

JRU-29

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082546 Matrix: Solid Date Prep: 03.18.19
MB Sample Id: 7673783-1-BLK LCS Sample Id: 7673783-1-BKS LCSD Sample Id: 7673783-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	241	96	242	97	90-110	0	20	mg/kg	03.18.19 21:20	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082557 Matrix: Solid Date Prep: 03.18.19
MB Sample Id: 7673794-1-BLK LCS Sample Id: 7673794-1-BKS LCSD Sample Id: 7673794-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	252	101	226	90	90-110	11	20	mg/kg	03.18.19 16:12	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082546 Matrix: Soil Date Prep: 03.18.19
Parent Sample Id: 617911-007 MS Sample Id: 617911-007 S MSD Sample Id: 617911-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	193	248	418	91	414	89	90-110	1	20	mg/kg	03.18.19 21:39	X

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082546 Matrix: Soil Date Prep: 03.18.19
Parent Sample Id: 617911-017 MS Sample Id: 617911-017 S MSD Sample Id: 617911-017 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	48.3	248	297	100	295	99	90-110	1	20	mg/kg	03.18.19 23:03	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082557 Matrix: Soil Date Prep: 03.18.19
Parent Sample Id: 617904-008 MS Sample Id: 617904-008 S MSD Sample Id: 617904-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	35.2	248	304	108	276	97	90-110	10	20	mg/kg	03.18.19 16:43	

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

QC Summary 617904

LT Environmental, Inc.

JRU-29

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082557 Matrix: Soil Date Prep: 03.18.19
Parent Sample Id: 617974-002 MS Sample Id: 617974-002 S MSD Sample Id: 617974-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	343	250	580	95	589	98	90-110	2	20	mg/kg	03.18.19 19:07	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3082947 Matrix: Solid Date Prep: 03.21.19
MB Sample Id: 7674076-1-BLK LCS Sample Id: 7674076-1-BKS LCSD Sample Id: 7674076-1-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	1130	113	1190	119	70-135	5	20	mg/kg	03.21.19 19:00	
Diesel Range Organics (DRO)	<8.13	1000	1110	111	1160	116	70-135	4	20	mg/kg	03.21.19 19:00	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	104		127		128		70-135	%	03.21.19 19:00
o-Terphenyl	107		109		120		70-135	%	03.21.19 19:00

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3082947 Matrix: Soil Date Prep: 03.21.19
Parent Sample Id: 617904-001 MS Sample Id: 617904-001 S MSD Sample Id: 617904-001 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	1010	101	991	99	70-135	2	20	mg/kg	03.21.19 19:59	
Diesel Range Organics (DRO)	<8.12	999	1000	100	988	99	70-135	1	20	mg/kg	03.21.19 19:59	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	109		108		70-135	%	03.21.19 19:59
o-Terphenyl	101		98		70-135	%	03.21.19 19:59

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 617904

LT Environmental, Inc.

JRU-29

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3083162 Matrix: Solid Date Prep: 03.22.19
MB Sample Id: 7674226-1-BLK LCS Sample Id: 7674226-1-BKS LCSD Sample Id: 7674226-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.114	114	0.114	113	70-130	0	35	mg/kg	03.22.19 22:03	
Toluene	<0.00200	0.0998	0.118	118	0.118	117	70-130	0	35	mg/kg	03.22.19 22:03	
Ethylbenzene	<0.00200	0.0998	0.102	102	0.103	102	70-130	1	35	mg/kg	03.22.19 22:03	
m,p-Xylenes	<0.00399	0.200	0.199	100	0.202	100	70-130	1	35	mg/kg	03.22.19 22:03	
o-Xylene	<0.00200	0.0998	0.100	100	0.102	101	70-130	2	35	mg/kg	03.22.19 22:03	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	116		107		108		70-130	%	03.22.19 22:03
4-Bromofluorobenzene	111		101		104		70-130	%	03.22.19 22:03

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3083180 Matrix: Solid Date Prep: 03.22.19
MB Sample Id: 7674232-1-BLK LCS Sample Id: 7674232-1-BKS LCSD Sample Id: 7674232-1-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	0.108	107	0.104	105	70-130	4	35	mg/kg	03.23.19 07:47	
Toluene	<0.00201	0.101	0.113	112	0.110	111	70-130	3	35	mg/kg	03.23.19 07:47	
Ethylbenzene	<0.000568	0.101	0.0973	96	0.0958	96	70-130	2	35	mg/kg	03.23.19 07:47	
m,p-Xylenes	<0.00402	0.201	0.191	95	0.189	95	70-130	1	35	mg/kg	03.23.19 07:47	
o-Xylene	<0.00201	0.101	0.0971	96	0.0967	97	70-130	0	35	mg/kg	03.23.19 07:47	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	116		108		107		70-130	%	03.23.19 07:47
4-Bromofluorobenzene	112		104		105		70-130	%	03.23.19 07:47

