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

January 3, 2020

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

RE: Closure Request
PLU Ross Ranch 33-25-30 Battery
Remediation Permit Number 2RP-4508
Eddy County, New Mexico

Dear Mr. Billings:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following Closure Request report detailing site assessment, soil sampling, and excavation activities at the PLU Ross Ranch 33-25-30 Battery (Site) in Unit D, Section 33, Township 25 South, Range 30 East, in Eddy County, New Mexico (Figure 1). The purpose of the site assessment, soil sampling, and excavation activities was to address impacts to soil after a release of produced water at the Site.

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

RELEASE BACKGROUND

On November 18, 2017, a corrosion hole developed in the salt water disposal (SWD) line at the SWD riser operational area immediately adjacent to the lease road. Approximately 16 barrels (bbls) of produced water were released around the SWD riser and onto the surface of the lease road. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 on December 1, 2017, and was assigned Remediation Permit (RP) Number 2RP-4508 (Attachment 1). Based on the site assessment activities and results of the soil sampling events, XTO is requesting no further action for this release.

SITE CHARACTERIZATION

LTE characterized the Site according to Table 1, *Closure Criteria for Soils Impacted by a Release*, of 19.15.29.12 of the NMAC. Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest water well data. The nearest permitted water well with depth to water data is United States Geological Survey (USGS) well 320628103533001, located approximately 5,492 feet northeast of the Site. The water well has a depth to groundwater of 264 feet and a total depth of 288 feet. Ground surface elevation at the water well location is 3,207 feet above mean sea level (AMSL), which is approximately 7 feet higher in elevation than the Site. The closest continuously flowing water or significant watercourse to the Site is an intermittent stream located approximately 2,820 feet northwest of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is located in a low-potential karst area.

CLOSURE CRITERIA

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

- Benzene: 10 milligrams per kilogram (mg/kg);
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg;
- TPH-gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg;
- Total petroleum hydrocarbons (TPH): 2,500 mg/kg; and
- Chloride: 20,000 mg/kg.

SITE ASSESSMENT, EXCAVATION, AND DELINEATION SOIL SAMPLING ACTIVITIES

During May 2018, LTE personnel inspected the Site to evaluate the release extent. Surficial staining was observed in the release area around the SWD riser. On June 6, 2018, LTE personnel returned to the Site to oversee excavation of impacted soil as indicated by visual observations and field screening activities. To direct excavation activities, LTE screened soil for volatile aromatic hydrocarbons and chloride utilizing a calibrated photoionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. Impacted soil was excavated to a depth of 6 feet bgs around the SWD line.

Excavation of the impacted soil was conducted prior to the Compliance Agreement and prior to the implementation of the August 14, 2018, NMOCD modification to 19.15.29. Following removal of impacted soil, excavation confirmation samples were collected as discrete samples instead of

composite samples. The area of impacted soil could be visually discerned; therefore, LTE applied a judgmental sampling protocol, selecting sample locations based on visual observation to represent the floor and sidewalls of the excavation. The sampling protocol complied with Guidance on Choosing a Sampling Design for Environmental Data Collection for Use in Developing a Quality Assurance Project Plan, EPA QA/G-5S, December 2002. Soil samples SW1 through SW4 were collected from the sidewalls of the excavation from a depth 4 feet bgs. Soil sample FS1 was collected from the floor of the excavation from a depth of 6 feet bgs. The excavation extent and excavation soil sample locations are depicted on Figure 2.

The excavation measured approximately 800 square feet in area and was completed to a depth of 6 feet bgs. A total of approximately 200 cubic yards of impacted soil were removed from the excavation. The impacted soil was transported and properly disposed of at the R360 Landfill located in Hobbs, New Mexico.

During May 2019, LTE personnel returned to the Site to oversee site assessment activities to confirm the lateral and vertical extent of impacted soil. Potholes and boreholes were advanced via backhoe or hand-auger at 6 locations within and around the release area. Potholes PH01 and PH02 and boreholes BH01 through BH04 were advanced to a depth of 4 feet bgs. Delineation soil samples were collected from each pothole and borehole from depths ranging from 1 foot to 4 feet bgs. Soil from the potholes and boreholes was field screened for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach® chloride QuanTab® test strips, respectively. Field screening results and observations for the potholes and boreholes were logged on lithologic/soil sampling logs, which are included in Attachment 2. The delineation soil sample locations are depicted on Figure 3.

The excavation and delineation soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were shipped at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Xenco Laboratories (Xenco) in Midland, Texas, for analysis of BTEX following United States Environmental Protection Agency (USEPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following USEPA Method 8015M/D; and chloride following USEPA Method 300.0.

Photographic documentation was conducted during the Site visits. Photographs are included in Attachment 3.

ANALYTICAL RESULTS

Laboratory analytical results for excavation soil samples SW1 through SW4 and FS1 indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Laboratory analytical results for the delineation soil samples, collected from potholes PH01 and PH02 and boreholes BH01 through BH04, indicated that BTEX, GRO/DRO, TPH, and

chloride concentrations were compliant with the Closure Criteria. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Attachment 4.

CLOSURE REQUEST

Impacted soil was excavated from the Site to address the November 18, 2017, release of produced water at the Site. Laboratory analytical results for the excavation soil samples collected from the final excavation extent indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Delineation soil sampling was completed in and around the release area to confirm the presence or absence of additional impacted soil. Laboratory analytical results for the delineation soil samples collected from 2 potholes and 4 boreholes indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Based on the excavation and delineation soil sample analytical results, no further remediation was required.

Initial response efforts, natural attenuation, and excavation of impacted soil have mitigated impacts at this Site. XTO requests no further action for RP Number 2RP-4508. XTO backfilled the excavation with material purchased locally and recontoured the Site to match pre-existing site conditions. An updated NMOCD Form C-141 is included in Attachment 1.

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

Sincerely,

LT ENVIRONMENTAL, INC.

Aimee Cole
Project Environmental Scientist

Ashley L. Ager, P.G.
Senior Geologist

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

Attachments:

Figure 1 Site Location Map
Figure 2 Excavation Soil Sample Locations

FIGURES

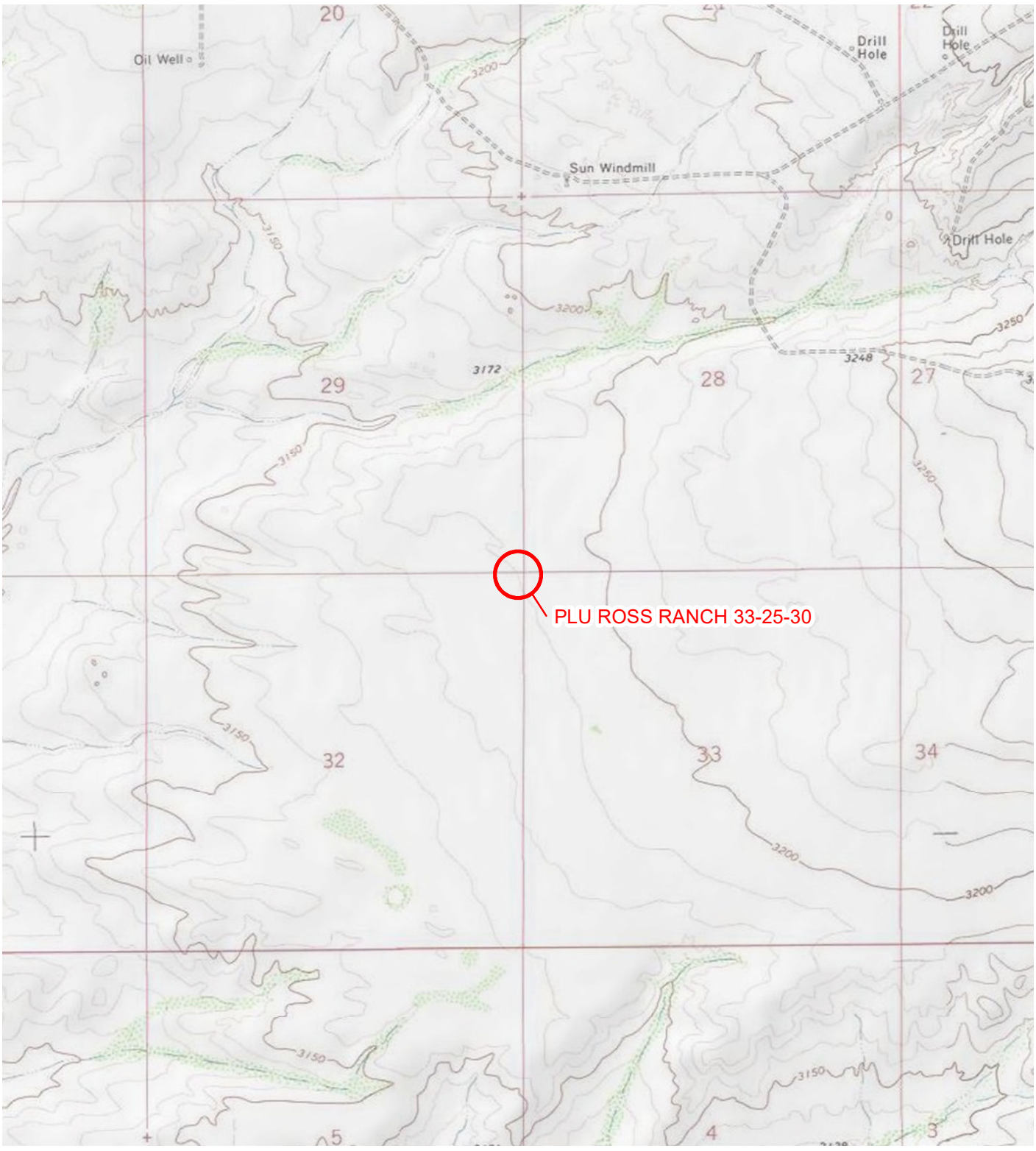


IMAGE COURTESY OF ESRI/USGS

LEGEND

SITE LOCATION

0 2,000 4,000

Feet

N

NEW MEXICO

NOTE: REMEDIATION PERMIT NUMBER 2RP-4508

FIGURE 1
SITE LOCATION MAP
PLU ROSS RANCH 33-25-30 BATTERY
UNIT D SEC 33 T25S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012917041_PLU ROSS RANCH_33-25-30 TB\2RP-4508\012917041_FIG01_SL_4508.mxd

