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	NRM2007254419
District RP	
Facility ID	
Application ID	

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)*
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.276894 Longitude -103.931863
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Remuda South 25 State 167H	Site Type Well Pad
Date Release Discovered 02/29/2020	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
H	25	23S	29E	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) 5	Volume Recovered (bbls) 4
	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 defective flange caused a release of produced water. Approximately 4 bbls of fluid sprayed into the containment and 1 bbl out of containment onto the well pad. Vacuum truck was dispatched and recovered 4 bbls. A third party contractor will be retained to complete remediation activities.

Form C-141 State of New Mexico
Oil Conservation Division

Incident ID	NRM2007254119
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release? 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: Adrian Baker Title: SH&E Coordinator

Signature: Date: 3/11/20

email: adrian_baker@xtoenergy.com Telephone:

OCD Only

Received by: Ramona Marcus Date: 3/12/2020

NRM2007254419

Location:	**Remuda South 25 State 167H**	
Spill Date:	**2/29/2020**	

Area 1		
Approximate Area =	22.50	cu. ft.
VOLUME OF LEAK		
Total Produced Water =	4.00	bbls

Area 2		
Approximate Area =	2235.00	sq. ft.
Average Saturation (or depth) of spill =	1.00	inches

Average Porosity Factor =	0.03	

VOLUME OF LEAK		
Total Produced Water =	1.00	bbls

TOTAL VOLUME OF LEAK		
Total Produced Water =	**5.00**	**bbls**
TOTAL VOLUME RECOVERED		
Total Produced Water =	**4.00**	**bbls**

Incident ID	NRM2007254419
District RP	
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?	<50 (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	NRM2007254419
District RP	
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 Supervisor

Signature: Date: 05/27/2020

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

OCD Only

Received by: Date:

Incident ID	NRM2007254419
District RP	
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 Supervisor

Signature: Date: 05/27/2020

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: Date:

Printed Name: Title:

LT Environmental, Inc.
3300 North "A" Street
Building 1, Unit 222
Midland, Texas 79705
432.704.5178

May 27, 2020

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

RE: Closure Request
Remuda South 25 State 167H
Incident Number NRM2007254419
Eddy County, New Mexico

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following Closure Request detailing site assessment and soil sampling activities at the Remuda South 25 State 167H (Site) in Unit H, Section 25, Township 23 South, Range 29 East, in Eddy County, New Mexico (Figure 1). The purpose of the site assessment and soil sampling activities was to assess for the presence or absence of impacted to soil following the release of produced water at the Site. Based on field observations, field screening, and laboratory analytical results from soil sampling activities, XTO is submitting this Closure Request and requesting no further action (NFA) for Incident Number NRM2007254419.

RELEASE BACKGROUND

On February 29, 2020, a defective flange caused the release of 5 barrels (bbls) of produced water. Approximately 4 bbls of fluid were released within the containment and 1 bbl sprayed onto the surrounding caliche well pad. A vacuum truck was dispatched to the Site to recover the freestanding fluids; approximately 4 bbls of produced water were recovered from within the containment. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 (Form C-141) on March 11, 2020 and subsequently assigned Incident Number NRM2007254419.

SITE CHARACTERIZATION

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 between 50 and 100 feet below ground surface (bgs) based on the nearest groundwater well data. The nearest permitted groundwater well with depth to groundwater data is United States Geological Survey (USGS) well 321717103561001, located approximately 4,406 feet northwest of the Site. The groundwater well has a reported depth to groundwater of less than 50 feet bgs, and the total depth is

undetermined. Ground surface elevation at the groundwater well location is 3,034 feet above mean sea level (amsl), which is approximately 60 feet lower in elevation than the Site. The closest continuously flowing water or significant watercourse to the Site is an unnamed dry wash, located approximately 630 feet west-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 potentially underlain by unstable geology (high potential karst designation area). The Site receptors are identified on Figure 1.

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
- Total petroleum hydrocarbons (TPH): 100 mg/kg
- Chloride: 600 mg/kg

SITE ASSESSMENT AND DELINEATION SOIL SAMPLING ACTIVITIES

On May 12, 2020, LTE personnel inspected the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. LTE personnel collected two preliminary soil samples (SS01 and SS02) from within the release extent at a depth of approximately 0.5 feet bgs to assess for the presence or absence of impacted surface soil. Soil from the preliminary soil samples was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photoionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. The release extent and preliminary soil sample locations were mapped utilizing a handheld Global Positing System (GPS) unit and are depicted on Figure 2. Photo documentation of the release was conducted, and a photographic log of the Site is included as Attachment 1.

The preliminary 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 transported at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Xenco Laboratories (Xenco) in Carlsbad, New Mexico, for analysis of BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

Laboratory analytical results for preliminary soil samples SS01 and SS02 indicated that benzene, BTEX, TPH, and chloride concentrations were compliant with the Closure Criteria. Excavation activities did not appear to be warranted; however, further delineation activities were scheduled. Laboratory analytical results for the preliminary soil samples are presented on Figure 2 and summarized in Table 1. The laboratory analytical report is included in Attachment 2.