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3083162 Matrix: Soil Date Prep: 03.22.19
Parent Sample Id: 617809-006 MS Sample Id: 617809-006 S MSD Sample Id: 617809-006 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	0.0757	75	0.0660	66	70-130	14	35	mg/kg	03.22.19 22:41	X
Toluene	<0.00201	0.101	0.105	104	0.0832	84	70-130	23	35	mg/kg	03.22.19 22:41	
Ethylbenzene	<0.00201	0.101	0.0927	92	0.0783	79	70-130	17	35	mg/kg	03.22.19 22:41	
m,p-Xylenes	<0.00402	0.201	0.186	93	0.161	81	70-130	14	35	mg/kg	03.22.19 22:41	
o-Xylene	<0.00201	0.101	0.0958	95	0.0833	84	70-130	14	35	mg/kg	03.22.19 22:41	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		127		70-130	%	03.22.19 22:41
4-Bromofluorobenzene	132	**	178	**	70-130	%	03.22.19 22:41

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

QC Summary 617904

LT Environmental, Inc.

JRU-29

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

Seq Number: 3083180 Matrix: Soil Date Prep: 03.22.19

Parent Sample Id: 617904-007 MS Sample Id: 617904-007 S MSD Sample Id: 617904-007 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	0.0502	50	0.0991	99	70-130	66	35	mg/kg	03.23.19 08:25	XF
Toluene	<0.00200	0.0998	0.0755	76	0.105	105	70-130	33	35	mg/kg	03.23.19 08:25	
Ethylbenzene	<0.00200	0.0998	0.0697	70	0.0883	88	70-130	24	35	mg/kg	03.23.19 08:25	
m,p-Xylenes	0.0136	0.200	0.124	55	0.174	80	70-130	34	35	mg/kg	03.23.19 08:25	X
o-Xylene	<0.00200	0.0998	0.0626	63	0.0883	88	70-130	34	35	mg/kg	03.23.19 08:25	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		108		70-130	%	03.23.19 08:25
4-Bromofluorobenzene	144	**	107		70-130	%	03.23.19 08:25

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: 617904

XENCO LABORATORIES

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

www.xenco.com Page 1 of 1

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

Work Order Comments

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

Project Name:	JRU-29	Turn Around	
Project Number:		Routine	☑
P.O. Number:	2RP-4833 2RP-2726	Rush:	
Sampler's Name:	Robert M	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	20/1.9	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)
PH06	S	03/11/19	1410	9'	1	X	X	X
PH06A		03/12/19	1100	13'		X	X	X
PH07		03/11/19	1300	1'		X	X	X
PH07A		03/14/19	0925	6'		X	X	X
PH08		03/12/19	1135	1'		X	X	X
PH08A		03/14/19	0845	13.5		X	X	X
PH09		03/11/19	1530	1'		X	X	X
PH09A		03/14/19	1010	5'		X	X	X
PH10		03/11/19	1535	1'		X	X	X
PH10A		03/11/19	1610	4'		X	X	X

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

discrete

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			3/14/19 1612	2		3.15.19 10:12AM
3			3/18/19 0946	4		
5				6		

Revised Date 051418 Rev. 2018.1

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Final 1.000

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

SHIP DATE: 15MAR19
ACTWGT: 42.00 LB
CAD: 101813706/INET4100
DIMS: 23x14x15 IN
BILL RECIPIENT

TO **HOLD FOR XENCO**

200 W INTERSTATE 20

MIDLAND TX 79701
(806) 674-0639 REF: XENCO
INV:
PO: DEPT:

565J1/46D3/23AD

J191619018701ur

FedEx Express

SATURDAY HOLD
PRIORITY OVERNIGHT
HLD
79701
TX-US **LBB**

TRK# 0201 **7747 2010 6150**

41 MAFA

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: 03/18/2019 07:45:00 AM

Work Order #: 617904

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)?	1.9
#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: 03/18/2019

Brianna Teel

Checklist reviewed by: Kalei Stout Date: 03/18/2019

Kalei Stout

Northeastern view of the release area.

Project: 012918135	XTO Energy, Inc. James Ranch Unit 29 SWD Tank Battery	LTE Advancing Opportunity
August 1, 2018	Photographic Log	

Western view of the release area.

Project: 012918135	XTO Energy, Inc. James Ranch Unit 29 SWD Tank Battery	LTE Advancing Opportunity
August 1, 2018	Photographic Log	