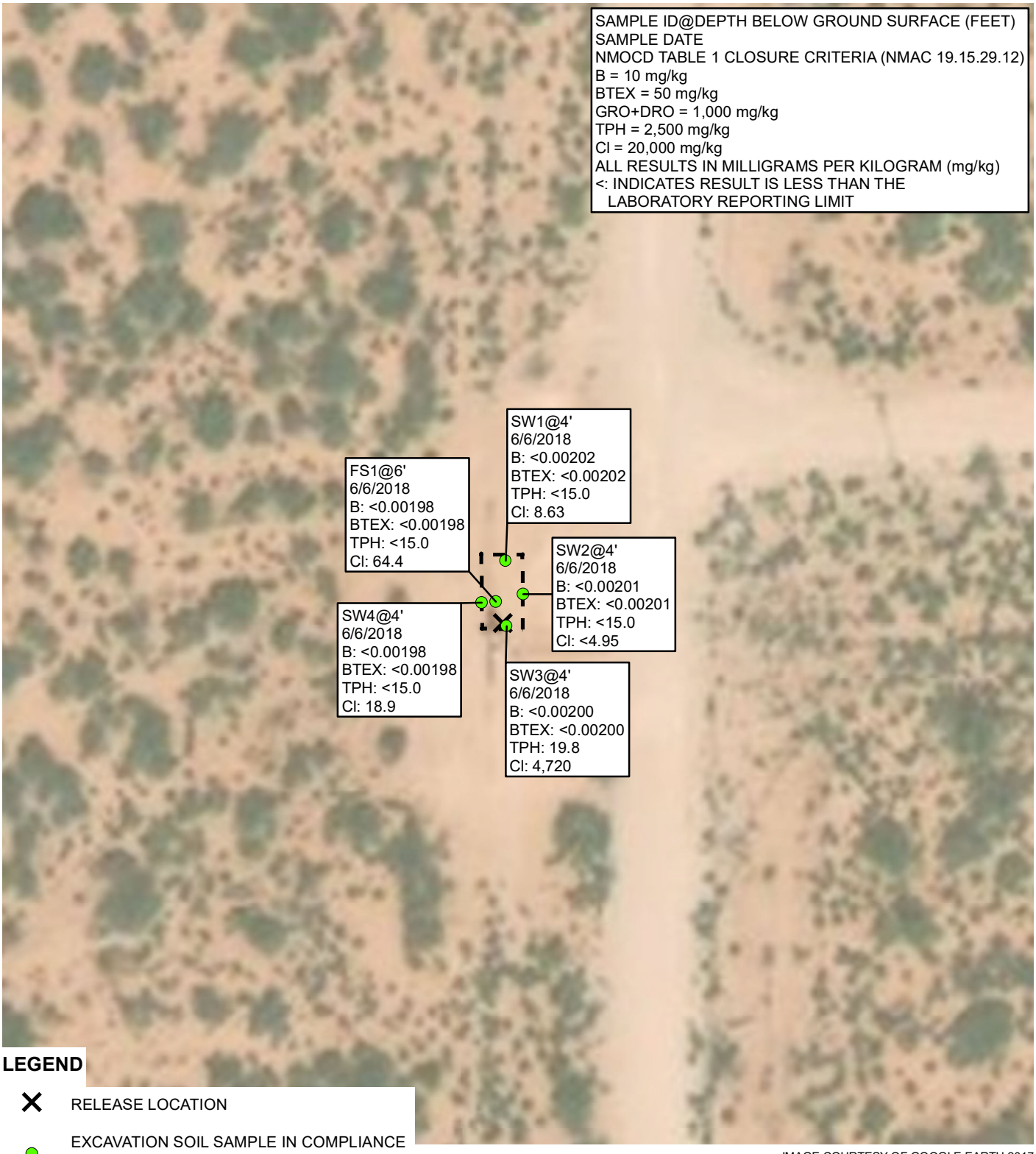
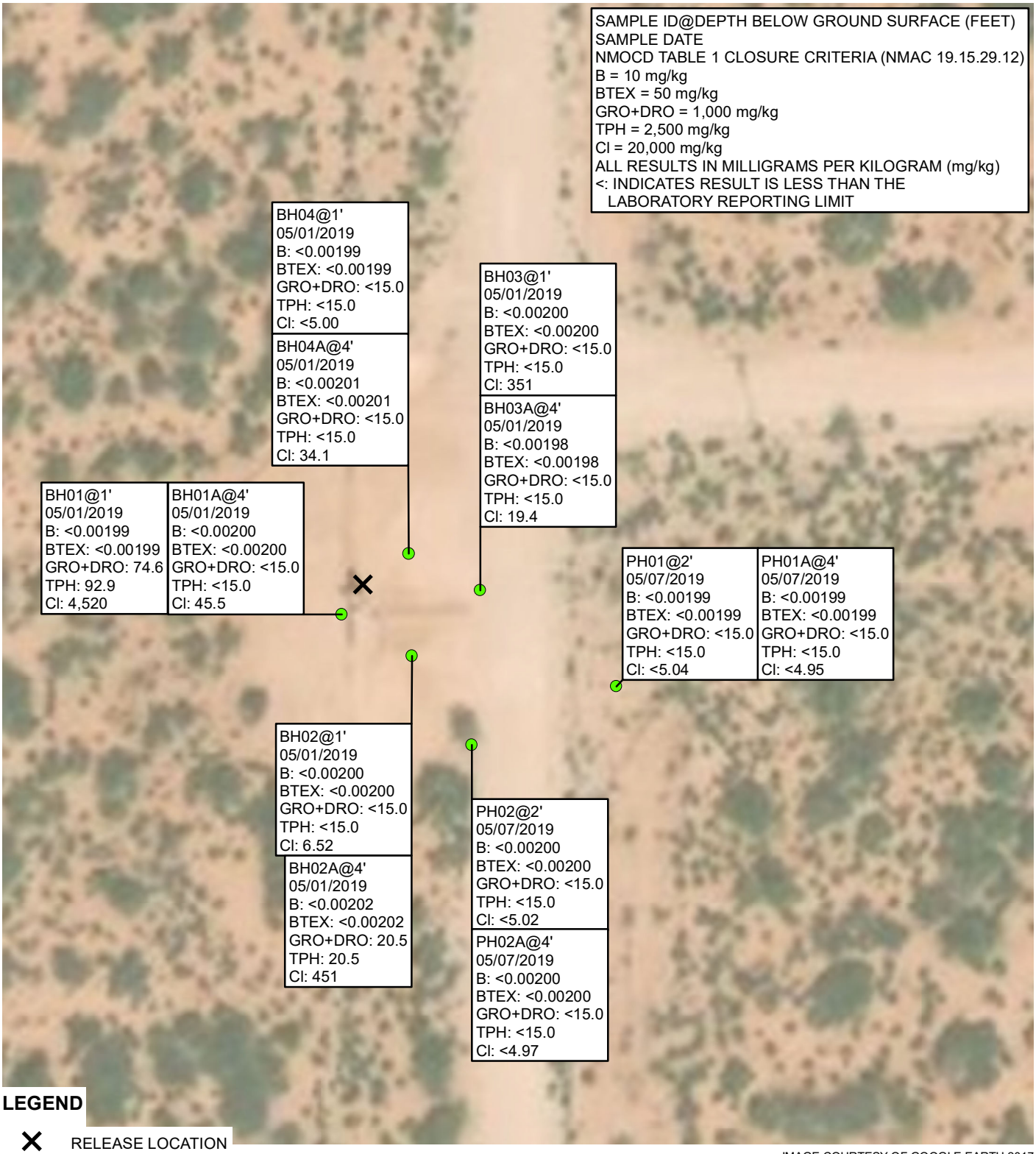


FIGURE 2
EXCAVATION SOIL SAMPLE LOCATIONS
PLU ROSS RANCH 33-25-30 BATTERY
UNIT D SEC 33 T25S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012917041_PLU ROSS RANCH_33-25-30 TB\2RP-4508\012917041_FIG04_EXCAVATION_4508.mxd



B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
GRO: GASOLINE RANGE ORGANICS
DRO: DIESEL RANGE ORGANICS
TPH: TOTAL PETROLEUM HYDROCARBONS
Cl: CHLORIDE
NMAC: NEW MEXICO ADMINISTRATIVE CODE
NMOCD: NEW MEXICO OIL CONSERVATION DIVISION
NOTE: REMEDIATION PERMIT NUMBER 2RP-4508

FIGURE 3
DELINEATION SOIL SAMPLE LOCATIONS
PLU ROSS RANCH 33-25-30 BATTERY
UNIT D SEC 33 T25S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012917041_PLU ROSS RANCH_33-25-30 TB\2RP-4508\012917041_FIG03_DELINEATION_4508.mxd

TABLES

TABLE 1
SOIL ANALYTICAL RESULTS

PLU ROSS RANCH 33-25-30 BATTERY
REMEDIATION PERMIT NUMBER 2RP-4508
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	MRO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
FS1	6	06/06/2018	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	64.4
SW1	4	06/06/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	8.63
SW2	4	06/06/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	<4.95
SW3	4	06/06/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	19.8	<15.0	19.8	19.8	4,720
SW4	4	06/06/2018	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	18.9
PH01	2	05/07/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	<5.04
PH01A	4	05/07/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	<4.95
PH02	2	05/07/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<5.02
PH02A	4	05/07/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<4.97
BH01	1	05/01/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	74.6	18.3	74.6	92.9	4,520
BH01A	4	05/01/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	45.5
BH02	1	05/01/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	6.52
BH02A	4	05/01/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	20.5	<15.0	20.5	20.5	451
BH03	1	05/01/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	351
BH03A	4	05/01/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	19.4
BH04	1	05/01/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	<5.00
BH04A	4	05/01/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	34.1
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
DRO - diesel range organics
GRO - gasoline range organics
mg/kg - milligrams per kilogram
MRO - motor oil range organics
NMAC - New Mexico Administrative Code
NMOCD - New Mexico Oil Conservation Division
NE - not established
TPH - total petroleum hydrocarbons

Bold - indicates result exceeds the applicable regulatory standard
< - indicates result is below laboratory reporting limits
Table 1 - closure criteria for soils impacted by a release per NMAC 19.15.29 August 2018

ATTACHMENT 1: INITIAL/FINAL NMOCD FORM C-141 (2RP-4508)

NM OIL CONSERVATION
ARTESIA DISTRICT
DEC 01 2017
RECEIVED

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised April 3, 2017

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

Release Notification and Corrective Action

nAB1734031542 | BPCD2000737

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: PLU Ross Ranch 33-25-30 USA Battery (API for well Poker Lake Unit CVX JV RR #007H)	Facility Type: Exploration and Production

Surface Owner: Federal	Mineral Owner: Federal	API No. 30-015-40762

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	33	25S	30E	330	North	680	West	Eddy

Latitude 32.092806° **Longitude** -103.892550° NAD83

NATURE OF RELEASE

Type of Release: Produced water	Volume of Release: 16 bbl	Volume Recovered: 0
Source of Release: Buried SWD line	Date and Hour of Occurrence: 11/18/2017 time unknown	Date and Hour of Discovery 11/18/2017, 4:00 PM
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom? N/A	
By Whom?	Date and Hour	
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.*

Hole in line due to corrosion. Lease operator located leak and isolated line.

Describe Area Affected and Cleanup Action Taken.*

Leak affected the lease road. Line will be excavated and impacted area will be remediated to NMOCD standards.

