June 14, 2019

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

RE: Closure Request
Poker Lake Unit Remuda Basin 4-24-30 USA Battery
Remediation Permit Number 2RP-5335
Eddy County, New Mexico

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following report detailing soil sampling activities at the Poker Lake Unit Remuda Basin 4-24-30 USA Battery (Site) in Unit A, Section 4, Township 24 South, Range 30 East, in Eddy County, New Mexico (Figure 1). The purpose of the soil sampling activities was to assess impacts to soil after 10.1 barrels (bbls) of crude oil and 10.1 bbls of produced water were released from the produced water tank thief hatch and a swage on the water transfer pump on March 16, 2019.

Fluids were released into the lined tank battery containment and onto the caliche well pad from overspray. A vacuum truck was dispatched to the Site to recover free-standing fluid; approximately 10 bbls of crude oil and 10 bbls of produced water were recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) via electronic mail within 24 hours on a Release Notification and Corrective Action Form C-141 on March 28, 2019, and was assigned Remediation Permit (RP) Number 2RP-5335 (Attachment 1). Based on the results of the soil sampling events, XTO is submitting this closure report and requesting no further action for this release event.

BACKGROUND

LTE characterized the Site according to Table 1, *Closure Criteria for Soils Impacted by a Release*, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest water well data. The nearest permitted water well is United States Geological Survey (USGS) well 321542103522801, located approximately 3,405 feet northeast of the Site and approximately 6 feet higher in elevation, with a depth to groundwater of 436 feet bgs and a total depth of 518 feet bgs. The nearest continuously flowing water or significant watercourse to the Site is an unnamed dry wash located approximately 5,169 feet northeast 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 in a low-potential karst area. Based on these criteria, the following NMOCD Table 1 closure criteria apply: 10 milligrams per kilogram (mg/kg) benzene; 50 mg/kg total benzene, toluene, ethylbenzene, and total xylenes (BTEX); 2,500 mg/kg total petroleum hydrocarbons (TPH); 1,000 mg/kg TPH-gasoline range organics (GRO) and TPH-diesel range organics (DRO); and 20,000 mg/kg chloride.

SOIL SAMPLING

On March 21, 2019, an LTE scientist collected three preliminary soil samples (SS01 through SS03) within the release area to assess the lateral extent of soil impacts. The soil sample locations, depicted on Figure 2, were selected based on information provided on the initial Form C-141 and visual surface staining. To eliminate the effects from weathering and natural degradation of contaminants at the ground surface, the soil samples were collected from each sample location at approximately 0.5 feet bgs. The soil samples were screened for volatile aromatic hydrocarbons and chlorides using a photo-ionization detector (PID) and Hach® chloride QuanTab® test strips. The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler, method of analysis, and immediately placed on ice. The soil samples were shipped at 4 degrees Celsius (°C) under strict chain-of-custody procedures to Xenco Laboratories (Xenco) in Midland, Texas, for analysis of BTEX by United States Environmental Protection Agency (USEPA) Method 8021B, TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) by USEPA Method 8015M/D, and chloride by USEPA Method 300.0.

On May 7, 2019, LTE personnel returned to the Site to assess the vertical extent of impacted soil in the release area. Potholes were advanced by track hoe to a depth of 4 feet bgs at preliminary soil sample locations SS01 through SS03. Two additional delineation soil samples were collected in the locations of preliminary soil samples SS01 through SS03. Soil sample SS01A was collected at a depth of 3 feet bgs; soil sample SS02A was collected at a depth of 1 foot bgs; soil sample SS03A was collected at a depth of 2 feet bgs; and soil samples SS01B through SS03B were collected at a depth of 4 feet bgs. The soil samples were collected, handled, and analyzed as described above and submitted to Xenco in Midland, Texas. All potholes were backfilled with the soil removed from the potholes; no soil was removed from the Site for disposal. The soil sample locations are depicted on Figure 2, and soil sample logs are included in Attachment 2.

ANALYTICAL RESULTS

Laboratory analytical results indicated that benzene, BTEX, TPH, TPH-DRO + TPH-GRO, and chloride concentrations were compliant with the NMOCD Table 1 closure criteria in preliminary soil samples SS01 through SS03 collected at 0.5 feet bgs and subsequent pothole soil samples SS01A through SS03A and SS01B through SS03B collected between 1 foot to 4 feet bgs. Based on the laboratory analytical results, no soil excavation was required. Laboratory analytical results

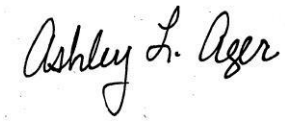
are presented on Figure 2 and summarized in Table 1, and the complete laboratory analytical reports are included as Attachment 3.

CONCLUSIONS

Soil samples SS01 through SS03, SS01A through SS03A, and SS01B through SS03B were collected within the release area to determine if soil with concentrations above NMOCD Table 1 closure criteria is present as a result of the release. Laboratory analytical results for all soil samples indicated that benzene, BTEX, TPH, TPH-DRO + TPH-GRO, and chloride concentrations were compliant with the NMOCD Table 1 closure criteria. XTO requests no further action for this release. An updated NMOCD Form C-141 is included as Attachment 1. A photographic log of the Site is included as Attachment 4.

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

Sincerely,
LT ENVIRONMENTAL, INC.



Ashley L. Ager, P.G.
Senior Geologist

cc: Kyle Littrell, XTO
Jim Amos, U.S. Bureau of Land Management
Robert Hamlet, NMOCD
Victoria Venegas, NMOCD

Attachments:

Figure 1	Site Location Map
Figure 2	Soil Sample Locations
Table 1	Soil Analytical Results
Attachment 1	Initial/Final NMOCD Form C-141 (2RP-5335)
Attachment 2	Soil Sample Logs
Attachment 3	Laboratory Analytical Reports
Attachment 4	Photographic Log

