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	NAB1912736236
District RP	2RP-5393
Facility ID	
Application ID	pAB1912736014

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)* NAB1912736236
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.065889° Longitude -103.784692°
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Phantom Banks 4-26-31 Battery	Site Type Bulk Storage and Separation Facility
Date Release Discovered 4/6/2019	API# *(if applicable)* 30-015-39847 (PLU CVX JV PB 3H)

Unit Letter	Section	Township	Range	County
N	4	26S	31E	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)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 25	Volume Recovered (bbls) 25
	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: Fluids were released to lined containment due to a tank overflow. Produced water transfer pumps did not activate due to a tank level gauge failure. A vacuum truck returned all fluid to production tank and the gauge was repaired. A 48-hour advance notice of liner inspection was provided by email to NMOCD District 2. The liner was visually inspected and determined to be inadequate. Delineation is not practicable at this time due to existing tank battery, lines, equipment, and containment above potential affected area. XTO requests to delineate and complete remediation during any future major well pad construction/alteration or final plugging and abandonment, whichever occurs first. The liner will be repaired to impervious condition.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NAB1912736236
District RP	2RP-5393
Facility ID	
Application ID	pAB1912736014

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? An unauthorized release of a volume of 25 barrels or more

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
Notice provided by Bryan Foust to Mike Bratcher, Rob Hamlet, and Jim Griswold (NMOCD), Jim Amos, Crystal Weaver, and Deborah McKinney (BLM) on 4/7/2019 by email

Initial Response

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

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

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

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

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

Printed Name: Kyle Littrell
Title: SH&E Supervisor
Signature:
Date: 4/19/2019
email: Kyle_Littrell@xtoenergy.com
Telephone: 432-221-7331

OCD Only

Received by:
Date: 5/7/2019

State of New Mexico
Oil Conservation Division

Incident ID	NAB1912736236
District RP	2RP-5393
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	NAB1912736236
District RP	2RP-5393
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: 6/11/20

email: Kyle_Littrell@xtoenergy.com Telephone:

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	NAB1912736236
District RP	2RP-5393
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: 6/11/20

email: Kyle_Littrell@xtoenergy.com Telephone:

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:

A proud member of WSP

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

June 11, 2020

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

RE: Closure Request
Phantom Banks 4-26-31 Battery
Incident Number NAB1912736236
Remediation Permit Number 2RP-5393
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 Phantom Banks 4-26-31 Battery (Site) in Unit N, Section 4, Township 26 South, Range 31 East, in Eddy County, New Mexico (Figure 1). The purpose of the site assessment and soil sampling activities was to confirm the presence or absence of impact to soil by a 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 NAB1912736236 / Remediation Permit Number 2RP-5393.

RELEASE BACKGROUND

On April 6, 2019, a tank overflow resulted in the release of 25 barrels (bbls) of produced water inside an impermeable containment. A vacuum truck was immediately dispatched to the Site to recover freestanding fluids, of which approximately 25 bbls of produced water were recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) via email on April 7, 2019 then on a Release Notification and Corrective Action Form C-141 (Form C-141) on April 19, 2019. A 48-hour advance notice of liner inspection was provided via email to NMOCD District 2 and, upon inspection, the liner was determined to be insufficient.

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 greater than 100 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted groundwater well with depth to groundwater data is United States Geological Survey (USGS) well 320330103462501, located approximately 0.80 miles southeast of the Site. The groundwater well

has a reported depth to groundwater of 287 feet bgs and a total depth of 338 feet bgs. There are six wells within a 3.5-mile radius that indicate regional depth to groundwater is greater than 150 feet bgs. New Mexico Office of the State Engineer (NMOSE) well C 03639, located 3.4 miles east of the Site, was most recently measured in October 2013 and has a reported depth to groundwater of 365 feet bgs.

The closest continuously flowing water or significant watercourse to the Site is an intermittent streambed, located approximately 0.28 miles south 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 not underlain by any unstable geology (medium potential karst area).

CLOSURE CRITERIA

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

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

SITE ASSESSMENT AND SOIL SAMPLING ACTIVITIES

On May 18, 2020, LTE evaluated the release extent based on information provided on the Form C-141 and visual observations. LTE personnel advanced a borehole via hand-auger at one location within the lined tank battery containment on the northern edge of the caliche well pad. Site assessment activities and vertical delineation soil sampling was completed at the location of the hole found during the liner integrity inspection conducted by XTO. Two soil samples were collected at one foot and two feet bgs (BH01 through BH01A). Soil from the borehole was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photo-ionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. Field screening results and observations for each sample were documented on a lithologic/soil sampling log and are included as Attachment 1. The borehole was backfilled with the soil removed and XTO repaired the liner. The borehole and vertical delineation soil sample location are depicted on Figure 2. Photographic documentation was conducted during the Site visit. Photographs are included in Attachment 2.

The 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.

ANALYTICAL RESULTS

Laboratory analytical results for delineation soil samples BH01 through BH01A, collected at depths ranging from 1 foot to 2 feet bgs, indicated benzene, BTEX, TPH-GRO, TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Laboratory analytical results are presented on Figure 2 and summarized in Table 1. The complete laboratory analytical reports are included as Attachment 3.