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: Kyle Littrell

Printed Name: Kyle Littrell

Title: EHS Coordinator

E-mail Address: kyle_littrell@xtoenergy.com

Date: 12/1/2017 Phone: 432-221-7331

OIL CONSERVATION DIVISION

Approved by Environmental Specialist: Crystal W

Approval Date: 12/4/17 Expiration Date: N/A

Conditions of Approval: See attached

Attached ☒ 2RP-4508

* Attach Additional Sheets If Necessary

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

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	
District RP	
Facility ID	2RP-4508
Application ID	

Release Notification

Responsible Party

Responsible Party: XTO Energy, Inc	OGRID: 5380
Contact Name: Kyle Littrell	Contact Telephone: (432)-221-7331
Contact email: Kyle_Littrell@xtoenergy.com	Incident #: 2RP-4508
Contact mailing address: 522 W. Mermod, Suite 704 Carlsbad, NM 88220	

Location of Release Source

Latitude N 32.092806 Longitude W -103.892550
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: PLU Ross 33-25-30 Ranch Battery	Site Type: Production Well Facility
Date Release Discovered: 11/18/2017	API# *(if applicable):* 30-015-40762

Unit Letter	Section	Township	Range	County
D	33	25S	30E	Eddy

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls):	Volume Recovered (bbls):
☒ Produced Water	Volume Released (bbls): 16	Volume Recovered (bbls): 0
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release
A corrosion hole developed in the SWD line. Leak affected the lease road.

Form C-141
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State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	2RP-4508
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? Less than 25 bbls was released.
If YES, was immediate notice given to the OCD? By whom? To whom? NA	

Initial Response

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

☒ The source of the release has been stopped.

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

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

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

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

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

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 1-2-2020

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

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	2RP-4508
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	2RP-4508
Application ID	

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 1-2-2020

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

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	nAB1734036542
District RP	
Facility ID	2RP-4508
Application ID	

Closure

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

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

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

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

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

☒ Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 1-2-2020

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

OCD Only

Received by: Date:

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: Bradford Billings Date: 08/06/2021

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

ATTACHMENT 2: LITHOLOGIC / SOIL SAMPLE LOGS

Submitted as BH01

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

Identifier: BH01	Date: 05/01/19
Project Name: PLU RR 33-25-30 Dog Leg	RP Number: 2RP-4508
Logged By: Robert M.	Method: Hand Auger
Lat/Long:	Field Screening:
Hole Diameter: 3"	Total Depth: 4'

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1020 dry	<124	0.2	N		0–1	1'	S	Silty sand trace Clay Brown PG
1022 dry	<124	0.1	N		1–2	2'	S	Sand trace Clay Brown Red PG
1025 dry	<124	0.1	N		2–3	3'	S	Clayey Sand Red Brown PG
1027 dry	<124	0.1	N		3–4	4'	S	Clayey Sand Red Brown PG
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

Submitted as BH02

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

Identifier: BH02	Date: 05/01/19	
Project Name: PLU RR 33-25-30 Dog Leg	RP Number: 2RP-4508	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Robert M.	Method: Hand Auger
Lat/Long:	Field Screening:	Hole Diameter: 3" / Total Depth: 4'
Comments:		

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1050 dry	<128	0.4	N		0–1	1'	S	silty sand trace clay PG Brown
1055 dry	<128	0.1	N		1–2	2'	S	Sand trace clay PG Brown red
1120 dry	200	0.1	N		2–3	3'	S	Clayey Sand PG Red Brown
1125 dry	200	0.1	N		3–4	4'	S	Clayey Sand PG Red Brown
					4–5			
					5–6			
					6–7			
					7–8			
					8–9			
					9–10			
					10–11			
					11–12			

Submitted as BH03

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

Identifier: BH03	Date: ~~02~~ 05/01/19
Project Name: PLU RR 33-25-30 Dogleg	RP Number: 2RP-4508
Logged By: Robert M	Method: Hand Auger
Hole Diameter: 3"	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
dry	380	0.4	N	1350	0–1	1'	S	Silty sand trace Clay PG Brown Red
dry	200	0.1	N	1352	1–2	2'	S	Sand trace Clay PG Brown Red
dry	<124	0.1	N	1355	2–3	3'	S	Clayey Sand PG Red Brown
dry	<124	0.1	N	1357	3–4	4'	S	Clayey Sand PG Red Brown

Submitted as BH04

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

Identifier: BH04	Date: 05/01/19
Project Name: PLU RR 33-25-30 Dog Leg	RP Number: 2RP-4508
Logged By: Robert M.	Method: Hand Auger
Hole Diameter: 3"	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
1405 dry	<124	0.3	N		0	1'	S	Silty Sand trace Clay PG Brown Red
1407 dry	<124	0.1	N		1			
1410 dry	<124	0.2	N		2	2'	S	Sand trace Clay PG Brown Red
1413 dry	<124	0.1	N		3	3'	S	Clayey Sand PG Red Brown
					4	4'	S	Clayey Sand PG Red Brown
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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

Identifier: PH01	Date: 05/07/19
Project Name: PLU AR 33-25-30 riser	RP Number: 2RP - 4506
Logged By: Robert M.	Method: Pothole
Hole Diameter: 2'	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
0904 dry	200	0.2	N		0–1	1'	S	Sand trace silt PG Brown trace root
0906 dry	<124	0.3	N		1–2	2'	S	Sand trace Clay trace root Brown red PG
0908 dry	<124	0.1	N		2–3	3'	S	Clayey sand PG Red Brown
0910 dry	<124	0.1	N		3–4	4'	S	Clayey Sand PG Red Brown
					4–5			
					5–6			
					6–7			
					7–8			
					8–9			
					9–10			
					10–11			
					11–12			

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

Identifier: PH02	Date: 05/07/19
Project Name: PLU-RR-33-25-30 R:SR	RP Number: 2RP-4508
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Robert M. / Method: Pothole
Lat/Long:	Field Screening: / Hole Diameter: 2' / Total Depth: 4'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1005 dry	200	0.2	N		0–1	1'	S	Sand trace silt trace root PG
1006 dry	208	0.4	N		1–2	2'	S	Sand trace clay trace silt trace root Brown Red PG
1008 dry	<124	0.1	N		2–3	3'	S	Clayey Sand Red Brown PG
1010 dry	2124	0.1	N		3–4	4'	S	Sandy Clay Red PG
					4–5			
					5–6			
					6–7			
					7–8			
					8–9			
					9–10			
					10–11			
					11–12			

ATTACHMENT 3: PHOTOGRAPHIC LOG

PHOTOGRAPHIC LOG

Photograph 1: West facing view of the open excavation.

Photograph 2: View of backfilled excavation area.

Photograph 3: Northeast facing view of former excavation area and road.

Photograph 4: West facing view of former excavation area and pasture.

PLU Ross Ranch 33-25-30 Battery
Eddy County, New Mexico
Photographs Taken: June 2018 - May 2019

ATTACHMENT 4: LABORATORY ANALYTICAL REPORTS

Analytical Report 588649

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU RR 33-25-30

18-JUN-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)

18-JUN-18

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

Reference: XENCO Report No(s): **588649**
PLU RR 33-25-30
Project Address: NM 2RP-4508

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) 588649. 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. 588649 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 588649

LT Environmental, Inc., Arvada, CO

PLU RR 33-25-30

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW1 @ 4'	S	06-06-18 09:30	4 ft	588649-001
SW2	S	06-06-18 09:35	4 ft	588649-002
SW3	S	06-06-18 09:40	4 ft	588649-003
SW4	S	06-06-18 09:45	4 ft	588649-004
FS1 @ 6'	S	06-06-18 09:25	6 ft	588649-005

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU RR 33-25-30

Project ID:
Work Order Number(s): *588649*

Report Date: *18-JUN-18*
Date Received: *06/08/2018*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3053429 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3053603 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3053699 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 588649

LT Environmental, Inc., Arvada, CO

Project Name: PLU RR 33-25-30

Project Id:
Contact: Adrian Baker
Project Location: NM 2RP-4508

Date Received in Lab: Fri Jun-08-18 10:09 am
Report Date: 18-JUN-18
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	588649-001		588649-002		588649-003		588649-004		588649-005	
	Field Id:	SW1 @ 4'		SW2		SW3		SW4		FS1 @ 6'	
	Depth:	4- ft		4- ft		4- ft		4- ft		6- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-06-18 09:30		Jun-06-18 09:35		Jun-06-18 09:40		Jun-06-18 09:45		Jun-06-18 09:25	
BTEX by EPA 8021B	***Extracted:***	Jun-12-18 08:00		Jun-12-18 08:00		Jun-15-18 08:00		Jun-14-18 16:00		Jun-14-18 16:00	
	Analyzed:	Jun-12-18 15:26		Jun-12-18 15:44		Jun-15-18 11:29		Jun-15-18 00:50		Jun-15-18 00:32	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00202	0.00202	<0.00201	0.00201	<0.00200	0.00200	<0.00198	0.00198	<0.00198	0.00198
Toluene		<0.00202	0.00202	<0.00201	0.00201	<0.00200	0.00200	<0.00198	0.00198	<0.00198	0.00198
Ethylbenzene		<0.00202	0.00202	<0.00201	0.00201	<0.00200	0.00200	<0.00198	0.00198	<0.00198	0.00198
m,p-Xylenes		<0.00404	0.00404	<0.00402	0.00402	<0.00399	0.00399	<0.00396	0.00396	<0.00397	0.00397
o-Xylene		<0.00202	0.00202	<0.00201	0.00201	<0.00200	0.00200	<0.00198	0.00198	<0.00198	0.00198
Total Xylenes		<0.00202	0.00202	<0.00201	0.00201	<0.00200	0.00200	<0.00198	0.00198	<0.00198	0.00198
Total BTEX		<0.00202	0.00202	<0.00201	0.00201	<0.00200	0.00200	<0.00198	0.00198	<0.00198	0.00198
Inorganic Anions by EPA 300	***Extracted:***	Jun-09-18 09:30		Jun-09-18 09:30		Jun-09-18 09:30		Jun-09-18 09:30		Jun-09-18 09:30	
	Analyzed:	Jun-11-18 11:39		Jun-11-18 11:44		Jun-11-18 11:50		Jun-11-18 11:55		Jun-11-18 12:01	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		8.63	5.00	<4.95	4.95	4720	49.7	18.9	4.96	64.4	5.00
TPH by SW8015 Mod	***Extracted:***	Jun-08-18 16:00		Jun-08-18 16:00		Jun-08-18 16:00		Jun-08-18 16:00		Jun-08-18 16:00	
	Analyzed:	Jun-10-18 00:58		Jun-10-18 01:17		Jun-10-18 01:35		Jun-10-18 01:53		Jun-10-18 02:12	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	19.8	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	<15.0	15.0
Total TPH		<15.0	15.0	<15.0	15.0	19.8	15.0	<15.0	15.0	<15.0	15.0

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

Jessica Kramer
Project Assistant

Certificate of Analytical Results 588649

LT Environmental, Inc., Arvada, CO

PLU RR 33-25-30

Sample Id:	**SW1 @ 4'**	Matrix:	Soil	Date Received:	06.08.18 10.09
Lab Sample Id:	588649-001	Date Collected:	06.06.18 09.30	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	SCM	Date Prep:	06.09.18 09.30	Basis:	Wet Weight
Seq Number:	3053082				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8.63**	5.00	mg/kg	06.11.18 11.39		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.08.18 16.00	Basis:	Wet Weight
Seq Number:	3052907				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.10.18 00.58	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.10.18 00.58	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	06.10.18 00.58	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.10.18 00.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	06.10.18 00.58	
o-Terphenyl	84-15-1	96	%	70-135	06.10.18 00.58	