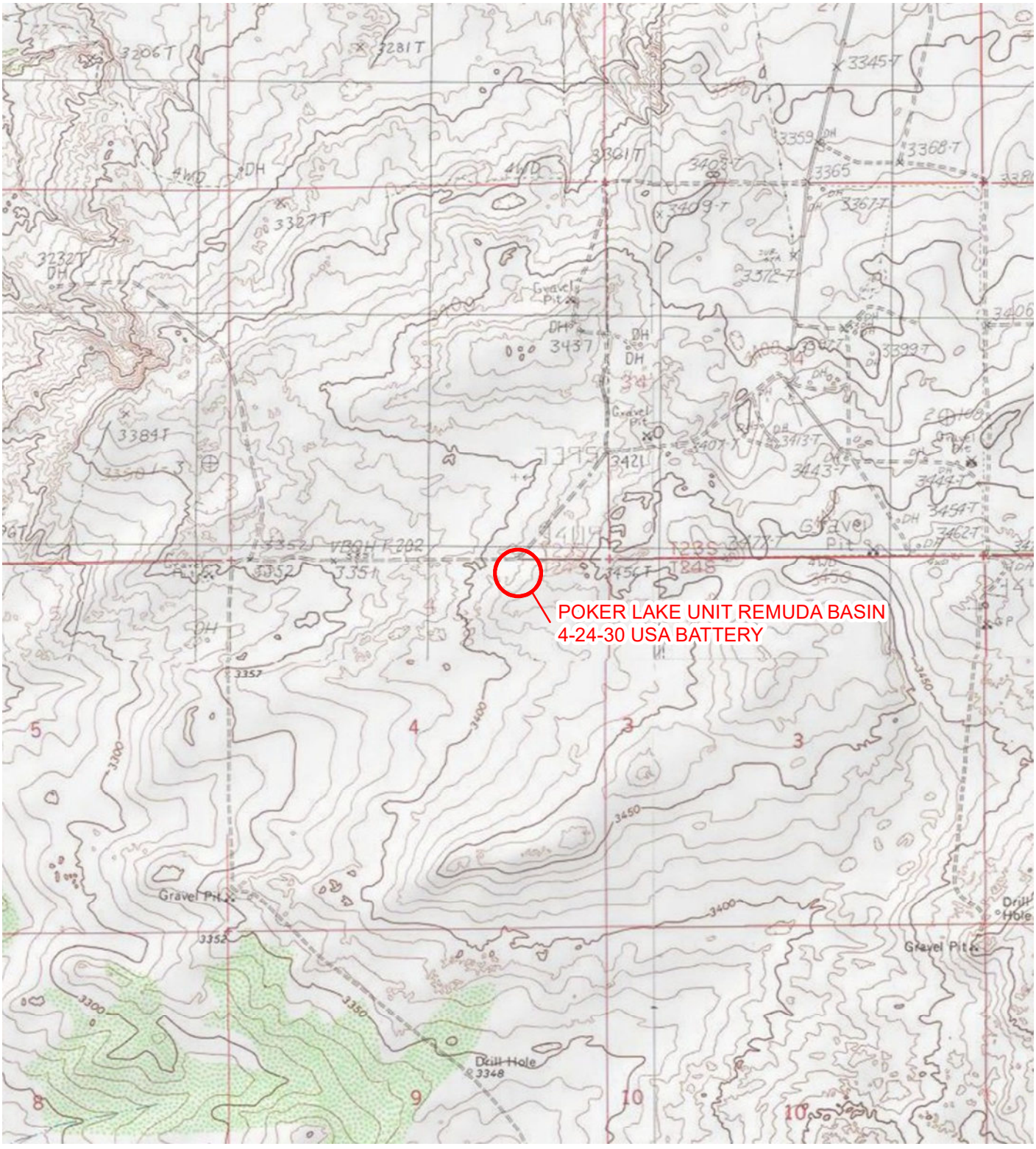


IMAGE COURTESY OF ESRI/USGS

LEGEND

SITE LOCATION

0 2,000 4,000

Feet

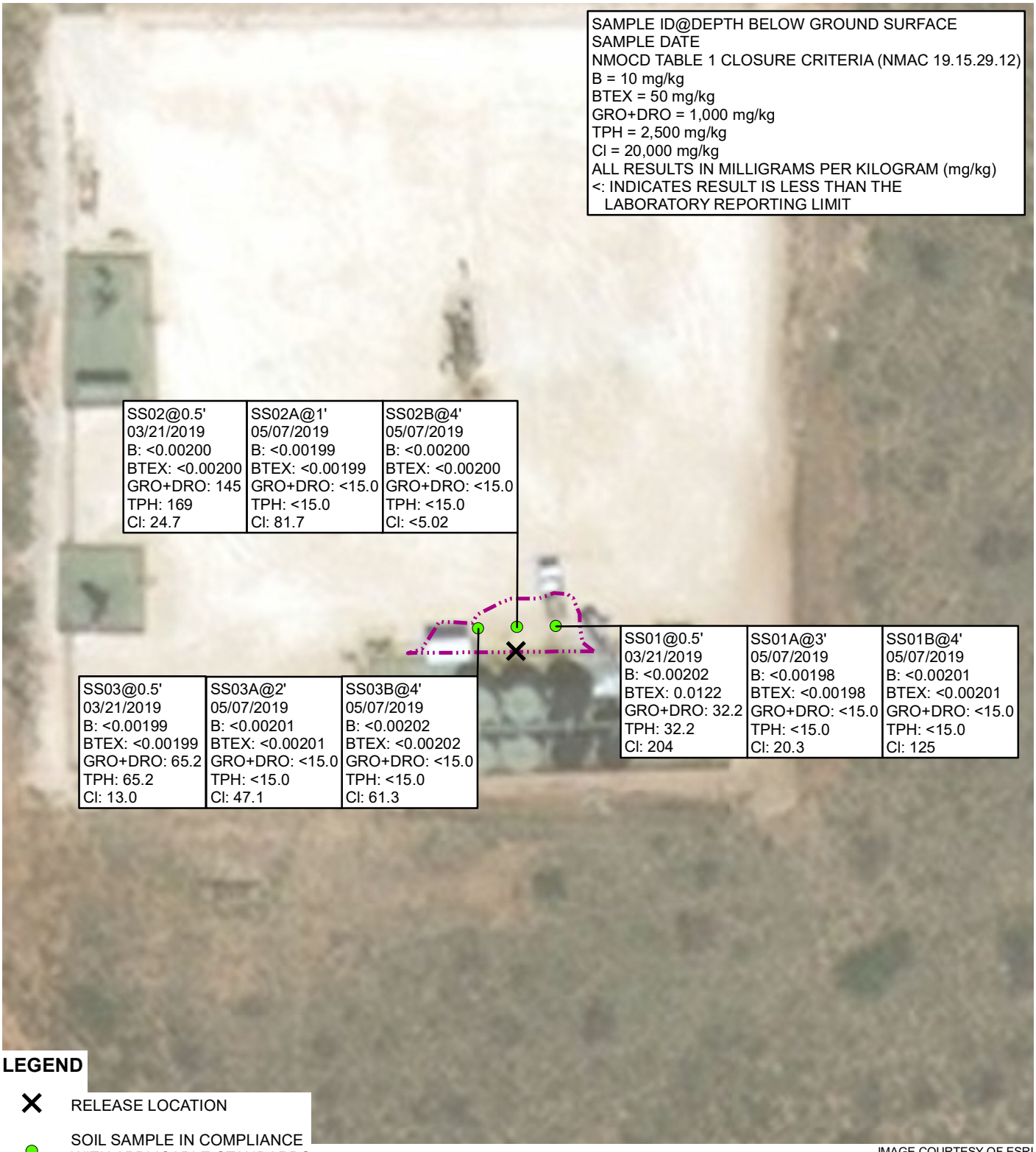
N

NEW MEXICO

NOTE: REMEDIATION PERMIT
NUMBER 2RP-5335

FIGURE 1
SITE LOCATION MAP
POKER LAKE UNIT REMUDA BASIN
4-24-30 USA BATTERY
UNIT A SEC 4 T24S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012919050_REMUDA BASIN 4-24-30\012919050_FIG01_SL_2019_5335.mxd



LEGEND

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

IMAGE COURTESY OF ESRI

0 60 120
Feet

N

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-5335

FIGURE 2
SOIL SAMPLE LOCATIONS
POKER LAKE UNIT REMUDA BASIN
4-24-30 USA BATTERY
UNIT A SEC 4 T24S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012919050_REMUDA BASIN 4-24-30\012919050_FIG02_PRELIMINARY_2019_5335_1.mxd

TABLE 1
SOIL ANALYTICAL RESULTS

POKER LAKE UNIT REMUDA BASIN 4-24-30 USA BATTERY
REMEDIATION PERMIT NUMBER 2RP-5335
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)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
SS01	0.5	03/21/2019	<0.00202	0.00310	<0.00202	0.00908	0.0122	<15.0	32.2	<15.0	32.2	32.2	204
SS02	0.5	03/21/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	145	24.3	145	169	24.7
SS03	0.5	03/21/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	65.2	<15.0	65.2	65.2	13.0
SS01A	3	05/07/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	20.3
SS02A	1	05/07/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	81.7
SS03A	2	05/07/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	47.1
SS01B	4	05/07/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	125
SS02B	4	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
SS03B	4	05/07/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	61.3
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
ORO - motor oil range organics
NMAC - New Mexico Administrative Code
NMOCD - New Mexico Oil Conservation Division
mg/kg - milligrams per kilogram
< - indicates result is below laboratory reporting limits
Table 1 - closure criteria for soils impacted by a release per NMAC 19.15.29 August 2018
TPH - total petroleum hydrocarbons
NE - not established

ATTACHMENT 1: INITIAL/FINAL NMOCD FORM C-141 (2RP-5335)

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	NAB1909543185
District RP	2RP-5335
Facility ID	
Application ID	pAB1909540559

Release Notification

Responsible Party

Responsible Party XTO Energy	OGRID 5380
Contact Name Kyle Littrell	Contact Telephone 432-221-7331
Contact email Kyle_Littrell@xtoenergy.com	Incident # *(assigned by OCD)* NAB1909543185
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.253236° Longitude -103.881487°
(NAD 83 in decimal degrees to 5 decimal places)

Site Name PLU Remuda Basin 4-24-30 USA Battery	Site Type Bulk Storage and Separation Facility
Date Release Discovered 3/16/2019	API# *(if applicable)* 30-015-40660 Poker Lake CVX JV RB 1H

Unit Letter	Section	Township	Range	County
A	4	24S	30E	Eddy

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

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) 10.1	Volume Recovered (bbls) 10
☒ Produced Water	Volume Released (bbls) 10.1	Volume Recovered (bbls) 10
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

A fluid release occurred from the water tank thief hatch and a swage on the water transfer pump. Fluids were released to lined containment and to the well pad due to overspray. Additional third party resources have been retained to assist with remediation.