On May 18, 2020, LTE personnel returned to the Site to oversee additional soil assessment activities. Two potholes were advanced via track-mounted backhoe to a depth of approximately 3 feet bgs at the SS01 and SS02 preliminary soil sample locations. Soil from the potholes was field screened utilizing a PID and Hach® chloride QuanTab® test strips. Field screening results and observations for each pothole were logged on lithologic/soil sampling logs, which are included in Attachment 3. Delineation soil samples SS01A and SS02A were collected at a depth of 3 feet bgs from each pothole. The delineation soil samples were collected, handled, and analyzed as described above and submitted to Xenco. The pothole and delineation soil sample locations are depicted on Figure 2.

ANALYTICAL RESULTS

Laboratory analytical results indicated benzene, BTEX, TPH, and chloride concentrations were compliant with the Closure Criteria in soil samples SS01/SS01A and SS02/SS02A collected within the release extent from depths of 0.5 feet and 3 feet bgs. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Attachment 2.

CONCLUSIONS

Initial and follow-up response efforts as a result of the produced water release included removal of freestanding fluid via vacuum truck, site assessment, and collection of soil samples. Preliminary soil samples SS01 and SS02 and delineation soil samples SS01A and SS02A were collected from within the release area from depths of 0.5 feet and 3 feet bgs to assess for the presence or absence of soil impacts as a result of the February 29, 2020, release. Laboratory analytical results for soil samples SS01/SS01A and SS02/SS02A indicated that benzene, BTEX, TPH, and chloride concentrations were compliant with the Closure Criteria. Based on the analytical results, no impacted soil was identified, and excavation activities did not appear to be warranted. XTO respectfully requests NFA for Incident Number NRM2007254419.

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

Sincerely,

LT ENVIRONMENTAL, INC.

Carol Ann Whaley
Staff Geoscientist

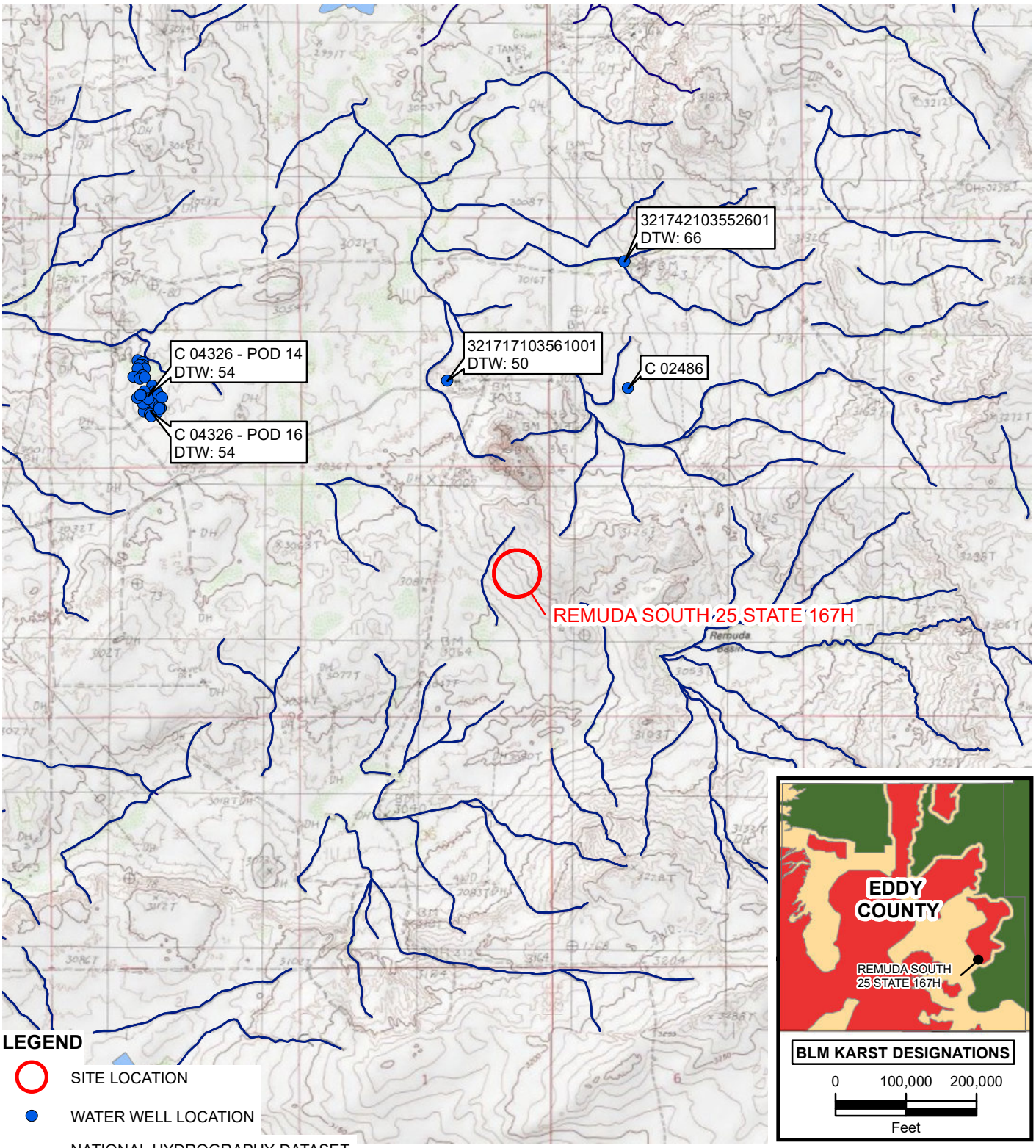
Ashley L. Ager, P.G.
Senior Geologist

cc: Kyle Littrell, XTO
Ryan Mann, State Land Office
Robert Hamlet, NMOCD
Victoria Venegas, NMOCD