Certificate of Analytical Results 588649

LT Environmental, Inc., Arvada, CO

PLU RR 33-25-30

Sample Id:	**SW1 @ 4'**	Matrix:	Soil	Date Received:	06.08.18 10.09
Lab Sample Id:	588649-001	Date Collected:	06.06.18 09.30	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	06.12.18 08.00	Basis:	Wet Weight
Seq Number:	3053429				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	06.12.18 15.26	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	06.12.18 15.26	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	06.12.18 15.26	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	06.12.18 15.26	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	06.12.18 15.26	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	06.12.18 15.26	U	1
Total BTEX		<0.00202	0.00202	mg/kg	06.12.18 15.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	93	%	70-130	06.12.18 15.26	
4-Bromofluorobenzene	460-00-4	117	%	70-130	06.12.18 15.26	

Certificate of Analytical Results 588649

LT Environmental, Inc., Arvada, CO

PLU RR 33-25-30

Sample Id:	**SW2**	Matrix:	Soil	Date Received:	06.08.18 10.09
Lab Sample Id:	588649-002	Date Collected:	06.06.18 09.35	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	SCM	Date Prep:	06.09.18 09.30	Basis:	Wet Weight
Seq Number:	3053082				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	06.11.18 11.44	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.08.18 16.00	Basis:	Wet Weight
Seq Number:	3052907				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.10.18 01.17	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.10.18 01.17	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	06.10.18 01.17	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.10.18 01.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	06.10.18 01.17	
o-Terphenyl	84-15-1	82	%	70-135	06.10.18 01.17	

Certificate of Analytical Results 588649

LT Environmental, Inc., Arvada, CO

PLU RR 33-25-30

Sample Id:	**SW2**	Matrix:	Soil	Date Received:	06.08.18 10.09
Lab Sample Id:	588649-002	Date Collected:	06.06.18 09.35	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	06.12.18 08.00	Basis:	Wet Weight
Seq Number:	3053429				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	06.12.18 15.44	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	06.12.18 15.44	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	06.12.18 15.44	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	06.12.18 15.44	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	06.12.18 15.44	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	06.12.18 15.44	U	1
Total BTEX		<0.00201	0.00201	mg/kg	06.12.18 15.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	06.12.18 15.44	
4-Bromofluorobenzene	460-00-4	96	%	70-130	06.12.18 15.44	

Certificate of Analytical Results 588649

LT Environmental, Inc., Arvada, CO

PLU RR 33-25-30

Sample Id:	**SW3**	Matrix:	Soil	Date Received:	06.08.18 10.09
Lab Sample Id:	588649-003	Date Collected:	06.06.18 09.40	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	SCM	Date Prep:	06.09.18 09.30	Basis:	Wet Weight
Seq Number:	3053082				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**4720**	49.7	mg/kg	06.11.18 11.50		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.08.18 16.00	Basis:	Wet Weight
Seq Number:	3052907				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.10.18 01.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	**19.8**	15.0	mg/kg	06.10.18 01.35		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	06.10.18 01.35	U	1
Total TPH	PHC635	**19.8**	15.0	mg/kg	06.10.18 01.35		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	06.10.18 01.35	
o-Terphenyl	84-15-1	98	%	70-135	06.10.18 01.35	

Certificate of Analytical Results 588649

LT Environmental, Inc., Arvada, CO

PLU RR 33-25-30

Sample Id:	**SW3**	Matrix:	Soil	Date Received:	06.08.18 10.09
Lab Sample Id:	588649-003	Date Collected:	06.06.18 09.40	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	06.15.18 08.00	Basis:	Wet Weight
Seq Number:	3053699				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.15.18 11.29	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.15.18 11.29	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.15.18 11.29	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	06.15.18 11.29	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.15.18 11.29	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.15.18 11.29	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.15.18 11.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	94	%	70-130	06.15.18 11.29	
4-Bromofluorobenzene	460-00-4	88	%	70-130	06.15.18 11.29	

Certificate of Analytical Results 588649

LT Environmental, Inc., Arvada, CO

PLU RR 33-25-30

Sample Id:	**SW4**	Matrix:	Soil	Date Received:	06.08.18 10.09
Lab Sample Id:	588649-004	Date Collected:	06.06.18 09.45	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	SCM	Date Prep:	06.09.18 09.30	Basis:	Wet Weight
Seq Number:	3053082				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**18.9**	4.96	mg/kg	06.11.18 11.55		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.08.18 16.00	Basis:	Wet Weight
Seq Number:	3052907				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.10.18 01.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.10.18 01.53	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	06.10.18 01.53	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.10.18 01.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	06.10.18 01.53	
o-Terphenyl	84-15-1	98	%	70-135	06.10.18 01.53	

Certificate of Analytical Results 588649

LT Environmental, Inc., Arvada, CO

PLU RR 33-25-30

Sample Id:	**SW4**	Matrix:	Soil	Date Received:	06.08.18 10.09
Lab Sample Id:	588649-004	Date Collected:	06.06.18 09.45	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	06.14.18 16.00	Basis:	Wet Weight
Seq Number:	3053603				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	06.15.18 00.50	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	06.15.18 00.50	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	06.15.18 00.50	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	06.15.18 00.50	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	06.15.18 00.50	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	06.15.18 00.50	U	1
Total BTEX		<0.00198	0.00198	mg/kg	06.15.18 00.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	117	%	70-130	06.15.18 00.50	
4-Bromofluorobenzene	460-00-4	92	%	70-130	06.15.18 00.50	

Certificate of Analytical Results 588649

LT Environmental, Inc., Arvada, CO

PLU RR 33-25-30

Sample Id:	**FS1 @ 6'**	Matrix:	Soil	Date Received:	06.08.18 10.09
Lab Sample Id:	588649-005	Date Collected:	06.06.18 09.25	Sample Depth:	6 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	SCM	Date Prep:	06.09.18 09.30	Basis:	Wet Weight
Seq Number:	3053082				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**64.4**	5.00	mg/kg	06.11.18 12.01		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.08.18 16.00	Basis:	Wet Weight
Seq Number:	3052907				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.10.18 02.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.10.18 02.12	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	06.10.18 02.12	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.10.18 02.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	06.10.18 02.12	
o-Terphenyl	84-15-1	99	%	70-135	06.10.18 02.12	

Certificate of Analytical Results 588649

LT Environmental, Inc., Arvada, CO

PLU RR 33-25-30

Sample Id:	**FS1 @ 6'**	Matrix:	Soil	Date Received:	06.08.18 10.09
Lab Sample Id:	588649-005	Date Collected:	06.06.18 09.25	Sample Depth:	6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	06.14.18 16.00	Basis:	Wet Weight
Seq Number:	3053603				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	06.15.18 00.32	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	06.15.18 00.32	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	06.15.18 00.32	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	06.15.18 00.32	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	06.15.18 00.32	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	06.15.18 00.32	U	1
Total BTEX		<0.00198	0.00198	mg/kg	06.15.18 00.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	06.15.18 00.32	
4-Bromofluorobenzene	460-00-4	99	%	70-130	06.15.18 00.32	

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 588649

LT Environmental, Inc.

PLU RR 33-25-30

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3053082 — Matrix: Solid — Date Prep: 06.09.18
MB Sample Id: 7656330-1-BLK — LCS Sample Id: 7656330-1-BKS — LCSD Sample Id: 7656330-1-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	245	98	246	98	90-110	0	20	mg/kg	06.11.18 09:24	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3053082 — Matrix: Soil — Date Prep: 06.09.18
Parent Sample Id: 588544-002 — MS Sample Id: 588544-002 S — MSD Sample Id: 588544-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	6.88	250	310	121	313	122	90-110	1	20	mg/kg	06.11.18 09:40	X

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3053082 — Matrix: Soil — Date Prep: 06.09.18
Parent Sample Id: 588647-007 — MS Sample Id: 588647-007 S — MSD Sample Id: 588647-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	78.0	247	354	112	359	114	90-110	1	20	mg/kg	06.11.18 10:56	X

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3052907 — Matrix: Solid — Date Prep: 06.08.18
MB Sample Id: 7656367-1-BLK — LCS Sample Id: 7656367-1-BKS — LCSD Sample Id: 7656367-1-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	907	91	975	98	70-135	7	20	mg/kg	06.09.18 19:27	
Diesel Range Organics (DRO)	<15.0	1000	1010	101	1080	108	70-135	7	20	mg/kg	06.09.18 19:27	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	90		130		122		70-135	%	06.09.18 19:27
o-Terphenyl	95		117		114		70-135	%	06.09.18 19:27

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 588649

LT Environmental, Inc.

PLU RR 33-25-30

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3052907 — Matrix: Soil — Date Prep: 06.08.18
Parent Sample Id: 588459-001 — MS Sample Id: 588459-001 S — MSD Sample Id: 588459-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	999	918	92	907	91	70-135	1	20	mg/kg	06.09.18 20:23	
Diesel Range Organics (DRO)	<15.0	999	1040	104	1030	103	70-135	1	20	mg/kg	06.09.18 20:23	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	120		118		70-135	%	06.09.18 20:23
o-Terphenyl	102		102		70-135	%	06.09.18 20:23

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3053429 — Matrix: Solid — Date Prep: 06.12.18
MB Sample Id: 7656567-1-BLK — LCS Sample Id: 7656567-1-BKS — LCSD Sample Id: 7656567-1-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	0.100	0.0934	93	0.0836	83	70-130	11	35	mg/kg	06.12.18 07:35	
Toluene	<0.00201	0.100	0.0973	97	0.0867	86	70-130	12	35	mg/kg	06.12.18 07:35	
Ethylbenzene	<0.00201	0.100	0.0970	97	0.0889	88	70-130	9	35	mg/kg	06.12.18 07:35	
m,p-Xylenes	<0.00402	0.201	0.199	99	0.186	93	70-130	7	35	mg/kg	06.12.18 07:35	
o-Xylene	<0.00201	0.100	0.0923	92	0.0920	91	70-130	0	35	mg/kg	06.12.18 07:35	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		100		98		70-130	%	06.12.18 07:35
4-Bromofluorobenzene	113		97		98		70-130	%	06.12.18 07:35

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3053603 — Matrix: Solid — Date Prep: 06.14.18
MB Sample Id: 7656667-1-BLK — LCS Sample Id: 7656667-1-BKS — LCSD Sample Id: 7656667-1-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	0.0941	94	0.0871	87	70-130	8	35	mg/kg	06.14.18 17:19	
Toluene	<0.00200	0.100	0.101	101	0.0930	93	70-130	8	35	mg/kg	06.14.18 17:19	
Ethylbenzene	<0.00200	0.100	0.0993	99	0.0925	93	70-130	7	35	mg/kg	06.14.18 17:19	
m,p-Xylenes	<0.00401	0.200	0.208	104	0.194	97	70-130	7	35	mg/kg	06.14.18 17:19	
o-Xylene	<0.00200	0.100	0.106	106	0.0910	91	70-130	15	35	mg/kg	06.14.18 17:19	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		92		99		70-130	%	06.14.18 17:19
4-Bromofluorobenzene	89		100		122		70-130	%	06.14.18 17:19

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 588649

LT Environmental, Inc.