State of New Mexico
Oil Conservation Division

Incident ID	NAB1909543185
District RP	2RP_5335
Facility ID	
Application ID	pAB1909540559

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

Initial Response

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

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

If all the actions described above have not been undertaken, explain why:
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: [signature] Date: 3/28/2019

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

OCD Only

Received by: [signature] Date: 4/5/2019

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5335
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5335
Facility ID	
Application ID	

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

Printed Name: Kyle Littrell Title: SH&E Coordinator

Signature: Date: 6/14/2019

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

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5335
Facility ID	
Application ID	

Closure

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

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

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

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

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

☒ Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E Coordinator

Signature: Date: 6/14/2019

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

OCD Only

Received by: Date:

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

Closure Approved by: Date:

Printed Name: Title:

ATTACHMENT 2: SOIL SMAPLE LOGS

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

Identifier: SS01	Date: 05/07/19
Project Name: Remuda Basin 4-24-37	RP Number:
Logged By: Robert M.	Method: Pot hole
Lat/Long:	Field Screening:
Hole Diameter: 2'	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
1308 dry	<124	1.4	N		0–1	1'	S	Sand trace Caliche PG Brown/tan
1310 dry	<124	1.1	N		2	2'	S	sand trace Clay PG Brown
1312 dry	<124	2.1	N		3	3'	S	Sand trace Clay PG Brown
1314 dry	<124	2.3	N		4	4'	S	Sand trace Clay PG Brown
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220

Compliance · Engineering · Remediation

Identifier: SS0[illegible] 2	Date: 05/07/19
Project Name: Remuda Basin 4-24-30	RP Number:
Logged By: Robert M.	Method: Pot hole
Hole Diameter: 2'	Total Depth: 4'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening:

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1255 dry	124	2.0	N		0–1	1'	S	Sand trace Caliche Brown/tan PG
1256 dry	200	1.0	N		2	2'	S	Sand trace Clay Brown PG
1258 dry	200	1.9	N		3	3'	S	Sand trace Clay Brown PG
1300 dry	200	2.1	N		4	4'	S	Sand trace Clay Brown PG

5 6 7 8 9 10 11 12

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

Identifier:	Date:
5503	05/07/19
Project Name: Remuda Basin 4-24-30	**RP Number:**
Logged By: Robert M	**Method:** Pot hole
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
1340 dry	<124	1.7	N		0–1	1'	S	Sand trace Caliche PG Brown tan
1342 dry	<124	1.2	N		2	2'	S	Sand trace Clay PG Brown
1346 dry	<124	1.8	N		3	3'	S	Sand trace Clay PG Brown
1348 dry	<124	2.6	N		4	4'	S	Sand trace Clay PG Brown
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

ATTACHMENT 3: LABORATORY ANALYTICAL REPORTS

Analytical Report 618903

for

LT Environmental, Inc.