Appendices:

Figure 1	Site Location Map
Figure 2	Soil Sample Locations
Table 1	Soil Analytical Results
Attachment 1	Photographic Logs
Attachment 2	Laboratory Analytical Reports
Attachment 3	Lithologic/Soil Sampling Logs

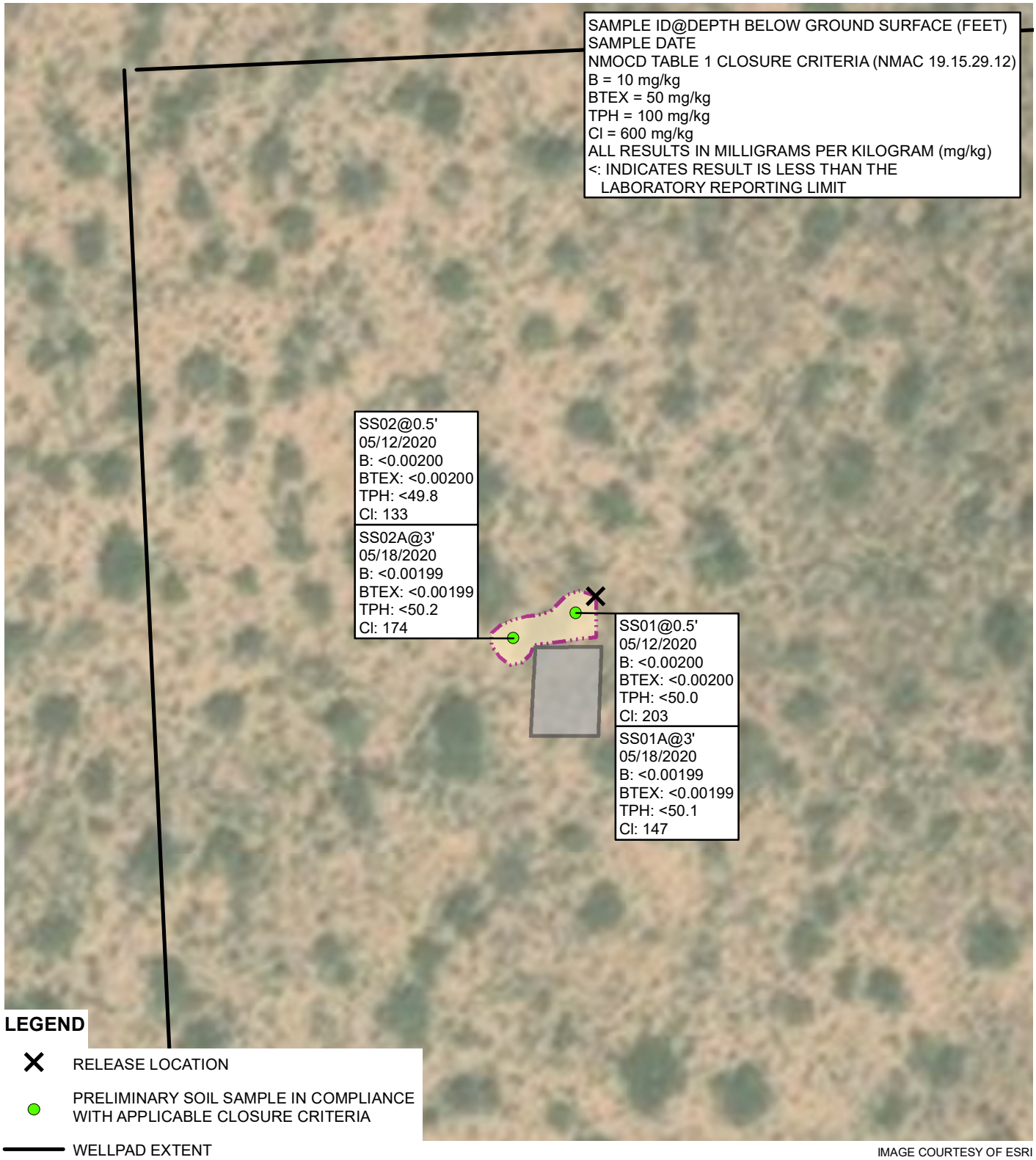
FIGURES



NOTE: INCIDENT NUMBER NRM2007254419
DTW: DEPTH TO WATER IN FEET
BLM: BUREAU OF LAND MANAGEMENT

FIGURE 1
SITE LOCATION MAP
REMUDA SOUTH 25 STATE 167H
UNIT H SEC 25 T23S R29E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012920038_REMUDA SOUTH 25 STATE 167H\012920038_FIG01_SL_RECEPTOR_2020.mxd



B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
TPH: TOTAL PETROLEUM HYDROCARBONS
Cl: CHLORIDE
NMAC: NEW MEXICO ADMINISTRATIVE CODE
NMOCD: NEW MEXICO OIL CONSERVATION DIVISION
NOTE: INCIDENT NUMBER NRM2007254419