PLU RR 33-25-30

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3053699 — Matrix: Solid — Date Prep: 06.15.18
MB Sample Id: 7656796-1-BLK — LCS Sample Id: 7656796-1-BKS — LCSD Sample Id: 7656796-1-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	0.0915	91	0.0882	88	70-130	4	35	mg/kg	06.15.18 07:31	
Toluene	<0.00201	0.101	0.0993	98	0.0953	95	70-130	4	35	mg/kg	06.15.18 07:31	
Ethylbenzene	<0.00201	0.101	0.0984	97	0.0935	94	70-130	5	35	mg/kg	06.15.18 07:31	
m,p-Xylenes	<0.00402	0.201	0.206	102	0.196	98	70-130	5	35	mg/kg	06.15.18 07:31	
o-Xylene	<0.00201	0.101	0.0946	94	0.0924	92	70-130	2	35	mg/kg	06.15.18 07:31	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		93		100		70-130	%	06.15.18 07:31
4-Bromofluorobenzene	106		101		98		70-130	%	06.15.18 07:31

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3053429 — Matrix: Soil — Date Prep: 06.12.18
Parent Sample Id: 588647-006 — MS Sample Id: 588647-006 S — MSD Sample Id: 588647-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0881	88	0.0915	91	70-130	4	35	mg/kg	06.12.18 08:12	
Toluene	<0.00200	0.100	0.0942	94	0.0952	94	70-130	1	35	mg/kg	06.12.18 08:12	
Ethylbenzene	<0.00200	0.100	0.0880	88	0.0892	88	70-130	1	35	mg/kg	06.12.18 08:12	
m,p-Xylenes	<0.00401	0.200	0.192	96	0.194	97	70-130	1	35	mg/kg	06.12.18 08:12	
o-Xylene	0.0107	0.100	0.0957	85	0.0921	81	70-130	4	35	mg/kg	06.12.18 08:12	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		100		70-130	%	06.12.18 08:12
4-Bromofluorobenzene	96		101		70-130	%	06.12.18 08:12

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3053603 — Matrix: Soil — Date Prep: 06.14.18
Parent Sample Id: 588822-002 — MS Sample Id: 588822-002 S — MSD Sample Id: 588822-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.0578	58	0.0661	65	70-130	13	35	mg/kg	06.14.18 17:55	X
Toluene	<0.00201	0.100	0.0592	59	0.0663	66	70-130	11	35	mg/kg	06.14.18 17:55	X
Ethylbenzene	<0.00201	0.100	0.0519	52	0.0592	59	70-130	13	35	mg/kg	06.14.18 17:55	X
m,p-Xylenes	<0.00402	0.201	0.107	53	0.120	60	70-130	11	35	mg/kg	06.14.18 17:55	X
o-Xylene	<0.00201	0.100	0.0520	52	0.0572	57	70-130	10	35	mg/kg	06.14.18 17:55	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		97		70-130	%	06.14.18 17:55
4-Bromofluorobenzene	106		123		70-130	%	06.14.18 17:55

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 588649

LT Environmental, Inc.

PLU RR 33-25-30

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

Seq Number: 3053699 Matrix: Soil Date Prep: 06.15.18

Parent Sample Id: 588766-001 MS Sample Id: 588766-001 S MSD Sample Id: 588766-001 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	0.0356	36	0.0325	33	70-130	9	35	mg/kg	06.15.18 08:07	X
Toluene	<0.00200	0.0998	0.0393	39	0.0342	34	70-130	14	35	mg/kg	06.15.18 08:07	X
Ethylbenzene	<0.00200	0.0998	0.0365	37	0.0349	35	70-130	4	35	mg/kg	06.15.18 08:07	X
m,p-Xylenes	<0.00399	0.200	0.0760	38	0.0722	36	70-130	5	35	mg/kg	06.15.18 08:07	X
o-Xylene	<0.00200	0.0998	0.0351	35	0.0327	33	70-130	7	35	mg/kg	06.15.18 08:07	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		96		70-130	%	06.15.18 08:07
4-Bromofluorobenzene	102		103		70-130	%	06.15.18 08:07

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 1

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 # 588049

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: Lynda Lanbach

Project Information

Project Name/Number: PLURR 23-25-30
Project Location: NM 2RP-4508
Invoice To: XTO Energy - Kyle Littrell
PO Number:

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	Analytical Information: BTEX 8021 (only BTEX)	TPH (MRO GRO, DRO) 8015	chloride (300.0)	Field Comments
1	SW1 @ 4'	4'	06/06/18	9:30	S	1								X	X	X	X	
2	SW2	↓	↓	9:35	S	1								X	X	X	X	
3	SW3			9:40	S	1								X	X	X	X	
4	SW4			9:45	S	1								X	X	X	X	
5	FS1 @ 6'	6"	↓	9:25	S	1								X	X	X	X	
6																		
7																		
8																		
9																		
10																		

Turnaround Time (Business days)

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

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

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level 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 #

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	Lynda Lanbach	06/06/18 17:40		Timothy R. Edwards		
2						
3		6/7/18 1930			6/7 15:30	10:09 6/8/18
4						
5						

Custody Seal # | Preserved where applicable | On Ice: X | Cooler Temp.: 4.2 | Thermo. Corr. Factor: 0.0

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

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 06/08/2018 10:09:00 AM

Work Order #: 588649

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

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	4.2
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**N/A**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 06/08/2018
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 06/08/2018
Jessica Kramer

Analytical Report 623709

for

LT Environmental, Inc.

Project Manager: Ashley Ager

PLU RR 33-25-30

13-MAY-19

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

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

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)

13-MAY-19

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

Reference: XENCO Report No(s): **623709**
PLU RR 33-25-30
Project Address: Delaware Basin

Ashley Ager:

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) 623709. 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. 623709 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 623709

LT Environmental, Inc., Arvada, CO

PLU RR 33-25-30

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH01	S	05-07-19 09:06	2 ft	623709-001
PH01A	S	05-07-19 09:10	2 ft	623709-002
PH02	S	05-07-19 10:06	2 ft	623709-003
PH02A	S	05-07-19 10:10	2 ft	623709-004

Version: 1.%

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU RR 33-25-30

Project ID:
Work Order Number(s): *623709*

Report Date: *13-MAY-19*
Date Received: *05/09/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3088597 BTEX by EPA 8021B

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

Certificate of Analysis Summary 623709

LT Environmental, Inc., Arvada, CO

Project Name: PLU RR 33-25-30

Project Id:
Contact: Ashley Ager
Project Location: Delaware Basin

Date Received in Lab: Thu May-09-19 04:30 pm
Report Date: 13-MAY-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	623709-001		623709-002		623709-003		623709-004					
	Field Id:	PH01		PH01A		PH02		PH02A					
	Depth:	2- ft		2- ft		2- ft		2- ft					
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	May-07-19 09:06		May-07-19 09:10		May-07-19 10:06		May-07-19 10:10					
BTEX by EPA 8021B	***Extracted:***	May-09-19 16:30		May-09-19 16:30		May-09-19 16:30		May-09-19 16:30					
	Analyzed:	May-09-19 23:09		May-09-19 23:28		May-09-19 23:47		May-10-19 00:06					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200				
Toluene		<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200				
Ethylbenzene		<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200				
m,p-Xylenes		<0.00398	0.00398	<0.00398	0.00398	<0.00399	0.00399	<0.00401	0.00401				
o-Xylene		<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200				
Total Xylenes		<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200				
Total BTEX		<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200				
Chloride by EPA 300	***Extracted:***	May-10-19 12:00		May-10-19 12:00		May-10-19 12:00		May-10-19 12:00					
	Analyzed:	May-10-19 17:50		May-10-19 18:06		May-10-19 18:11		May-10-19 18:16					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		<5.04	5.04	<4.95	4.95	<5.02	5.02	<4.97	4.97				
TPH by SW8015 Mod	***Extracted:***	May-09-19 17:00		May-09-19 17:00		May-09-19 17:00		May-09-19 17:00					
	Analyzed:	May-10-19 00:06		May-10-19 00:26		May-10-19 00:46		May-10-19 01:06					
	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				
Motor Oil Range Hydrocarbons (MRO)		<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				
Total GRO-DRO		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0				

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

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analytical Results 623709

LT Environmental, Inc., Arvada, CO

PLU RR 33-25-30

Sample Id:	**PH01**	Matrix:	Soil	Date Received:	05.09.19 16.30
Lab Sample Id:	623709-001	Date Collected:	05.07.19 09.06	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	05.10.19 12.00	Basis:	Wet Weight
Seq Number:	3088730				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.04	5.04	mg/kg	05.10.19 17.50	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.09.19 17.00	Basis:	Wet Weight
Seq Number:	3088608				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.10.19 00.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.10.19 00.06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.10.19 00.06	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.10.19 00.06	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.10.19 00.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	05.10.19 00.06	
o-Terphenyl	84-15-1	96	%	70-135	05.10.19 00.06	

Certificate of Analytical Results 623709

LT Environmental, Inc., Arvada, CO

PLU RR 33-25-30

Sample Id:	**PH01**	Matrix:	Soil	Date Received:	05.09.19 16.30
Lab Sample Id:	623709-001	Date Collected:	05.07.19 09.06	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	SCM	Date Prep:	05.09.19 16.30	Basis:	Wet Weight
Seq Number:	3088597				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	05.09.19 23.09	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	05.09.19 23.09	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	05.09.19 23.09	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	05.09.19 23.09	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	05.09.19 23.09	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	05.09.19 23.09	U	1
Total BTEX		<0.00199	0.00199	mg/kg	05.09.19 23.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	88	%	70-130	05.09.19 23.09	
1,4-Difluorobenzene	540-36-3	98	%	70-130	05.09.19 23.09	

Certificate of Analytical Results 623709

LT Environmental, Inc., Arvada, CO

PLU RR 33-25-30

Sample Id:	**PH01A**	Matrix:	Soil	Date Received:	05.09.19 16.30
Lab Sample Id:	623709-002	Date Collected:	05.07.19 09.10	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	05.10.19 12.00	Basis:	Wet Weight
Seq Number:	3088730				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	05.10.19 18.06	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.09.19 17.00	Basis:	Wet Weight
Seq Number:	3088608				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.10.19 00.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.10.19 00.26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.10.19 00.26	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.10.19 00.26	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.10.19 00.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	05.10.19 00.26	
o-Terphenyl	84-15-1	96	%	70-135	05.10.19 00.26	