Project Manager: Adrian Baker

Remuda Basin 4-24-30

04-APR-19

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)
Xenco-Lakeland: Florida (E84098)

04-APR-19

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

Reference: XENCO Report No(s): **618903**
Remuda Basin 4-24-30
Project Address: ---

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 618903. 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. 618903 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,

Kalei Stout
Midland Laboratory Director

Sample Cross Reference 618903

LT Environmental, Inc., Arvada, CO

Remuda Basin 4-24-30

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	03-21-19 10:15	.5 ft	618903-001
SS02	S	03-21-19 10:25	.5 ft	618903-002
SS03	S	03-21-19 10:35	.5 ft	618903-003

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3084064 BTEX by EPA 8021B

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

Certificate of Analysis Summary 618903

LT Environmental, Inc., Arvada, CO

Project Name: Remuda Basin 4-24-30

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

Date Received in Lab: Tue Mar-26-19 11:30 am
Report Date: 04-APR-19
Project Manager: Kalei Stout

Analysis Requested									
	Lab Id:	618903-001		618903-002		618903-003			
	Field Id:	SS01		SS02		SS03			
	Depth:	.5- ft		.5- ft		.5- ft			
	Matrix:	SOIL		SOIL		SOIL			
	Sampled:	Mar-21-19 10:15		Mar-21-19 10:25		Mar-21-19 10:35			
BTEX by EPA 8021B	***Extracted:***	Mar-29-19 16:30		Mar-29-19 16:30		Mar-29-19 16:30			
	Analyzed:	Mar-30-19 09:31		Mar-30-19 09:51		Mar-30-19 23:05			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzene		<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199		
Toluene		0.00310	0.00202	<0.00200	0.00200	<0.00199	0.00199		
Ethylbenzene		<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199		
m,p-Xylenes		0.00626	0.00403	<0.00401	0.00401	<0.00398	0.00398		
o-Xylene		0.00282	0.00202	<0.00200	0.00200	<0.00199	0.00199		
Total Xylenes		0.00908	0.00202	<0.00200	0.00200	<0.00199	0.00199		
Total BTEX		0.0122	0.00202	<0.00200	0.00200	<0.00199	0.00199		
Inorganic Anions by EPA 300	***Extracted:***	Mar-27-19 16:15		Mar-27-19 16:15		Mar-27-19 16:15			
	Analyzed:	Mar-28-19 04:15		Mar-28-19 05:01		Mar-28-19 05:08			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		204	5.00	24.7	5.01	13.0	4.98		
TPH by SW8015 Mod	***Extracted:***	Mar-29-19 10:00		Mar-29-19 10:00		Mar-29-19 10:00			
	Analyzed:	Mar-30-19 00:53		Mar-30-19 01:12		Mar-30-19 01:32			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<14.9	14.9	<15.0	15.0		
Diesel Range Organics (DRO)		32.2	15.0	145	14.9	65.2	15.0		
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	24.3	14.9	<15.0	15.0		
Total TPH		32.2	15.0	169	14.9	65.2	15.0		

Kalei Stout
Midland Laboratory Director

Certificate of Analytical Results 618903

LT Environmental, Inc., Arvada, CO

Remuda Basin 4-24-30

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	03.26.19 11.30
Lab Sample Id:	618903-001	Date Collected:	03.21.19 10.15	Sample Depth:	.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.27.19 16.15	Basis:	Wet Weight
Seq Number:	3083709				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**204**	5.00	mg/kg	03.28.19 04.15		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.29.19 10.00	Basis:	Wet Weight
Seq Number:	3084047				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.30.19 00.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	**32.2**	15.0	mg/kg	03.30.19 00.53		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.30.19 00.53	U	1
Total TPH	PHC635	**32.2**	15.0	mg/kg	03.30.19 00.53		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	03.30.19 00.53	
o-Terphenyl	84-15-1	95	%	70-135	03.30.19 00.53	

Certificate of Analytical Results 618903

LT Environmental, Inc., Arvada, CO

Remuda Basin 4-24-30

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	03.26.19 11.30
Lab Sample Id:	618903-001	Date Collected:	03.21.19 10.15	Sample Depth:	.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.29.19 16.30	Basis:	Wet Weight
Seq Number:	3084064				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	03.30.19 09.31	U	1
Toluene	108-88-3	**0.00310**	0.00202	mg/kg	03.30.19 09.31		1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	03.30.19 09.31	U	1
m,p-Xylenes	179601-23-1	**0.00626**	0.00403	mg/kg	03.30.19 09.31		1
o-Xylene	95-47-6	**0.00282**	0.00202	mg/kg	03.30.19 09.31		1
Total Xylenes	1330-20-7	**0.00908**	0.00202	mg/kg	03.30.19 09.31		1
Total BTEX		**0.0122**	0.00202	mg/kg	03.30.19 09.31		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	113	%	70-130	03.30.19 09.31	
1,4-Difluorobenzene	540-36-3	100	%	70-130	03.30.19 09.31	

Certificate of Analytical Results 618903

LT Environmental, Inc., Arvada, CO

Remuda Basin 4-24-30

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	03.26.19 11.30
Lab Sample Id:	618903-002	Date Collected:	03.21.19 10.25	Sample Depth:	.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.27.19 16.15	Basis:	Wet Weight
Seq Number:	3083709				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**24.7**	5.01	mg/kg	03.28.19 05.01		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.29.19 10.00	Basis:	Wet Weight
Seq Number:	3084047				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	03.30.19 01.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	**145**	14.9	mg/kg	03.30.19 01.12		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**24.3**	14.9	mg/kg	03.30.19 01.12		1
Total TPH	PHC635	**169**	14.9	mg/kg	03.30.19 01.12		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	03.30.19 01.12	
o-Terphenyl	84-15-1	96	%	70-135	03.30.19 01.12	

Certificate of Analytical Results 618903

LT Environmental, Inc., Arvada, CO

Remuda Basin 4-24-30

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	03.26.19 11.30
Lab Sample Id:	618903-002	Date Collected:	03.21.19 10.25	Sample Depth:	.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.29.19 16.30	Basis:	Wet Weight
Seq Number:	3084064				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.30.19 09.51	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.30.19 09.51	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.30.19 09.51	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	03.30.19 09.51	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.30.19 09.51	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.30.19 09.51	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.30.19 09.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	113	%	70-130	03.30.19 09.51	
1,4-Difluorobenzene	540-36-3	100	%	70-130	03.30.19 09.51	