FIGURE 2
PRELIMINARY SOIL SAMPLE LOCATIONS
REMUDA SOUTH 25 STATE 167H
UNIT H SEC 25 T23S R29E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012920038_REMUDA SOUTH 25 STATE 167H\012920038_FIG02_PRELIMINARY_2020.mxd

TABLES

TABLE 1
SOIL ANALYTICAL RESULTS

REMUDA SOUTH 25 STATE 167H
INCIDENT NUMBER NRM2007254419
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)
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	NE	**100**	**600**
SS01	0.5	05/12/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	203
SS01A	3	05/18/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.1	<50.1	<50.1	<50.1	<50.1	147
SS02	0.5	05/12/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	133
SS02A	3	05/18/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.2	<50.2	<50.2	<50.2	<50.2	174

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

A proud member of WSP

ATTACHMENT 1: PHOTOGRAPHIC LOG

PHOTOGRAPHIC LOG

Northern view of release extent during site assessment activities.

Southern view of release extent during delineation soil sampling activities.

ATTACHMENT 2: LABORATORY ANALYTICAL REPORTS

Certificate of Analysis Summary 661298

LT Environmental, Inc., Arvada, CO

Project Name: Remuda South 25 State167H

Project Id: 012920038
Contact: Dan Moir
Project Location:

Date Received in Lab: Tue 05.12.2020 14:00
Report Date: 05.15.2020 08:46
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	661298-001				661298-002							
	Field Id:	SS01				SS02							
	Depth:	0.5- ft				0.5- ft							
	Matrix:	SOIL				SOIL							
	Sampled:	05.12.2020 09:10				05.12.2020 09:30							
BTEX by EPA 8021B	***Extracted:***	05.12.2020 14:21				05.12.2020 14:21							
	Analyzed:	05.13.2020 08:49				05.13.2020 09:09							
	Units/RL:	mg/kg	RL			mg/kg	RL						
Benzene		<0.00200	0.00200			<0.00200	0.00200						
Toluene		<0.00200	0.00200			<0.00200	0.00200						
Ethylbenzene		<0.00200	0.00200			<0.00200	0.00200						
m,p-Xylenes		<0.00399	0.00399			<0.00399	0.00399						
o-Xylene		<0.00200	0.00200			<0.00200	0.00200						
Total Xylenes		<0.00200	0.00200			<0.00200	0.00200						
Total BTEX		<0.00200	0.00200			<0.00200	0.00200						
Chloride by EPA 300	***Extracted:***	05.12.2020 17:00				05.12.2020 17:00							
	Analyzed:	05.13.2020 01:17				05.13.2020 01:23							
	Units/RL:	mg/kg	RL			mg/kg	RL						
Chloride		203	49.9			133	50.1						
TPH by SW8015 Mod	***Extracted:***	05.13.2020 11:40				05.13.2020 11:40							
	Analyzed:	05.14.2020 11:01				05.14.2020 04:17							
	Units/RL:	mg/kg	RL			mg/kg	RL						
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0			<49.8	49.8						
Diesel Range Organics (DRO)		<50.0	50.0			<49.8	49.8						
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0			<49.8	49.8						
Total GRO-DRO		<50.0	50.0			<49.8	49.8						
Total TPH		<50.0	50.0			<49.8	49.8						

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

Jessica Kramer
Project Manager

Analytical Report 661298

for

LT Environmental, Inc.

Project Manager: Dan Moir

Remuda South 25 State167H

012920038

05.15.2020

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-32), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-23), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

05.15.2020

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

Reference: XENCO Report No(s): **661298**
Remuda South 25 State167H
Project Address:

Dan Moir:

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) 661298. 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. 661298 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 Manager

A Small Business and Minority Company

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

Sample Cross Reference 661298

LT Environmental, Inc., Arvada, CO

Remuda South 25 State167H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	05.12.2020 09:10	0.5 ft	661298-001
SS02	S	05.12.2020 09:30	0.5 ft	661298-002

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Remuda South 25 State167H

Project ID: *012920038*
Work Order Number(s): *661298*

Report Date: *05.15.2020*
Date Received: *05.12.2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analytical Results 661298

LT Environmental, Inc., Arvada, CO

Remuda South 25 State167H

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	05.12.2020 14:00
Lab Sample Id:	661298-001	Date Collected:	05.12.2020 09:10	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.12.2020 17:00	Basis:	Wet Weight
Seq Number:	3125748				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**203**	49.9	mg/kg	05.13.2020 01:17		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	05.13.2020 11:40	Basis:	Wet Weight
Seq Number:	3125908				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	05.14.2020 11:01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	05.14.2020 11:01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	05.14.2020 11:01	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	05.14.2020 11:01	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	05.14.2020 11:01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	118	%	70-135	05.14.2020 11:01	
o-Terphenyl	84-15-1	121	%	70-135	05.14.2020 11:01	

Certificate of Analytical Results 661298

LT Environmental, Inc., Arvada, CO

Remuda South 25 State167H

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	05.12.2020 14:00
Lab Sample Id:	661298-001	Date Collected:	05.12.2020 09:10	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.12.2020 14:21	Basis:	Wet Weight
Seq Number:	3125867				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.13.2020 08:49	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.13.2020 08:49	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.13.2020 08:49	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	05.13.2020 08:49	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.13.2020 08:49	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.13.2020 08:49	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.13.2020 08:49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	70-130	05.13.2020 08:49	
1,4-Difluorobenzene	540-36-3	106	%	70-130	05.13.2020 08:49	