Certificate of Analytical Results 623709

LT Environmental, Inc., Arvada, CO

PLU RR 33-25-30

Sample Id:	**PH01A**	Matrix:	Soil	Date Received:	05.09.19 16.30
Lab Sample Id:	623709-002	Date Collected:	05.07.19 09.10	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	SCM	Date Prep:	05.09.19 16.30	Basis:	Wet Weight
Seq Number:	3088597				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	05.09.19 23.28	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	05.09.19 23.28	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	05.09.19 23.28	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	05.09.19 23.28	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	05.09.19 23.28	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	05.09.19 23.28	U	1
Total BTEX		<0.00199	0.00199	mg/kg	05.09.19 23.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	05.09.19 23.28	
4-Bromofluorobenzene	460-00-4	80	%	70-130	05.09.19 23.28	

Certificate of Analytical Results 623709

LT Environmental, Inc., Arvada, CO

PLU RR 33-25-30

Sample Id:	**PH02**	Matrix:	Soil	Date Received:	05.09.19 16.30
Lab Sample Id:	623709-003	Date Collected:	05.07.19 10.06	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	05.10.19 12.00	Basis:	Wet Weight
Seq Number:	3088730				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.02	5.02	mg/kg	05.10.19 18.11	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.09.19 17.00	Basis:	Wet Weight
Seq Number:	3088608				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.10.19 00.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.10.19 00.46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.10.19 00.46	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.10.19 00.46	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.10.19 00.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	05.10.19 00.46	
o-Terphenyl	84-15-1	98	%	70-135	05.10.19 00.46	

Certificate of Analytical Results 623709

LT Environmental, Inc., Arvada, CO

PLU RR 33-25-30

Sample Id:	**PH02**	Matrix:	Soil	Date Received:	05.09.19 16.30
Lab Sample Id:	623709-003	Date Collected:	05.07.19 10.06	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	SCM	Date Prep:	05.09.19 16.30	Basis:	Wet Weight
Seq Number:	3088597				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.09.19 23.47	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.09.19 23.47	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.09.19 23.47	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	05.09.19 23.47	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.09.19 23.47	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.09.19 23.47	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.09.19 23.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	89	%	70-130	05.09.19 23.47	
4-Bromofluorobenzene	460-00-4	70	%	70-130	05.09.19 23.47	

Certificate of Analytical Results 623709

LT Environmental, Inc., Arvada, CO

PLU RR 33-25-30

Sample Id:	**PH02A**	Matrix:	Soil	Date Received:	05.09.19 16.30
Lab Sample Id:	623709-004	Date Collected:	05.07.19 10.10	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	05.10.19 12.00	Basis:	Wet Weight
Seq Number:	3088730				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.97	4.97	mg/kg	05.10.19 18.16	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.09.19 17.00	Basis:	Wet Weight
Seq Number:	3088608				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.10.19 01.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.10.19 01.06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.10.19 01.06	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.10.19 01.06	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.10.19 01.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	05.10.19 01.06	
o-Terphenyl	84-15-1	103	%	70-135	05.10.19 01.06	

Certificate of Analytical Results 623709

LT Environmental, Inc., Arvada, CO

PLU RR 33-25-30

Sample Id:	**PH02A**	Matrix:	Soil	Date Received:	05.09.19 16.30
Lab Sample Id:	623709-004	Date Collected:	05.07.19 10.10	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	SCM	Date Prep:	05.09.19 16.30	Basis:	Wet Weight
Seq Number:	3088597				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.10.19 00.06	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.10.19 00.06	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.10.19 00.06	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	05.10.19 00.06	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.10.19 00.06	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.10.19 00.06	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.10.19 00.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	86	%	70-130	05.10.19 00.06	
1,4-Difluorobenzene	540-36-3	100	%	70-130	05.10.19 00.06	

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 623709

LT Environmental, Inc.

PLU RR 33-25-30

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3088730 — Matrix: Solid — Date Prep: 05.10.19
MB Sample Id: 7677645-1-BLK — LCS Sample Id: 7677645-1-BKS — LCSD Sample Id: 7677645-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	251	100	251	100	90-110	0	20	mg/kg	05.10.19 17:40	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3088730 — Matrix: Soil — Date Prep: 05.10.19
Parent Sample Id: 623709-001 — MS Sample Id: 623709-001 S — MSD Sample Id: 623709-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.04	252	257	102	257	102	90-110	0	20	mg/kg	05.10.19 17:55	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3088730 — Matrix: Soil — Date Prep: 05.10.19
Parent Sample Id: 623712-001 — MS Sample Id: 623712-001 S — MSD Sample Id: 623712-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	136	249	379	98	381	98	90-110	1	20	mg/kg	05.10.19 19:07	

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3088608 — Matrix: Solid — Date Prep: 05.09.19
MB Sample Id: 7677599-1-BLK — LCS Sample Id: 7677599-1-BKS — LCSD Sample Id: 7677599-1-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	1010	101	1030	103	70-135	2	20	mg/kg	05.09.19 22:25	
Diesel Range Organics (DRO)	<8.13	1000	1030	103	1040	104	70-135	1	20	mg/kg	05.09.19 22:25	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	95		123		129		70-135	%	05.09.19 22:25
o-Terphenyl	97		116		121		70-135	%	05.09.19 22:25

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

QC Summary 623709

LT Environmental, Inc.

PLU RR 33-25-30

Analytical Method: TPH by SW8015 Mod | Prep Method: TX1005P
Seq Number: 3088608 | Matrix: Soil | Date Prep: 05.09.19
Parent Sample Id: 623710-002 | MS Sample Id: 623710-002 S | MSD Sample Id: 623710-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	10.1	1000	1010	100	996	99	70-135	1	20	mg/kg	05.09.19 23:26	
Diesel Range Organics (DRO)	10.1	1000	1000	99	1000	99	70-135	0	20	mg/kg	05.09.19 23:26	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	127		123		70-135	%	05.09.19 23:26
o-Terphenyl	126		118		70-135	%	05.09.19 23:26

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3088597 | Matrix: Solid | Date Prep: 05.09.19
MB Sample Id: 7677588-1-BLK | LCS Sample Id: 7677588-1-BKS | LCSD Sample Id: 7677588-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000384	0.0998	0.111	111	0.113	113	70-130	2	35	mg/kg	05.09.19 21:17	
Toluene	<0.000455	0.0998	0.103	103	0.104	104	70-130	1	35	mg/kg	05.09.19 21:17	
Ethylbenzene	<0.000564	0.0998	0.109	109	0.109	109	70-130	0	35	mg/kg	05.09.19 21:17	
m,p-Xylenes	<0.00101	0.200	0.226	113	0.227	114	70-130	0	35	mg/kg	05.09.19 21:17	
o-Xylene	<0.000344	0.0998	0.110	110	0.112	112	70-130	2	35	mg/kg	05.09.19 21:17	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		100		104		70-130	%	05.09.19 21:17
4-Bromofluorobenzene	74		80		87		70-130	%	05.09.19 21:17

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3088597 | Matrix: Soil | Date Prep: 05.09.19
Parent Sample Id: 623709-001 | MS Sample Id: 623709-001 S | MSD Sample Id: 623709-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	0.000538	0.100	0.114	113	0.111	109	70-130	3	35	mg/kg	05.09.19 21:55	
Toluene	0.000458	0.100	0.104	104	0.101	100	70-130	3	35	mg/kg	05.09.19 21:55	
Ethylbenzene	<0.000567	0.100	0.109	109	0.106	105	70-130	3	35	mg/kg	05.09.19 21:55	
m,p-Xylenes	<0.00102	0.201	0.227	113	0.221	110	70-130	3	35	mg/kg	05.09.19 21:55	
o-Xylene	<0.000346	0.100	0.111	111	0.108	107	70-130	3	35	mg/kg	05.09.19 21:55	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		103		70-130	%	05.09.19 21:55
4-Bromofluorobenzene	88		86		70-130	%	05.09.19 21:55

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

Final 1.000

Chain of Custody

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

Work Order No: 623709

Page 1 of

Project Manager:	Ashley Ager	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:	aager@ltenv.com rmcafee@ltenv.com

Work Order Comments

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

Project Name:	RLV RR 33-25-30	Turn Around	
Project Number:		Routine ☐	
P.O. Number:	2RP-4508	Rush: 24 hr	
Sampler's Name:	Robert McAfee	Due Date: 05/09/19	

SAMPLE RECEIPT			
Temperature (°C):	0.4/0.3	Temp Blank: Yes (No)	Wet Ice: (Yes) No
Received Intact:	(Yes) No	Thermometer ID	RB
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.1
Sample Custody Seals:	Yes No (N/A)	Total Containers:	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
PH01	S	05/07/19	0906	2'	1	X	X	X
PH01A			0910	4'	1	X	X	X
PH02			1006	2'		X	X	X
PH02A			1010	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
Robert McAfee		05/07/19 17:30	2		
			4		
			6		

Revised Date 051418 Rev. 2018.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 05/09/2019 04:30:00 PM

Work Order #: 623709

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

Temperature Measuring device used : R8

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Katie Lowe Date: 05/09/2019

Checklist reviewed by: Jessica Kramer Date: 05/10/2019

Jessica Kramer

Analytical Report 623245

for

LT Environmental, Inc.

Project Manager: Ashley Ager

PLU RR 33-25-30 Dog Leg

07-MAY-19

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

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

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)

07-MAY-19

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

Reference: XENCO Report No(s): **623245**
PLU RR 33-25-30 Dog Leg
Project Address: Delaware Basin

Ashley Ager:

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) 623245. 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. 623245 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 623245

LT Environmental, Inc., Arvada, CO

PLU RR 33-25-30 Dog Leg

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH01	S	05-01-19 10:20	1 ft	623245-001
BH01A	S	05-01-19 10:27	4 ft	623245-002
BH02	S	05-01-19 10:50	1 ft	623245-003
BH02A	S	05-01-19 11:25	4 ft	623245-004
BH03	S	05-01-19 13:50	1 ft	623245-005
BH03A	S	05-01-19 13:58	4 ft	623245-006
BH04	S	05-01-19 14:05	1 ft	623245-007
BH04A	S	05-01-19 14:13	4 ft	623245-008

Version: 1.%

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU RR 33-25-30 Dog Leg

Project ID:
Work Order Number(s): *623245*

Report Date: *07-MAY-19*
Date Received: *05/06/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3088143 BTEX by EPA 8021B
Surrogate 4-Bromofluorobenzene recovered below QC limits. Matrix interferences is suspected.
Samples affected are: 623245-004.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 623245

LT Environmental, Inc., Arvada, CO

Project Name: PLU RR 33-25-30 Dog Leg

Project Id:
Contact: Ashley Ager
Project Location: Delaware Basin

Date Received in Lab: Mon May-06-19 07:45 am
Report Date: 07-MAY-19
Project Manager: Jessica Kramer