Certificate of Analytical Results 618903

LT Environmental, Inc., Arvada, CO

Remuda Basin 4-24-30

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	03.26.19 11.30
Lab Sample Id:	618903-003	Date Collected:	03.21.19 10.35	Sample Depth:	.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.27.19 16.15	Basis:	Wet Weight
Seq Number:	3083709				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**13.0**	4.98	mg/kg	03.28.19 05.08		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.29.19 10.00	Basis:	Wet Weight
Seq Number:	3084047				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.30.19 01.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	**65.2**	15.0	mg/kg	03.30.19 01.32		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.30.19 01.32	U	1
Total TPH	PHC635	**65.2**	15.0	mg/kg	03.30.19 01.32		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	03.30.19 01.32	
o-Terphenyl	84-15-1	94	%	70-135	03.30.19 01.32	

Certificate of Analytical Results 618903

LT Environmental, Inc., Arvada, CO

Remuda Basin 4-24-30

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	03.26.19 11.30
Lab Sample Id:	618903-003	Date Collected:	03.21.19 10.35	Sample Depth:	.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.29.19 16.30	Basis:	Wet Weight
Seq Number:	3084064				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.30.19 23.05	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.30.19 23.05	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.30.19 23.05	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.30.19 23.05	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.30.19 23.05	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.30.19 23.05	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.30.19 23.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	70-130	03.30.19 23.05	
1,4-Difluorobenzene	540-36-3	97	%	70-130	03.30.19 23.05	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 618903

LT Environmental, Inc.

Remuda Basin 4-24-30

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3083709 Matrix: Solid Date Prep: 03.27.19
MB Sample Id: 7674516-1-BLK LCS Sample Id: 7674516-1-BKS LCSD Sample Id: 7674516-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	252	101	259	104	90-110	3	20	mg/kg	03.28.19 02:29	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3083709 Matrix: Soil Date Prep: 03.27.19
Parent Sample Id: 618897-007 MS Sample Id: 618897-007 S MSD Sample Id: 618897-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	202	248	448	99	451	100	90-110	1	20	mg/kg	03.28.19 02:49	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3083709 Matrix: Soil Date Prep: 03.27.19
Parent Sample Id: 618903-001 MS Sample Id: 618903-001 S MSD Sample Id: 618903-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	204	250	454	100	472	107	90-110	4	20	mg/kg	03.28.19 04:22	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3084047 Matrix: Solid Date Prep: 03.29.19
MB Sample Id: 7674698-1-BLK LCS Sample Id: 7674698-1-BKS LCSD Sample Id: 7674698-1-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	958	96	924	92	70-135	4	20	mg/kg	03.29.19 21:42	
Diesel Range Organics (DRO)	<8.13	1000	1050	105	1020	102	70-135	3	20	mg/kg	03.29.19 21:42	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	94		122		122		70-135	%	03.29.19 21:42
o-Terphenyl	97		117		104		70-135	%	03.29.19 21:42

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 618903

LT Environmental, Inc.

Remuda Basin 4-24-30

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3084047 Matrix: Soil Date Prep: 03.29.19
Parent Sample Id: 618899-001 MS Sample Id: 618899-001 S MSD Sample Id: 618899-001 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)	8.95	998	972	96	969	96	70-135	0	20	mg/kg	03.29.19 22:39	
Diesel Range Organics (DRO)	<8.11	998	988	99	982	98	70-135	1	20	mg/kg	03.29.19 22:39	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	125		122		70-135	%	03.29.19 22:39
o-Terphenyl	100		99		70-135	%	03.29.19 22:39

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3084064 Matrix: Solid Date Prep: 03.29.19
MB Sample Id: 7674758-1-BLK LCS Sample Id: 7674758-1-BKS LCSD Sample Id: 7674758-1-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	0.0927	93	0.0981	99	70-130	6	35	mg/kg	03.30.19 05:07	
Toluene	<0.000455	0.0998	0.0952	95	0.100	101	70-130	5	35	mg/kg	03.30.19 05:07	
Ethylbenzene	<0.000564	0.0998	0.0890	89	0.0935	94	70-130	5	35	mg/kg	03.30.19 05:07	
m,p-Xylenes	<0.00101	0.200	0.179	90	0.189	95	70-130	5	35	mg/kg	03.30.19 05:07	
o-Xylene	<0.000344	0.0998	0.0913	91	0.0977	98	70-130	7	35	mg/kg	03.30.19 05:07	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		98		99		70-130	%	03.30.19 05:07
4-Bromofluorobenzene	85		94		102		70-130	%	03.30.19 05:07

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3084064 Matrix: Soil Date Prep: 03.29.19
Parent Sample Id: 618899-001 MS Sample Id: 618899-001 S MSD Sample Id: 618899-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000386	0.100	0.0929	93	0.0741	73	70-130	23	35	mg/kg	03.30.19 05:45	
Toluene	<0.000457	0.100	0.0958	96	0.0775	77	70-130	21	35	mg/kg	03.30.19 05:45	
Ethylbenzene	<0.000567	0.100	0.0896	90	0.0730	72	70-130	20	35	mg/kg	03.30.19 05:45	
m,p-Xylenes	<0.00102	0.201	0.180	90	0.148	74	70-130	20	35	mg/kg	03.30.19 05:45	
o-Xylene	<0.000346	0.100	0.0934	93	0.0782	77	70-130	18	35	mg/kg	03.30.19 05:45	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		102		70-130	%	03.30.19 05:45
4-Bromofluorobenzene	107		110		70-130	%	03.30.19 05:45

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: 6018903

XENCO LABORATORIES

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

www.xenco.com Page 1 of 1

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

Work Order Comments

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

Project Name:	Remuda Basin 4-24-30	Turn Around	
Project Number:		Routine	☑
P.O. Number:	3/16/19	Rush:	
Sampler's Name:	Garrett Green	Due Date:	

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
SS01	S	3/21/19	1015	.5'	1	X	X	X
SS02	S	↓	1025	↓	1	X	X	X
SS03	S	↓	1034	↓	1	X	X	X

Work Order Notes

32.253564,
-103.881678

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

Sample Comments

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

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

7747 9294 4760

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		Timothy R. Elkins	3/22/19 -0700	2		3.26.19 1130
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

Final 1.000

Page 15 of 15

Analytical Report 623939

for

LT Environmental, Inc.