Certificate of Analytical Results 661298

LT Environmental, Inc., Arvada, CO

Remuda South 25 State167H

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	05.12.2020 14:00
Lab Sample Id:	661298-002	Date Collected:	05.12.2020 09:30	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.12.2020 17:00	Basis:	Wet Weight
Seq Number:	3125748				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**133**	50.1	mg/kg	05.13.2020 01:23		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	05.13.2020 11:40	Basis:	Wet Weight
Seq Number:	3125908				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	05.14.2020 04:17	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	05.14.2020 04:17	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	05.14.2020 04:17	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	05.14.2020 04:17	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	05.14.2020 04:17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	05.14.2020 04:17	
o-Terphenyl	84-15-1	115	%	70-135	05.14.2020 04:17	

Certificate of Analytical Results 661298

LT Environmental, Inc., Arvada, CO

Remuda South 25 State167H

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	05.12.2020 14:00
Lab Sample Id:	661298-002	Date Collected:	05.12.2020 09:30	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.12.2020 14:21	Basis:	Wet Weight
Seq Number:	3125867				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.13.2020 09:09	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.13.2020 09:09	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.13.2020 09:09	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	05.13.2020 09:09	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.13.2020 09:09	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.13.2020 09:09	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.13.2020 09:09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	05.13.2020 09:09	
4-Bromofluorobenzene	460-00-4	99	%	70-130	05.13.2020 09:09	

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. **ND** Not Detected.

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 661298

LT Environmental, Inc.

Remuda South 25 State167H

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3125748 — Matrix: Solid — Date Prep: 05.12.2020
MB Sample Id: 7703192-1-BLK — LCS Sample Id: 7703192-1-BKS — LCSD Sample Id: 7703192-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	251	100	250	100	90-110	0	20	mg/kg	05.12.2020 22:33	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3125748 — Matrix: Soil — Date Prep: 05.12.2020
Parent Sample Id: 661220-014 — MS Sample Id: 661220-014 S — MSD Sample Id: 661220-014 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	55.9	200	251	98	253	98	90-110	1	20	mg/kg	05.12.2020 22:50	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3125748 — Matrix: Soil — Date Prep: 05.12.2020
Parent Sample Id: 661295-003 — MS Sample Id: 661295-003 S — MSD Sample Id: 661295-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1150	201	1330	90	1350	99	90-110	1	20	mg/kg	05.13.2020 00:13	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3125908 — Matrix: Solid — Date Prep: 05.13.2020
MB Sample Id: 7703305-1-BLK — LCS Sample Id: 7703305-1-BKS — LCSD Sample Id: 7703305-1-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)	<50.0	1000	991	99	996	100	70-135	1	35	mg/kg	05.14.2020 09:59	
Diesel Range Organics (DRO)	<50.0	1000	1110	111	1090	109	70-135	2	35	mg/kg	05.14.2020 09:59	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	135		123		122		70-135	%	05.14.2020 09:59
o-Terphenyl	135		124		121		70-135	%	05.14.2020 09:59

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3125908 — Matrix: Solid — Date Prep: 05.13.2020
MB Sample Id: 7703305-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	05.13.2020 12:23	

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

QC Summary 661298

LT Environmental, Inc.

Remuda South 25 State167H

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3125908 Matrix: Soil Date Prep: 05.13.2020
Parent Sample Id: 661180-001 MS Sample Id: 661180-001 S MSD Sample Id: 661180-001 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)	<50.1	1000	1010	101	1040	104	70-135	3	35	mg/kg	05.13.2020 23:07	
Diesel Range Organics (DRO)	1090	1000	2130	104	2300	121	70-135	8	35	mg/kg	05.13.2020 23:07	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	123		122		70-135	%	05.13.2020 23:07
o-Terphenyl	107		110		70-135	%	05.13.2020 23:07

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3125867 Matrix: Solid Date Prep: 05.12.2020
MB Sample Id: 7703235-1-BLK LCS Sample Id: 7703235-1-BKS LCSD Sample Id: 7703235-1-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	0.111	111	0.103	103	70-130	7	35	mg/kg	05.12.2020 23:25	
Toluene	<0.00200	0.100	0.106	106	0.0977	98	70-130	8	35	mg/kg	05.12.2020 23:25	
Ethylbenzene	<0.00200	0.100	0.0993	99	0.0915	92	71-129	8	35	mg/kg	05.12.2020 23:25	
m,p-Xylenes	<0.00400	0.200	0.201	101	0.185	93	70-135	8	35	mg/kg	05.12.2020 23:25	
o-Xylene	<0.00200	0.100	0.103	103	0.0947	95	71-133	8	35	mg/kg	05.12.2020 23:25	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		104		104		70-130	%	05.12.2020 23:25
4-Bromofluorobenzene	96		92		94		70-130	%	05.12.2020 23:25