Analysis Requested		623245-001		623245-002		623245-003		623245-004		623245-005		623245-006	
	Field Id:	BH01		BH01A		BH02		BH02A		BH03		BH03A	
	Depth:	1- ft		4- ft		1- ft		4- ft		1- ft		4- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	May-01-19 10:20		May-01-19 10:27		May-01-19 10:50		May-01-19 11:25		May-01-19 13:50		May-01-19 13:58	
BTEX by EPA 8021B	*Extracted:*	May-06-19 13:00		May-06-19 13:00		May-06-19 13:00		May-06-19 13:00		May-06-19 13:00		May-06-19 13:00	
	Analyzed:	May-06-19 18:52		May-06-19 19:12		May-06-19 19:32		May-06-19 19:51		May-06-19 20:10		May-06-19 20:30	
	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	<0.00200	0.00200	<0.00202	0.00202	<0.00200	0.00200	<0.00198	0.00198
Toluene		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00200	0.00200	<0.00198	0.00198
Ethylbenzene		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00200	0.00200	<0.00198	0.00198
m,p-Xylenes		<0.00398	0.00398	<0.00399	0.00399	<0.00400	0.00400	<0.00403	0.00403	<0.00401	0.00401	<0.00397	0.00397
o-Xylene		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00200	0.00200	<0.00198	0.00198
Total Xylenes		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00200	0.00200	<0.00198	0.00198
Total BTEX		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00200	0.00200	<0.00198	0.00198
Chloride by EPA 300	*Extracted:*	May-06-19 14:40		May-06-19 14:40		May-06-19 14:40		May-06-19 14:40		May-06-19 14:40		May-06-19 14:40	
	Analyzed:	May-06-19 16:32		May-06-19 16:15		May-06-19 16:37		May-06-19 16:43		May-06-19 16:48		May-06-19 17:04	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		4520	25.0	45.5	5.00	6.52	5.00	451	5.00	351	5.00	19.4	5.00
TPH by SW8015 Mod	*Extracted:*	May-06-19 13:00		May-06-19 13:00		May-06-19 13:00		May-06-19 13:00		May-06-19 13:00		May-06-19 13:00	
	Analyzed:	May-06-19 17:20		May-06-19 17:41		May-06-19 18:41		May-06-19 19:01		May-06-19 19:21		May-06-19 19:41	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		74.6	15.0	<15.0	15.0	<15.0	15.0	20.5	15.0	<15.0	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		18.3	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		92.9	15.0	<15.0	15.0	<15.0	15.0	20.5	15.0	<15.0	15.0	<15.0	15.0
Total GRO-DRO		74.6	15.0	<15.0	15.0	<15.0	15.0	20.5	15.0	<15.0	15.0	<15.0	15.0

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Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 623245

LT Environmental, Inc., Arvada, CO

Project Name: PLU RR 33-25-30 Dog Leg

Project Id:
Contact: Ashley Ager
Project Location: Delaware Basin

Date Received in Lab: Mon May-06-19 07:45 am
Report Date: 07-MAY-19
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	623245-007		623245-008					
	Field Id:	BH04		BH04A					
	Depth:	1- ft		4- ft					
	Matrix:	SOIL		SOIL					
	Sampled:	May-01-19 14:05		May-01-19 14:13					
BTEX by EPA 8021B	***Extracted:***	May-06-19 13:00		May-06-19 13:00					
	Analyzed:	May-06-19 20:49		May-06-19 21:08					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00199	0.00199	<0.00201	0.00201				
Toluene		<0.00199	0.00199	<0.00201	0.00201				
Ethylbenzene		<0.00199	0.00199	<0.00201	0.00201				
m,p-Xylenes		<0.00398	0.00398	<0.00402	0.00402				
o-Xylene		<0.00199	0.00199	<0.00201	0.00201				
Total Xylenes		<0.00199	0.00199	<0.00201	0.00201				
Total BTEX		<0.00199	0.00199	<0.00201	0.00201				
Chloride by EPA 300	***Extracted:***	May-06-19 14:40		May-06-19 14:40					
	Analyzed:	May-06-19 17:10		May-06-19 17:32					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		<5.00	5.00	34.1	5.00				
TPH by SW8015 Mod	***Extracted:***	May-06-19 13:00		May-06-19 13:00					
	Analyzed:	May-06-19 20:01		May-06-19 20:21					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0				
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0				
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0				
Total TPH		<15.0	15.0	<15.0	15.0				
Total GRO-DRO		<15.0	15.0	<15.0	15.0				

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Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analytical Results 623245

LT Environmental, Inc., Arvada, CO

PLU RR 33-25-30 Dog Leg

Sample Id:	**BH01**	Matrix:	Soil	Date Received:	05.06.19 07.45
Lab Sample Id:	623245-001	Date Collected:	05.01.19 10.20	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.06.19 14.40	Basis:	Wet Weight
Seq Number:	3088111				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**4520**	25.0	mg/kg	05.06.19 16.32		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.06.19 13.00	Basis:	Wet Weight
Seq Number:	3088199				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.06.19 17.20	U	1
Diesel Range Organics (DRO)	C10C28DRO	**74.6**	15.0	mg/kg	05.06.19 17.20		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**18.3**	15.0	mg/kg	05.06.19 17.20		1
Total TPH	PHC635	**92.9**	15.0	mg/kg	05.06.19 17.20		1
Total GRO-DRO	PHC628	**74.6**	15.0	mg/kg	05.06.19 17.20		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	05.06.19 17.20	
o-Terphenyl	84-15-1	111	%	70-135	05.06.19 17.20	

Certificate of Analytical Results 623245

LT Environmental, Inc., Arvada, CO

PLU RR 33-25-30 Dog Leg

Sample Id:	**BH01**	Matrix:	Soil	Date Received:	05.06.19 07.45
Lab Sample Id:	623245-001	Date Collected:	05.01.19 10.20	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.06.19 13.00	Basis:	Wet Weight
Seq Number:	3088143				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	05.06.19 18.52	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	05.06.19 18.52	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	05.06.19 18.52	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	05.06.19 18.52	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	05.06.19 18.52	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	05.06.19 18.52	U	1
Total BTEX		<0.00199	0.00199	mg/kg	05.06.19 18.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	70-130	05.06.19 18.52	
4-Bromofluorobenzene	460-00-4	89	%	70-130	05.06.19 18.52	

Certificate of Analytical Results 623245

LT Environmental, Inc., Arvada, CO

PLU RR 33-25-30 Dog Leg

Sample Id:	**BH01A**	Matrix:	Soil	Date Received:	05.06.19 07.45
Lab Sample Id:	623245-002	Date Collected:	05.01.19 10.27	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.06.19 14.40	Basis:	Wet Weight
Seq Number:	3088111				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**45.5**	5.00	mg/kg	05.06.19 16.15		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.06.19 13.00	Basis:	Wet Weight
Seq Number:	3088199				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.06.19 17.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.06.19 17.41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.06.19 17.41	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.06.19 17.41	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.06.19 17.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	05.06.19 17.41	
o-Terphenyl	84-15-1	108	%	70-135	05.06.19 17.41	

Certificate of Analytical Results 623245

LT Environmental, Inc., Arvada, CO

PLU RR 33-25-30 Dog Leg

Sample Id:	**BH01A**	Matrix:	Soil	Date Received:	05.06.19 07.45
Lab Sample Id:	623245-002	Date Collected:	05.01.19 10.27	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.06.19 13.00	Basis:	Wet Weight
Seq Number:	3088143				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.06.19 19.12	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.06.19 19.12	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.06.19 19.12	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	05.06.19 19.12	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.06.19 19.12	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.06.19 19.12	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.06.19 19.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	05.06.19 19.12	
4-Bromofluorobenzene	460-00-4	81	%	70-130	05.06.19 19.12	

Certificate of Analytical Results 623245

LT Environmental, Inc., Arvada, CO

PLU RR 33-25-30 Dog Leg

Sample Id:	**BH02**	Matrix:	Soil	Date Received:	05.06.19 07.45
Lab Sample Id:	623245-003	Date Collected:	05.01.19 10.50	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.06.19 14.40	Basis:	Wet Weight
Seq Number:	3088111				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**6.52**	5.00	mg/kg	05.06.19 16.37		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.06.19 13.00	Basis:	Wet Weight
Seq Number:	3088199				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.06.19 18.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.06.19 18.41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.06.19 18.41	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.06.19 18.41	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.06.19 18.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	05.06.19 18.41	
o-Terphenyl	84-15-1	108	%	70-135	05.06.19 18.41	

Certificate of Analytical Results 623245

LT Environmental, Inc., Arvada, CO

PLU RR 33-25-30 Dog Leg

Sample Id:	**BH02**	Matrix:	Soil	Date Received:	05.06.19 07.45
Lab Sample Id:	623245-003	Date Collected:	05.01.19 10.50	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.06.19 13.00	Basis:	Wet Weight
Seq Number:	3088143				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.06.19 19.32	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.06.19 19.32	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.06.19 19.32	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	05.06.19 19.32	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.06.19 19.32	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.06.19 19.32	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.06.19 19.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	86	%	70-130	05.06.19 19.32	
1,4-Difluorobenzene	540-36-3	101	%	70-130	05.06.19 19.32	

Certificate of Analytical Results 623245

LT Environmental, Inc., Arvada, CO

PLU RR 33-25-30 Dog Leg

Sample Id:	**BH02A**	Matrix:	Soil	Date Received:	05.06.19 07.45
Lab Sample Id:	623245-004	Date Collected:	05.01.19 11.25	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.06.19 14.40	Basis:	Wet Weight
Seq Number:	3088111				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**451**	5.00	mg/kg	05.06.19 16.43		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.06.19 13.00	Basis:	Wet Weight
Seq Number:	3088199				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.06.19 19.01	U	1
Diesel Range Organics (DRO)	C10C28DRO	**20.5**	15.0	mg/kg	05.06.19 19.01		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.06.19 19.01	U	1
Total TPH	PHC635	**20.5**	15.0	mg/kg	05.06.19 19.01		1
Total GRO-DRO	PHC628	**20.5**	15.0	mg/kg	05.06.19 19.01		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	05.06.19 19.01	
o-Terphenyl	84-15-1	108	%	70-135	05.06.19 19.01	

Certificate of Analytical Results 623245

LT Environmental, Inc., Arvada, CO

PLU RR 33-25-30 Dog Leg

Sample Id:	**BH02A**	Matrix:	Soil	Date Received:	05.06.19 07.45
Lab Sample Id:	623245-004	Date Collected:	05.01.19 11.25	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.06.19 13.00	Basis:	Wet Weight
Seq Number:	3088143				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	05.06.19 19.51	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	05.06.19 19.51	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	05.06.19 19.51	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	05.06.19 19.51	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	05.06.19 19.51	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	05.06.19 19.51	U	1
Total BTEX		<0.00202	0.00202	mg/kg	05.06.19 19.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	68	%	70-130	05.06.19 19.51	**
1,4-Difluorobenzene	540-36-3	86	%	70-130	05.06.19 19.51	

Certificate of Analytical Results 623245

LT Environmental, Inc., Arvada, CO

PLU RR 33-25-30 Dog Leg

Sample Id:	**BH03**	Matrix:	Soil	Date Received:	05.06.19 07.45
Lab Sample Id:	623245-005	Date Collected:	05.01.19 13.50	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.06.19 14.40	Basis:	Wet Weight
Seq Number:	3088111				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**351**	5.00	mg/kg	05.06.19 16.48		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.06.19 13.00	Basis:	Wet Weight
Seq Number:	3088199				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.06.19 19.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.06.19 19.21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.06.19 19.21	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.06.19 19.21	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.06.19 19.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	05.06.19 19.21	
o-Terphenyl	84-15-1	106	%	70-135	05.06.19 19.21	