Project Manager: Ashley Ager

Remuda Basin 4-24-30

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): **623939**
Remuda Basin 4-24-30
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) 623939. 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. 623939 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,

Kalei Stout
Midland Laboratory Director

Sample Cross Reference 623939

LT Environmental, Inc., Arvada, CO

Remuda Basin 4-24-30

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01A	S	05-07-19 13:12	3 ft	623939-001
SS01B	S	05-07-19 13:14	4 ft	623939-002
SS02A	S	05-07-19 12:55	1 ft	623939-003
SS02B	S	05-07-19 13:00	4 ft	623939-004
SS03A	S	05-07-19 13:42	2 ft	623939-005
SS03B	S	05-07-19 13:48	4 ft	623939-006

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3088828 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Surrogate 4-Bromofluorobenzene recovered below QC limits. Matrix interferences is suspected.
Samples affected are: 623939-006.

Certificate of Analysis Summary 623939

LT Environmental, Inc., Arvada, CO

Project Name: Remuda Basin 4-24-30

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

Date Received in Lab: Fri May-10-19 11:00 am
Report Date: 13-MAY-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	623939-001		623939-002		623939-003		623939-004		623939-005		623939-006	
	Field Id:	SS01A		SS01B		SS02A		SS02B		SS03A		SS03B	
	Depth:	3- ft		4- ft		1- ft		4- ft		2- ft		4- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	May-07-19 13:12		May-07-19 13:14		May-07-19 12:55		May-07-19 13:00		May-07-19 13:42		May-07-19 13:48	
BTEX by EPA 8021B	***Extracted:***	May-10-19 11:15		May-10-19 11:15		May-10-19 11:15		May-10-19 11:15		May-10-19 11:15		May-10-19 11:15	
	Analyzed:	May-10-19 17:40		May-10-19 17:59		May-10-19 18:18		May-10-19 18:37		May-10-19 19:51		May-10-19 20:10	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00198	0.00198	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202
Toluene		<0.00198	0.00198	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202
Ethylbenzene		<0.00198	0.00198	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202
m,p-Xylenes		<0.00397	0.00397	<0.00402	0.00402	<0.00398	0.00398	<0.00399	0.00399	<0.00402	0.00402	<0.00403	0.00403
o-Xylene		<0.00198	0.00198	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202
Total Xylenes		<0.00198	0.00198	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202
Total BTEX		<0.00198	0.00198	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202
Chloride by EPA 300	***Extracted:***	May-11-19 11:00		May-11-19 11:30		May-11-19 11:30		May-11-19 11:30		May-11-19 11:30		May-11-19 11:30	
	Analyzed:	May-11-19 14:36		May-11-19 15:07		May-11-19 15:23		May-11-19 15:28		May-11-19 15:33		May-11-19 15:38	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		20.3	5.00	125	5.05	81.7	4.96	<5.02	5.02	47.1	5.05	61.3	5.03
TPH by SW8015 Mod	***Extracted:***	May-10-19 17:00		May-10-19 17:00		May-10-19 17:00		May-10-19 17:00		May-10-19 17:00		May-10-19 17:00	
	Analyzed:	May-11-19 01:42		May-11-19 02:02		May-11-19 02:22		May-11-19 02:43		May-11-19 03:44		May-11-19 04:04	
	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)		<15.0	15.0	<15.0	15.0	<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	<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	<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	<15.0	15.0	<15.0	15.0

Kalei Stout
Midland Laboratory Director

Certificate of Analytical Results 623939

LT Environmental, Inc., Arvada, CO

Remuda Basin 4-24-30

Sample Id:	**SS01A**	Matrix:	Soil	Date Received:	05.10.19 11.00
Lab Sample Id:	623939-001	Date Collected:	05.07.19 13.12	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	05.11.19 11.00	Basis:	Wet Weight
Seq Number:	3088755				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**20.3**	5.00	mg/kg	05.11.19 14.36		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.10.19 17.00	Basis:	Wet Weight
Seq Number:	3088790				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.11.19 01.42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.11.19 01.42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.11.19 01.42	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.11.19 01.42	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.11.19 01.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	05.11.19 01.42	
o-Terphenyl	84-15-1	104	%	70-135	05.11.19 01.42	

Certificate of Analytical Results 623939

LT Environmental, Inc., Arvada, CO

Remuda Basin 4-24-30

Sample Id:	**SS01A**	Matrix:	Soil	Date Received:	05.10.19 11.00
Lab Sample Id:	623939-001	Date Collected:	05.07.19 13.12	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.10.19 11.15	Basis:	Wet Weight
Seq Number:	3088828				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	05.10.19 17.40	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	05.10.19 17.40	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	05.10.19 17.40	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	05.10.19 17.40	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	05.10.19 17.40	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	05.10.19 17.40	U	1
Total BTEX		<0.00198	0.00198	mg/kg	05.10.19 17.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	05.10.19 17.40	
4-Bromofluorobenzene	460-00-4	83	%	70-130	05.10.19 17.40	

Certificate of Analytical Results 623939

LT Environmental, Inc., Arvada, CO

Remuda Basin 4-24-30

Sample Id:	**SS01B**	Matrix:	Soil	Date Received:	05.10.19 11.00
Lab Sample Id:	623939-002	Date Collected:	05.07.19 13.14	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	05.11.19 11.30	Basis:	Wet Weight
Seq Number:	3088756				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**125**	5.05	mg/kg	05.11.19 15.07		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.10.19 17.00	Basis:	Wet Weight
Seq Number:	3088790				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.11.19 02.02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.11.19 02.02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.11.19 02.02	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.11.19 02.02	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.11.19 02.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	05.11.19 02.02	
o-Terphenyl	84-15-1	103	%	70-135	05.11.19 02.02	

Certificate of Analytical Results 623939

LT Environmental, Inc., Arvada, CO

Remuda Basin 4-24-30

Sample Id:	**SS01B**	Matrix:	Soil	Date Received:	05.10.19 11.00
Lab Sample Id:	623939-002	Date Collected:	05.07.19 13.14	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.10.19 11.15	Basis:	Wet Weight
Seq Number:	3088828				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	05.10.19 17.59	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	05.10.19 17.59	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	05.10.19 17.59	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	05.10.19 17.59	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	05.10.19 17.59	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	05.10.19 17.59	U	1
Total BTEX		<0.00201	0.00201	mg/kg	05.10.19 17.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	88	%	70-130	05.10.19 17.59	
1,4-Difluorobenzene	540-36-3	103	%	70-130	05.10.19 17.59	