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3125867 Matrix: Soil Date Prep: 05.12.2020
Parent Sample Id: 661298-001 MS Sample Id: 661298-001 S MSD Sample Id: 661298-001 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	0.104	104	0.0971	97	70-130	7	35	mg/kg	05.13.2020 00:06	
Toluene	<0.00200	0.0998	0.0970	97	0.0929	93	70-130	4	35	mg/kg	05.13.2020 00:06	
Ethylbenzene	<0.00200	0.0998	0.0887	89	0.0850	85	71-129	4	35	mg/kg	05.13.2020 00:06	
m,p-Xylenes	<0.00399	0.200	0.178	89	0.173	86	70-135	3	35	mg/kg	05.13.2020 00:06	
o-Xylene	<0.00200	0.0998	0.0911	91	0.0879	88	71-133	4	35	mg/kg	05.13.2020 00:06	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		103		70-130	%	05.13.2020 00:06
4-Bromofluorobenzene	94		100		70-130	%	05.13.2020 00:06

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

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: 6021298

Page 1 of 1

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A St. Bldg 1, Unit 222	Address:	3104 E Greene St.
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM
Phone:	(432) 701-2610	Email:	dmoir@ltenv.com rmcafee@ltenv.com

Work Order Comments

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

Project Name:	Remuda South 25 State 167H	Turn Around	
Project Number:	012920038	Routine	☑
P.O. Number:		Rush:	
Sampler's Name:	Robert McAfee	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	4.0	Thermometer ID		
Received Intact:	(Yes) No	T-NM-007		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes (No) N/A	Total Containers:	2	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
SS01	S	05/12/2020	0910	0.5'	1	X	X	X
SS02	S	05/12/2020	0930	0.5'	1	X	X	X

Work Order Notes

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

Sample Comments

SS01: discrete
SS02: 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		5/12/20 14:00	2		
			4		
			6		

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 05.12.2020 02.00.00 PM

Work Order #: 661298

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

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	4	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**	
#5 Custody Seals intact on sample bottles?	**Yes**	
#6*Custody Seals Signed and dated?	**Yes**	
#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**	Samples received in bulk containers
#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: Elizabeth McClellan Date: 05.12.2020

Checklist reviewed by: Jessica Kramer Date: 05.14.2020

Jessica Kramer

Certificate of Analysis Summary 661913

LT Environmental, Inc., Arvada, CO

Project Name: Remuda South 25 State 167H

Project Id: 012920038
Contact: Dan Moir
Project Location:

Date Received in Lab: Mon 05.18.2020 17:00
Report Date: 05.22.2020 15:02
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	661913-001		661913-002					
	Field Id:	SS01A		SS02A					
	Depth:	3- ft		3- ft					
	Matrix:	SOIL		SOIL					
	Sampled:	05.18.2020 09:52		05.18.2020 10:25					
BTEX by EPA 8021B	***Extracted:***	05.18.2020 17:37		05.18.2020 17:37					
	Analyzed:	05.19.2020 04:23		05.19.2020 04:43					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00199	0.00199	<0.00199	0.00199				
Toluene		<0.00199	0.00199	<0.00199	0.00199				
Ethylbenzene		<0.00199	0.00199	<0.00199	0.00199				
m,p-Xylenes		<0.00398	0.00398	<0.00398	0.00398				
o-Xylene		<0.00199	0.00199	<0.00199	0.00199				
Total Xylenes		<0.00199	0.00199	<0.00199	0.00199				
Total BTEX		<0.00199	0.00199	<0.00199	0.00199				
Chloride by EPA 300	***Extracted:***	05.18.2020 17:31		05.18.2020 17:31					
	Analyzed:	05.18.2020 20:38		05.18.2020 20:43					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		147	10.0	174	10.0				
TPH by SW8015 Mod	***Extracted:***	05.18.2020 17:30		05.18.2020 17:30					
	Analyzed:	05.18.2020 22:24		05.18.2020 22:44					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<50.1	50.1	<50.2	50.2				
Diesel Range Organics (DRO)		<50.1	50.1	<50.2	50.2				
Motor Oil Range Hydrocarbons (MRO)		<50.1	50.1	<50.2	50.2				
Total GRO-DRO		<50.1	50.1	<50.2	50.2				
Total TPH		<50.1	50.1	<50.2	50.2				

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

Jessica Kramer
Project Manager

Analytical Report 661913

for

LT Environmental, Inc.

Project Manager: Dan Moir

Remuda South 25 State 167H

012920038

05.22.2020

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-32), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-23), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-6)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

05.22.2020

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

Reference: XENCO Report No(s): **661913**
Remuda South 25 State 167H
Project Address:

Dan Moir:

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) 661913. 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. 661913 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 Manager

A Small Business and Minority Company

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

Sample Cross Reference 661913

LT Environmental, Inc., Arvada, CO

Remuda South 25 State 167H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01A	S	05.18.2020 09:52	3 ft	661913-001
SS02A	S	05.18.2020 10:25	3 ft	661913-002

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Remuda South 25 State 167H

Project ID: *012920038*
Work Order Number(s): *661913*

Report Date: *05.22.2020*
Date Received: *05.18.2020*

Sample receipt non conformances and comments:

V1.001 Revision (client email) Corrected sample date from 05/17/20 to 05/18/20 JK 05/22/20

Sample receipt non conformances and comments per sample:

None

Certificate of Analytical Results 661913

LT Environmental, Inc., Arvada, CO

Remuda South 25 State 167H

Sample Id:	**SS01A**	Matrix:	Soil	Date Received:	05.18.2020 17:00
Lab Sample Id:	661913-001	Date Collected:	05.18.2020 09:52	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.18.2020 17:31	Basis:	Wet Weight
Seq Number:	3126324				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**147**	10.0	mg/kg	05.18.2020 20:38		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	05.18.2020 17:30	Basis:	Wet Weight
Seq Number:	3126293				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	05.18.2020 22:24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	05.18.2020 22:24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	05.18.2020 22:24	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	05.18.2020 22:24	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	05.18.2020 22:24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	05.18.2020 22:24	
o-Terphenyl	84-15-1	116	%	70-135	05.18.2020 22:24	

Certificate of Analytical Results 661913

LT Environmental, Inc., Arvada, CO

Remuda South 25 State 167H

Sample Id:	**SS01A**	Matrix:	Soil	Date Received:	05.18.2020 17:00
Lab Sample Id:	661913-001	Date Collected:	05.18.2020 09:52	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.18.2020 17:37	Basis:	Wet Weight
Seq Number:	3126321				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	05.19.2020 04:23	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	05.19.2020 04:23	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	05.19.2020 04:23	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	05.19.2020 04:23	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	05.19.2020 04:23	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	05.19.2020 04:23	U	1
Total BTEX		<0.00199	0.00199	mg/kg	05.19.2020 04:23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	70-130	05.19.2020 04:23	
1,4-Difluorobenzene	540-36-3	106	%	70-130	05.19.2020 04:23	

Certificate of Analytical Results 661913

LT Environmental, Inc., Arvada, CO

Remuda South 25 State 167H

Sample Id:	**SS02A**	Matrix:	Soil	Date Received:	05.18.2020 17:00
Lab Sample Id:	661913-002	Date Collected:	05.18.2020 10:25	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.18.2020 17:31	Basis:	Wet Weight
Seq Number:	3126324				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**174**	10.0	mg/kg	05.18.2020 20:43		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	05.18.2020 17:30	Basis:	Wet Weight
Seq Number:	3126293				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	05.18.2020 22:44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	05.18.2020 22:44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	05.18.2020 22:44	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	05.18.2020 22:44	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	05.18.2020 22:44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	05.18.2020 22:44	
o-Terphenyl	84-15-1	120	%	70-135	05.18.2020 22:44	

Certificate of Analytical Results 661913

LT Environmental, Inc., Arvada, CO

Remuda South 25 State 167H

Sample Id:	**SS02A**	Matrix:	Soil	Date Received:	05.18.2020 17:00
Lab Sample Id:	661913-002	Date Collected:	05.18.2020 10:25	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.18.2020 17:37	Basis:	Wet Weight
Seq Number:	3126321				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	05.19.2020 04:43	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	05.19.2020 04:43	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	05.19.2020 04:43	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	05.19.2020 04:43	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	05.19.2020 04:43	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	05.19.2020 04:43	U	1
Total BTEX		<0.00199	0.00199	mg/kg	05.19.2020 04:43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	05.19.2020 04:43	
4-Bromofluorobenzene	460-00-4	99	%	70-130	05.19.2020 04:43	

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. **ND** Not Detected.

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 661913

LT Environmental, Inc.

Remuda South 25 State 167H

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3126324 — Matrix: Solid — Date Prep: 05.18.2020
MB Sample Id: 7703550-1-BLK — LCS Sample Id: 7703550-1-BKS — LCSD Sample Id: 7703550-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	250	100	248	99	90-110	1	20	mg/kg	05.18.2020 16:41	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3126324 — Matrix: Soil — Date Prep: 05.18.2020
Parent Sample Id: 661850-007 — MS Sample Id: 661850-007 S — MSD Sample Id: 661850-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	139	200	348	105	348	105	90-110	0	20	mg/kg	05.18.2020 16:59	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3126324 — Matrix: Soil — Date Prep: 05.18.2020
Parent Sample Id: 661912-002 — MS Sample Id: 661912-002 S — MSD Sample Id: 661912-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	342	201	524	91	523	90	90-110	0	20	mg/kg	05.18.2020 20:14	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3126293 — Matrix: Solid — Date Prep: 05.18.2020
MB Sample Id: 7703561-1-BLK — LCS Sample Id: 7703561-1-BKS — LCSD Sample Id: 7703561-1-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)	<50.0	1000	976	98	920	92	70-135	6	35	mg/kg	05.18.2020 14:48	
Diesel Range Organics (DRO)	<50.0	1000	1130	113	1080	108	70-135	5	35	mg/kg	05.18.2020 14:48	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	98		122		115		70-135	%	05.18.2020 14:48
o-Terphenyl	109		129		123		70-135	%	05.18.2020 14:48

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3126293 — Matrix: Solid — Date Prep: 05.18.2020
MB Sample Id: 7703561-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	05.18.2020 14:27	

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 661913

LT Environmental, Inc.