Certificate of Analytical Results 623245

LT Environmental, Inc., Arvada, CO

PLU RR 33-25-30 Dog Leg

Sample Id:	**BH03**	Matrix:	Soil	Date Received:	05.06.19 07.45
Lab Sample Id:	623245-005	Date Collected:	05.01.19 13.50	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.06.19 13.00	Basis:	Wet Weight
Seq Number:	3088143				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.06.19 20.10	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.06.19 20.10	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.06.19 20.10	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	05.06.19 20.10	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.06.19 20.10	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.06.19 20.10	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.06.19 20.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	87	%	70-130	05.06.19 20.10	
1,4-Difluorobenzene	540-36-3	102	%	70-130	05.06.19 20.10	

Certificate of Analytical Results 623245

LT Environmental, Inc., Arvada, CO

PLU RR 33-25-30 Dog Leg

Sample Id:	**BH03A**	Matrix:	Soil	Date Received:	05.06.19 07.45
Lab Sample Id:	623245-006	Date Collected:	05.01.19 13.58	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.06.19 14.40	Basis:	Wet Weight
Seq Number:	3088111				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**19.4**	5.00	mg/kg	05.06.19 17.04		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.06.19 13.00	Basis:	Wet Weight
Seq Number:	3088199				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.06.19 19.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.06.19 19.41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.06.19 19.41	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.06.19 19.41	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.06.19 19.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	05.06.19 19.41	
o-Terphenyl	84-15-1	110	%	70-135	05.06.19 19.41	

Certificate of Analytical Results 623245

LT Environmental, Inc., Arvada, CO

PLU RR 33-25-30 Dog Leg

Sample Id:	**BH03A**	Matrix:	Soil	Date Received:	05.06.19 07.45
Lab Sample Id:	623245-006	Date Collected:	05.01.19 13.58	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.06.19 13.00	Basis:	Wet Weight
Seq Number:	3088143				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	05.06.19 20.30	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	05.06.19 20.30	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	05.06.19 20.30	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	05.06.19 20.30	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	05.06.19 20.30	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	05.06.19 20.30	U	1
Total BTEX		<0.00198	0.00198	mg/kg	05.06.19 20.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	88	%	70-130	05.06.19 20.30	
1,4-Difluorobenzene	540-36-3	103	%	70-130	05.06.19 20.30	

Certificate of Analytical Results 623245

LT Environmental, Inc., Arvada, CO

PLU RR 33-25-30 Dog Leg

Sample Id:	**BH04**	Matrix:	Soil	Date Received:	05.06.19 07.45
Lab Sample Id:	623245-007	Date Collected:	05.01.19 14.05	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.06.19 14.40	Basis:	Wet Weight
Seq Number:	3088111				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	05.06.19 17.10	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.06.19 13.00	Basis:	Wet Weight
Seq Number:	3088199				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.06.19 20.01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.06.19 20.01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.06.19 20.01	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.06.19 20.01	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.06.19 20.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	05.06.19 20.01	
o-Terphenyl	84-15-1	106	%	70-135	05.06.19 20.01	

Certificate of Analytical Results 623245

LT Environmental, Inc., Arvada, CO

PLU RR 33-25-30 Dog Leg

Sample Id:	**BH04**	Matrix:	Soil	Date Received:	05.06.19 07.45
Lab Sample Id:	623245-007	Date Collected:	05.01.19 14.05	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.06.19 13.00	Basis:	Wet Weight
Seq Number:	3088143				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	05.06.19 20.49	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	05.06.19 20.49	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	05.06.19 20.49	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	05.06.19 20.49	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	05.06.19 20.49	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	05.06.19 20.49	U	1
Total BTEX		<0.00199	0.00199	mg/kg	05.06.19 20.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	85	%	70-130	05.06.19 20.49	
1,4-Difluorobenzene	540-36-3	102	%	70-130	05.06.19 20.49	

Certificate of Analytical Results 623245

LT Environmental, Inc., Arvada, CO

PLU RR 33-25-30 Dog Leg

Sample Id:	**BH04A**	Matrix:	Soil	Date Received:	05.06.19 07.45
Lab Sample Id:	623245-008	Date Collected:	05.01.19 14.13	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.06.19 14.40	Basis:	Wet Weight
Seq Number:	3088111				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**34.1**	5.00	mg/kg	05.06.19 17.32		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.06.19 13.00	Basis:	Wet Weight
Seq Number:	3088199				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.06.19 20.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.06.19 20.21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.06.19 20.21	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.06.19 20.21	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.06.19 20.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	05.06.19 20.21	
o-Terphenyl	84-15-1	106	%	70-135	05.06.19 20.21	

Certificate of Analytical Results 623245

LT Environmental, Inc., Arvada, CO

PLU RR 33-25-30 Dog Leg

Sample Id:	**BH04A**	Matrix:	Soil	Date Received:	05.06.19 07.45
Lab Sample Id:	623245-008	Date Collected:	05.01.19 14.13	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.06.19 13.00	Basis:	Wet Weight
Seq Number:	3088143				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	05.06.19 21.08	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	05.06.19 21.08	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	05.06.19 21.08	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	05.06.19 21.08	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	05.06.19 21.08	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	05.06.19 21.08	U	1
Total BTEX		<0.00201	0.00201	mg/kg	05.06.19 21.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	05.06.19 21.08	
4-Bromofluorobenzene	460-00-4	89	%	70-130	05.06.19 21.08	

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 623245

LT Environmental, Inc.

PLU RR 33-25-30 Dog Leg

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3088111 — Matrix: Solid — Date Prep: 05.06.19
MB Sample Id: 7677234-1-BLK — LCS Sample Id: 7677234-1-BKS — LCSD Sample Id: 7677234-1-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	244	98	248	99	90-110	2	20	mg/kg	05.06.19 16:04	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3088111 — Matrix: Soil — Date Prep: 05.06.19
Parent Sample Id: 623245-002 — MS Sample Id: 623245-002 S — MSD Sample Id: 623245-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	45.5	250	287	97	301	102	90-110	5	20	mg/kg	05.06.19 16:21	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3088111 — Matrix: Soil — Date Prep: 05.06.19
Parent Sample Id: 623245-008 — MS Sample Id: 623245-008 S — MSD Sample Id: 623245-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	34.1	250	274	96	271	95	90-110	1	20	mg/kg	05.06.19 17:37	

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3088199 — Matrix: Solid — Date Prep: 05.06.19
MB Sample Id: 7677331-1-BLK — LCS Sample Id: 7677331-1-BKS — LCSD Sample Id: 7677331-1-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	1030	103	1080	108	70-135	5	20	mg/kg	05.06.19 13:20	
Diesel Range Organics (DRO)	<8.13	1000	1040	104	1120	112	70-135	7	20	mg/kg	05.06.19 13:20	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	117		125		129		70-135	%	05.06.19 13:20
o-Terphenyl	121		129		125		70-135	%	05.06.19 13:20

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

QC Summary 623245

LT Environmental, Inc.

PLU RR 33-25-30 Dog Leg

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3088199 — Matrix: Soil — Date Prep: 05.06.19
Parent Sample Id: 622975-001 — MS Sample Id: 622975-001 S — MSD Sample Id: 622975-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	12.2	999	1040	103	1060	105	70-135	2	20	mg/kg	05.06.19 14:20	
Diesel Range Organics (DRO)	8.29	999	1110	110	1130	112	70-135	2	20	mg/kg	05.06.19 14:20	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	126		125		70-135	%	05.06.19 14:20
o-Terphenyl	125		102		70-135	%	05.06.19 14:20

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3088143 — Matrix: Solid — Date Prep: 05.06.19
MB Sample Id: 7677289-1-BLK — LCS Sample Id: 7677289-1-BKS — LCSD Sample Id: 7677289-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000384	0.0998	0.0998	100	0.0926	93	70-130	7	35	mg/kg	05.06.19 16:52	
Toluene	<0.000455	0.0998	0.0959	96	0.0892	89	70-130	7	35	mg/kg	05.06.19 16:52	
Ethylbenzene	<0.000564	0.0998	0.107	107	0.0998	100	70-130	7	35	mg/kg	05.06.19 16:52	
m,p-Xylenes	<0.00101	0.200	0.223	112	0.207	103	70-130	7	35	mg/kg	05.06.19 16:52	
o-Xylene	<0.000344	0.0998	0.110	110	0.103	103	70-130	7	35	mg/kg	05.06.19 16:52	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		102		103		70-130	%	05.06.19 16:52
4-Bromofluorobenzene	73		83		89		70-130	%	05.06.19 16:52

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3088143 — Matrix: Soil — Date Prep: 05.06.19
Parent Sample Id: 623245-001 — MS Sample Id: 623245-001 S — MSD Sample Id: 623245-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000388	0.101	0.0920	91	0.0904	90	70-130	2	35	mg/kg	05.06.19 17:32	
Toluene	<0.000459	0.101	0.0836	83	0.0833	83	70-130	0	35	mg/kg	05.06.19 17:32	
Ethylbenzene	<0.000569	0.101	0.0841	83	0.0865	87	70-130	3	35	mg/kg	05.06.19 17:32	
m,p-Xylenes	<0.00102	0.202	0.172	85	0.177	89	70-130	3	35	mg/kg	05.06.19 17:32	
o-Xylene	<0.000347	0.101	0.0860	85	0.0890	89	70-130	3	35	mg/kg	05.06.19 17:32	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		102		70-130	%	05.06.19 17:32
4-Bromofluorobenzene	85		86		70-130	%	05.06.19 17:32

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: 623245

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:	Ashley Ager	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:		aager@ltenv.com rmcafee@ltenv.com

Work Order Comments

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

Project Name:	PLU RR 33-25-30 DogLeg	Turn Around	
Project Number:		Routine ☐	
P.O. Number:		Rush: 24 hr	
Sampler's Name:	Robert McAfee	Due Date: 05/07/19	

SAMPLE RECEIPT			
Temperature (°C):	0.3 0.2	Temp Blank: Yes (No)	Wet Ice: (Yes) No
Received Intact:	(Yes) No	Thermometer ID	VE
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.1
Sample Custody Seals:	Yes (No) N/A	Total Containers:	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	Sample Comments
BH01	S	05/01/19	1020	1'	1	X	X	X	discrete
BH01A			1027	4'		X	X	X	
BH02			1050	1'		X	X	X	
BH02A			1125	4'		X	X	X	
BH03			1350	1'		X	X	X	
BH03A			1358	4'		X	X	X	
BH04			1405	1'		X	X	X	
BH04A			1413	4'		X	X	X	

ANALYSIS REQUEST

Work Order Notes

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

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			0503-19 13:15			5/6/19
3			15:15	4		0745
5				6		

Revised Date 051418 Rev. 2018.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 05/06/2019 07:45:00 AM

Work Order #: 623245

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

Temperature Measuring device used : R8

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 05/06/2019
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 05/06/2019
Jessica Kramer

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

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

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 4035
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
bbillings	None	8/6/2021