Certificate of Analytical Results 623939

LT Environmental, Inc., Arvada, CO

Remuda Basin 4-24-30

Sample Id:	**SS02A**	Matrix:	Soil	Date Received:	05.10.19 11.00
Lab Sample Id:	623939-003	Date Collected:	05.07.19 12.55	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	05.11.19 11.30	Basis:	Wet Weight
Seq Number:	3088756				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**81.7**	4.96	mg/kg	05.11.19 15.23		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.10.19 17.00	Basis:	Wet Weight
Seq Number:	3088790				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.11.19 02.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.11.19 02.22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.11.19 02.22	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.11.19 02.22	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.11.19 02.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	05.11.19 02.22	
o-Terphenyl	84-15-1	100	%	70-135	05.11.19 02.22	

Certificate of Analytical Results 623939

LT Environmental, Inc., Arvada, CO

Remuda Basin 4-24-30

Sample Id:	**SS02A**	Matrix:	Soil	Date Received:	05.10.19 11.00
Lab Sample Id:	623939-003	Date Collected:	05.07.19 12.55	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.10.19 11.15	Basis:	Wet Weight
Seq Number:	3088828				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	05.10.19 18.18	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	05.10.19 18.18	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	05.10.19 18.18	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	05.10.19 18.18	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	05.10.19 18.18	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	05.10.19 18.18	U	1
Total BTEX		<0.00199	0.00199	mg/kg	05.10.19 18.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	89	%	70-130	05.10.19 18.18	
1,4-Difluorobenzene	540-36-3	100	%	70-130	05.10.19 18.18	

Certificate of Analytical Results 623939

LT Environmental, Inc., Arvada, CO

Remuda Basin 4-24-30

Sample Id:	**SS02B**	Matrix:	Soil	Date Received:	05.10.19 11.00
Lab Sample Id:	623939-004	Date Collected:	05.07.19 13.00	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	05.11.19 11.30	Basis:	Wet Weight
Seq Number:	3088756				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.02	5.02	mg/kg	05.11.19 15.28	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.10.19 17.00	Basis:	Wet Weight
Seq Number:	3088790				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.11.19 02.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.11.19 02.43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.11.19 02.43	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.11.19 02.43	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.11.19 02.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	05.11.19 02.43	
o-Terphenyl	84-15-1	98	%	70-135	05.11.19 02.43	

Certificate of Analytical Results 623939

LT Environmental, Inc., Arvada, CO

Remuda Basin 4-24-30

Sample Id:	**SS02B**	Matrix:	Soil	Date Received:	05.10.19 11.00
Lab Sample Id:	623939-004	Date Collected:	05.07.19 13.00	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.10.19 11.15	Basis:	Wet Weight
Seq Number:	3088828				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.10.19 18.37	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.10.19 18.37	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.10.19 18.37	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	05.10.19 18.37	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.10.19 18.37	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.10.19 18.37	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.10.19 18.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	84	%	70-130	05.10.19 18.37	
1,4-Difluorobenzene	540-36-3	100	%	70-130	05.10.19 18.37	

Certificate of Analytical Results 623939

LT Environmental, Inc., Arvada, CO

Remuda Basin 4-24-30

Sample Id:	**SS03A**	Matrix:	Soil	Date Received:	05.10.19 11.00
Lab Sample Id:	623939-005	Date Collected:	05.07.19 13.42	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	05.11.19 11.30	Basis:	Wet Weight
Seq Number:	3088756				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**47.1**	5.05	mg/kg	05.11.19 15.33		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.10.19 17.00	Basis:	Wet Weight
Seq Number:	3088790				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.11.19 03.44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.11.19 03.44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.11.19 03.44	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.11.19 03.44	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.11.19 03.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	05.11.19 03.44	
o-Terphenyl	84-15-1	100	%	70-135	05.11.19 03.44	

Certificate of Analytical Results 623939

LT Environmental, Inc., Arvada, CO

Remuda Basin 4-24-30

Sample Id:	**SS03A**	Matrix:	Soil	Date Received:	05.10.19 11.00
Lab Sample Id:	623939-005	Date Collected:	05.07.19 13.42	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.10.19 11.15	Basis:	Wet Weight
Seq Number:	3088828				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	05.10.19 19.51	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	05.10.19 19.51	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	05.10.19 19.51	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	05.10.19 19.51	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	05.10.19 19.51	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	05.10.19 19.51	U	1
Total BTEX		<0.00201	0.00201	mg/kg	05.10.19 19.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	05.10.19 19.51	
4-Bromofluorobenzene	460-00-4	86	%	70-130	05.10.19 19.51	

Certificate of Analytical Results 623939

LT Environmental, Inc., Arvada, CO

Remuda Basin 4-24-30

Sample Id:	**SS03B**	Matrix:	Soil	Date Received:	05.10.19 11.00
Lab Sample Id:	623939-006	Date Collected:	05.07.19 13.48	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	05.11.19 11.30	Basis:	Wet Weight
Seq Number:	3088756				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**61.3**	5.03	mg/kg	05.11.19 15.38		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.10.19 17.00	Basis:	Wet Weight
Seq Number:	3088790				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.11.19 04.04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.11.19 04.04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.11.19 04.04	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.11.19 04.04	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.11.19 04.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	05.11.19 04.04	
o-Terphenyl	84-15-1	95	%	70-135	05.11.19 04.04	

Certificate of Analytical Results 623939

LT Environmental, Inc., Arvada, CO

Remuda Basin 4-24-30

Sample Id:	**SS03B**	Matrix:	Soil	Date Received:	05.10.19 11.00
Lab Sample Id:	623939-006	Date Collected:	05.07.19 13.48	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.10.19 11.15	Basis:	Wet Weight
Seq Number:	3088828				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	05.10.19 20.10	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	05.10.19 20.10	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	05.10.19 20.10	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	05.10.19 20.10	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	05.10.19 20.10	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	05.10.19 20.10	U	1
Total BTEX		<0.00202	0.00202	mg/kg	05.10.19 20.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	90	%	70-130	05.10.19 20.10	
4-Bromofluorobenzene	460-00-4	69	%	70-130	05.10.19 20.10	**

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 623939

LT Environmental, Inc.