Remuda South 25 State 167H

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3126293 Matrix: Soil Date Prep: 05.18.2020
Parent Sample Id: 661821-001 MS Sample Id: 661821-001 S MSD Sample Id: 661821-001 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)	<50.0	999	921	92	945	95	70-135	3	35	mg/kg	05.18.2020 15:50	
Diesel Range Organics (DRO)	<50.0	999	1070	107	1080	108	70-135	1	35	mg/kg	05.18.2020 15:50	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	123		126		70-135	%	05.18.2020 15:50
o-Terphenyl	129		127		70-135	%	05.18.2020 15:50

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3126321 Matrix: Solid Date Prep: 05.18.2020
MB Sample Id: 7703568-1-BLK LCS Sample Id: 7703568-1-BKS LCSD Sample Id: 7703568-1-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	0.104	104	0.0966	97	70-130	7	35	mg/kg	05.19.2020 00:18	
Toluene	<0.00200	0.100	0.100	100	0.0916	92	70-130	9	35	mg/kg	05.19.2020 00:18	
Ethylbenzene	<0.00200	0.100	0.0930	93	0.0859	86	71-129	8	35	mg/kg	05.19.2020 00:18	
m,p-Xylenes	<0.00400	0.200	0.191	96	0.176	88	70-135	8	35	mg/kg	05.19.2020 00:18	
o-Xylene	<0.00200	0.100	0.0973	97	0.0894	89	71-133	8	35	mg/kg	05.19.2020 00:18	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		103		104		70-130	%	05.19.2020 00:18
4-Bromofluorobenzene	97		93		94		70-130	%	05.19.2020 00:18

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3126321 Matrix: Soil Date Prep: 05.18.2020
Parent Sample Id: 661872-004 MS Sample Id: 661872-004 S MSD Sample Id: 661872-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.110	110	0.0931	93	70-130	17	35	mg/kg	05.19.2020 00:59	
Toluene	<0.00199	0.0996	0.103	103	0.0911	91	70-130	12	35	mg/kg	05.19.2020 00:59	
Ethylbenzene	<0.00199	0.0996	0.0952	96	0.0857	86	71-129	11	35	mg/kg	05.19.2020 00:59	
m,p-Xylenes	<0.00398	0.199	0.194	97	0.177	89	70-135	9	35	mg/kg	05.19.2020 00:59	
o-Xylene	<0.00199	0.0996	0.0984	99	0.0879	88	71-133	11	35	mg/kg	05.19.2020 00:59	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		102		70-130	%	05.19.2020 00:59
4-Bromofluorobenzene	96		95		70-130	%	05.19.2020 00:59

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

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)

Work Order No: 160913

www.xenco.com Page 1 of 1

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A St. Bldg 1, Unit 222	Address:	3104 E Greene St.
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM
Phone:	(432) 701-2610 Email:		dmoir@ltenv.com rmcafee@ltenv.com

Work Order Comments

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

Project Name:	Remuda South 25 State 167H	Turn Around	
Project Number:	012920038	Routine	☑
P.O. Number:		Rush:	
Sampler's Name:	Robert McAfee	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	Yes (No)	
Temperature (°C):	1.4	Thermometer ID		
Received Intact:	(Yes) No	T-NM-007		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.7	
Sample Custody Seals:	Yes (No) N/A	Total Containers:	2	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)	Sample Comments
SS01A	S	05/17/20	0952	3'	1	X	X	X	discrete
SS02A	S	05/17/20	1025	3'	1	X	X	X	discrete

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
Robert McAfee		5/18/20 1700	2		
			4		
			6		

Revised Date 051418 Rev. 2018.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 05.18.2020 05.00.00 PM

Work Order #: 661913

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

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	1.4	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**	
#5 Custody Seals intact on sample bottles?	**Yes**	
#6*Custody Seals Signed and dated?	**Yes**	
#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**	Samples received in bulk containers.
#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: Elizabeth McClellan Date: 05.18.2020

Checklist reviewed by: Jessica Kramer Date: 05.19.2020

Jessica Kramer

ATTACHMENT 3: LITHOLOGIC/SOIL SAMPLING LOGS

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
A proud member of WSP
Compliance · Engineering · Remediation

BH or PH Name: SS01
Date: 05/12/20 and 05/18/2020
Site Name: Remuda South 25 State 167H
RP or Incident Number: NRM2007254419
LTE Job Number: 7

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: Robert M
Method: Backhoe Pothole
Lat/Long:
Field Screening: Chloride, PID
Hole Diameter: 2'
Total Depth: 3'
Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
M	580	1.9	N	SS01		0.5'	S	CCHE, moderately consolidated, tan-brown
0943 M	220	1.2	N		1'	1	S	SP-SM Brown small round grain
0948 M	220	1.3	N		2'	2	S	
0952 M	220	1.8	N	SS01A	3'	3	S	

0 4 5 6 7 8 9 10 11 12

BM

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
A proud member of WSP
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BH or PH Name: SS02	Date: 05/12/20 and 05/18/2020
Site Name: Remuda South 25 State 167H	
RP or Incident Number: NRM2007254419	
LTE Job Number:	
Logged By: Robert M.	Method: Backhoe Pothole
Lat/Long:	Field Screening: Chloride, PID
Hole Diameter: 2'	Total Depth: 3'

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
M	390	2.1	N	SS02		0.5'	S	CCHE, moderately consolidated, tan-brown
1016 M	220	0.7	N		1'	1	S	SP-SM Brown Small round grain
1021 M	260	0.3	N		2'	2	S	
1025 M	280	0.2	N	SS02A	3'	3	S	

0 1 2 3 4 5 6 7 8 9 10 11 12