Remuda Basin 4-24-30

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3088755 Matrix: Solid Date Prep: 05.11.19
MB Sample Id: 7677656-1-BLK LCS Sample Id: 7677656-1-BKS LCSD Sample Id: 7677656-1-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	239	96	239	96	90-110	0	20	mg/kg	05.11.19 12:07	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3088756 Matrix: Solid Date Prep: 05.11.19
MB Sample Id: 7677657-1-BLK LCS Sample Id: 7677657-1-BKS LCSD Sample Id: 7677657-1-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	243	97	243	97	90-110	0	20	mg/kg	05.11.19 14:57	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3088755 Matrix: Soil Date Prep: 05.11.19
Parent Sample Id: 623945-001 MS Sample Id: 623945-001 S MSD Sample Id: 623945-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	145	250	364	88	364	88	90-110	0	20	mg/kg	05.11.19 12:22	X

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3088755 Matrix: Soil Date Prep: 05.11.19
Parent Sample Id: 623945-011 MS Sample Id: 623945-011 S MSD Sample Id: 623945-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	653	250	776	49	780	51	90-110	1	20	mg/kg	05.11.19 13:34	X

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3088756 Matrix: Soil Date Prep: 05.11.19
Parent Sample Id: 623905-003 MS Sample Id: 623905-003 S MSD Sample Id: 623905-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	412	249	649	95	652	96	90-110	0	20	mg/kg	05.11.19 16:24	

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 623939

LT Environmental, Inc.

Remuda Basin 4-24-30

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3088756 Matrix: Soil Date Prep: 05.11.19
Parent Sample Id: 623939-002 MS Sample Id: 623939-002 S MSD Sample Id: 623939-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	125	253	361	93	361	93	90-110	0	20	mg/kg	05.11.19 15:12	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3088790 Matrix: Solid Date Prep: 05.10.19
MB Sample Id: 7677670-1-BLK LCS Sample Id: 7677670-1-BKS LCSD Sample Id: 7677670-1-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	962	96	996	100	70-135	3	20	mg/kg	05.10.19 22:20	
Diesel Range Organics (DRO)	<8.13	1000	974	97	1020	102	70-135	5	20	mg/kg	05.10.19 22:20	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	95		125		125		70-135	%	05.10.19 22:20
o-Terphenyl	96		122		128		70-135	%	05.10.19 22:20

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3088790 Matrix: Soil Date Prep: 05.10.19
Parent Sample Id: 623937-001 MS Sample Id: 623937-001 S MSD Sample Id: 623937-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	999	1010	101	1030	103	70-135	2	20	mg/kg	05.10.19 23:19	
Diesel Range Organics (DRO)	<8.12	999	1040	104	1050	105	70-135	1	20	mg/kg	05.10.19 23:19	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	126		127		70-135	%	05.10.19 23:19
o-Terphenyl	127		122		70-135	%	05.10.19 23:19

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 623939

LT Environmental, Inc.

Remuda Basin 4-24-30

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

Seq Number: 3088828 Matrix: Solid Date Prep: 05.10.19

MB Sample Id: 7677732-1-BLK LCS Sample Id: 7677732-1-BKS LCSD Sample Id: 7677732-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000383	0.0994	0.117	118	0.123	122	70-130	5	35	mg/kg	05.10.19 13:52	
Toluene	<0.000453	0.0994	0.108	109	0.113	112	70-130	5	35	mg/kg	05.10.19 13:52	
Ethylbenzene	<0.000561	0.0994	0.114	115	0.120	119	70-130	5	35	mg/kg	05.10.19 13:52	
m,p-Xylenes	<0.00101	0.199	0.237	119	0.250	124	70-130	5	35	mg/kg	05.10.19 13:52	
o-Xylene	<0.000342	0.0994	0.114	115	0.121	120	70-130	6	35	mg/kg	05.10.19 13:52	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		103		104		70-130	%	05.10.19 13:52
4-Bromofluorobenzene	76		86		87		70-130	%	05.10.19 13:52

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

Seq Number: 3088828 Matrix: Soil Date Prep: 05.10.19

Parent Sample Id: 623937-001 MS Sample Id: 623937-001 S MSD Sample Id: 623937-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000387	0.101	0.105	104	0.0641	64	70-130	48	35	mg/kg	05.10.19 14:30	XF
Toluene	<0.000458	0.101	0.0969	96	0.0564	57	70-130	53	35	mg/kg	05.10.19 14:30	XF
Ethylbenzene	<0.000568	0.101	0.102	101	0.0565	57	70-130	57	35	mg/kg	05.10.19 14:30	XF
m,p-Xylenes	<0.00102	0.201	0.210	104	0.116	58	70-130	58	35	mg/kg	05.10.19 14:30	XF
o-Xylene	0.000388	0.101	0.101	100	0.0557	55	70-130	58	35	mg/kg	05.10.19 14:30	XF

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		102		70-130	%	05.10.19 14:30
4-Bromofluorobenzene	87		85		70-130	%	05.10.19 14:30

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

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

Work Order No: 623939

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 ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Remuda Basin 4-24-30	Turn Around	
Project Number:		Routine ☐	
P.O. Number:	2RP-5335	Rush: ~~Std~~ 1 day	
Sampler's Name:	Robert McAfee	Due Date: 05/10/19	

SAMPLE RECEIPT				
Temperature (°C):	3.4 / 3.3	Temp Blank: Yes (No)	Wet Ice: (Yes) No	
Received Intact:	(Yes) No	Thermometer ID	R8	
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.1	
Sample Custody Seals:	Yes No (N/A)	Total Containers:		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
SS01 A	S	05/07/19	1312	3'	1	X	X	X
SS01 B			1314	4'		X	X	X
SS02 A			1255	1'		X	X	X
SS02 B			1300	4'		X	X	X
SS03 A			1342	2'		X	X	X
SS03 B			1348	4'		X	X	X

Work Order Notes

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

Sample Comments

discrete

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			05-08-19 17:00			5/10/19
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

Final 1.000

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XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 05/10/2019 11:00:00 AM

Work Order #: 623939

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

Temperature Measuring device used : -0.1

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	3.3
#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)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 05/10/2019

Brianna Teel

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

Jessica Kramer

Southwestern view of release area during delineation activities.

Project: 012919050	XTO Energy, Inc. Poker Lake Unit Remuda Basin 4-24-30 USA Battery	LTE Advancing Opportunity
May 7, 2019	Photographic Log	

Western view of release area during delineation activities.

Project: 012919050	XTO Energy, Inc. Poker Lake Unit Remuda Basin 4-24-30 USA Battery	LTE Advancing Opportunity
May 7, 2019	Photographic Log	