CLOSURE REQUEST

Following the failed liner integrity inspection, LTE personnel advanced one borehole in the location of the hole in the compromised liner. Delineation soil samples BH01 through BH01A were collected from within the lined tank battery containment from depths ranging from one foot to two feet bgs to assess for the presence or absence of soil impacts as a result of April 6, 2019 produced water release. Laboratory analytical results indicated that benzene, BTEX, TPH-GRO, TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria in soil samples BH01 and BH01A at depths of approximately one foot and two feet bgs, respectively. After the delineation samples were collected, XTO repaired the liner. As such, XTO respectfully requests NFA for Incident Number NAB1912736236 / Remediation Permit Number 2RP-5393.

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

Sincerely,

LT ENVIRONMENTAL, INC.

Elizabeth A. Naka
Staff Environmental Scientist

Ashley L. Ager, P.G.
Senior Geologist

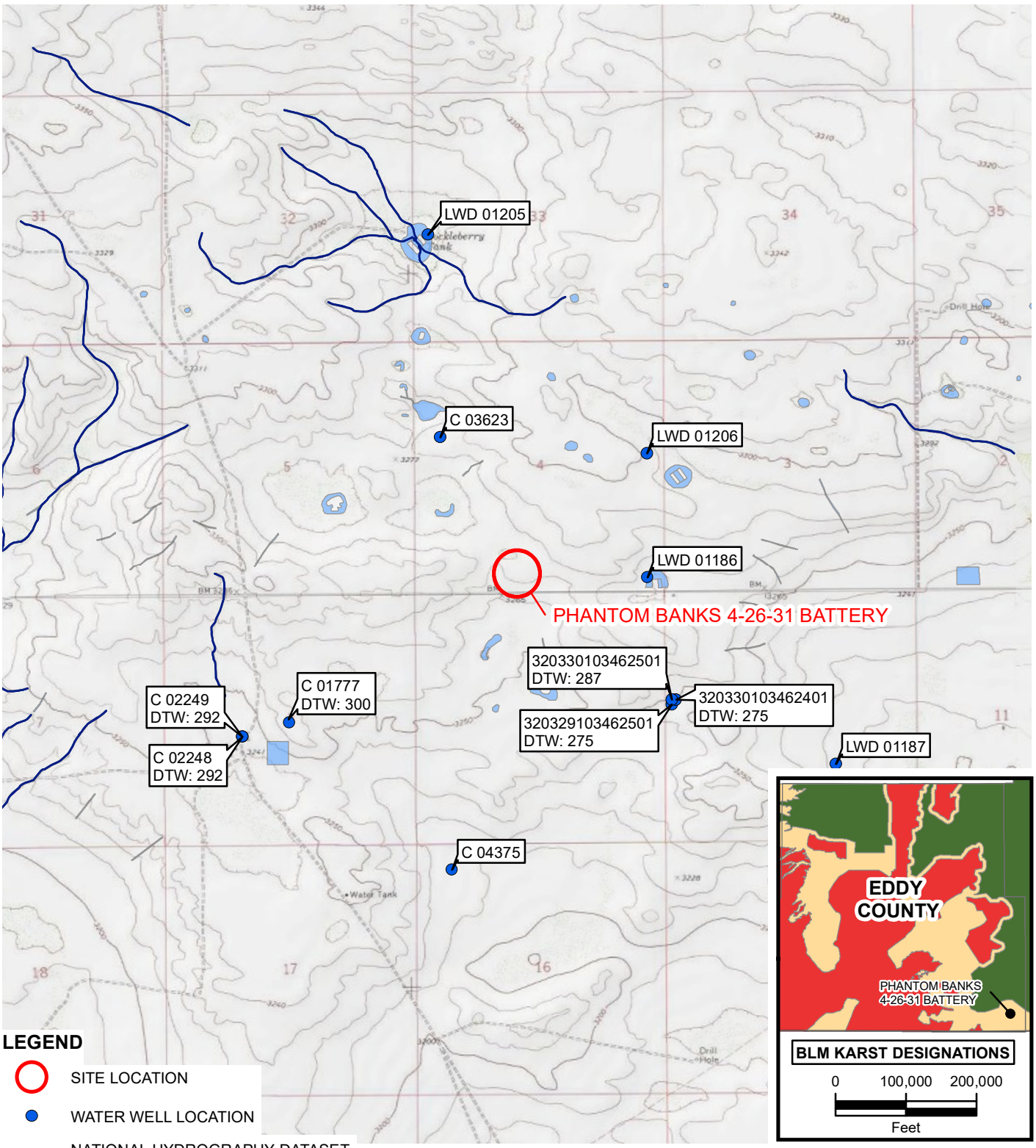
cc: Kyle Littrell, XTO

United States Bureau of Land Management – New Mexico
Robert Hamlet, NMOCD
Victoria Venegas, NMOCD

Appendices:

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

FIGURES



LEGEND

- SITE LOCATION
- WATER WELL LOCATION
- NATIONAL HYDROGRAPHY DATASET SURFACE WATER FEATURE
- NATIONAL WETLANDS INVENTORY SURFACE WATER FEATURE
- LOW KARST
- MEDIUM KARST
- HIGH KARST

NOTE: INCIDENT NUMBER NAB1912736236
DTW: DEPTH TO WATER IN FEET
BLM: BUREAU OF LAND MANAGEMENT

FIGURE 1
SITE LOCATION MAP
PHANTOM BANKS 4-26-31 BATTERY
UNIT N SEC 4 T26S R31E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012920075_PHANTOM BANKS 4-26-31 BATTERY\012920075_FIG01_SL_RECEPTOR_2020.mxd

LEGEND

DELINEATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA

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: INCIDENT NUMBER NAB1912736236
SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)

IMAGE COURTESY OF ESRI

0 50 100
Feet

N

FIGURE 2
DELINEATION SOIL SAMPLE LOCATIONS
PHANTOM BANKS 4-26-31 BATTERY
UNIT N SEC 4 T26S R31E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012920075_PHANTOM BANKS 4-26-31 BATTERY\012920075_FIG02_DELINEATION_2020.mxd

TABLES

TABLE 1
SOIL ANALYTICAL RESULTS

PHANTOM BANKS 4-26-31 BATTERY
INCIDENT NUMBER NAB1912736236
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	**1,000**	**2,500**	**20,000**
BH01	1	05/18/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.1	<50.1	<50.1	<50.1	<50.1	279
BH01A	2	05/18/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	530

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

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ATTACHMENT 1: LITHOLOGIC / SOIL SAMPLING LOG

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

BH or PH Name: BH01	Date: 5-18-20
Site Name: Phantom Banks 4-26-34	
RP or Incident Number: 2RP-5393	
LTE Job Number: 01292007S	
Logged By: SL	Method: Hand Auger
Lat/Long:	Field Screening: Chloride, PID
Hole Diameter: 4.5"	Total Depth: 2'

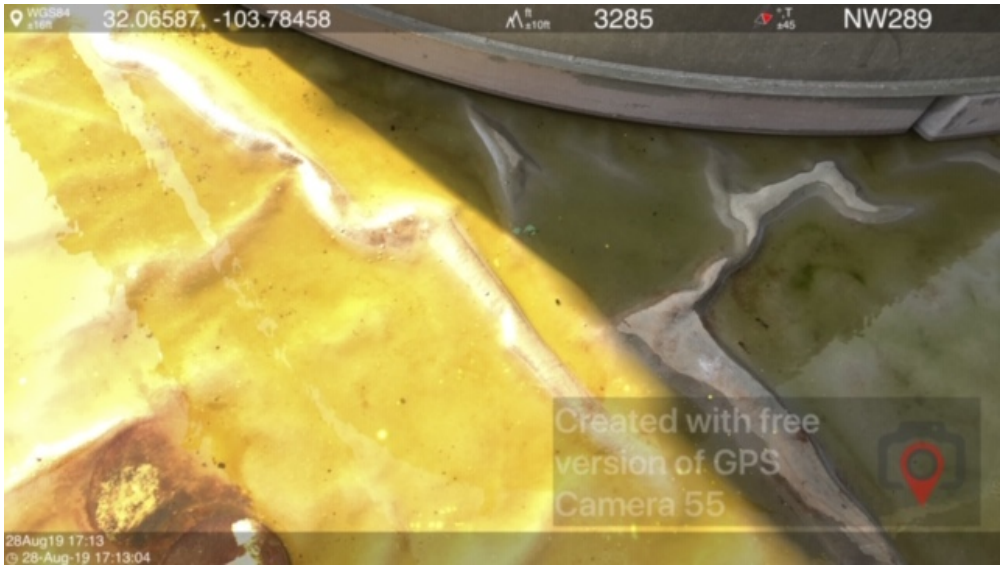
LITHOLOGIC / SOIL SAMPLING LOG

Comments: TD @ 2' - Auger Refusal

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D	320	21.6	N	BH01	1	0	CCHE	0-2 Caliche w/ Sand, tan, m-f, poorly graded, no odor, no stain
D	563	17.0	N	BH01A	2	1		
						2		TD @ 2' - Refusal
						3		
						4		
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		

ATTACHMENT 2: PHOTOGRAPHIC LOG

PHOTOGRAPHIC LOG



Photograph 1: View of accumulation of liquid inside lined containment.

Photograph 2: View of accumulation of liquid inside lined containment facing west.

ATTACHMENT 3: LABORATORY ANALYTICAL REPORTS

Certificate of Analysis Summary 661910

LT Environmental, Inc., Arvada, CO

Project Name: Phantom Banks 4-26-31

Project Id: 012920075
Contact: Dan Moir
Project Location:

Date Received in Lab: Mon 05.18.2020 17:00
Report Date: 05.19.2020 10:26
Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	661910-001					
	Field Id:	BH01					
	Depth:	1- ft					
	Matrix:	SOIL					
	Sampled:	05.18.2020 12:45					
BTEX by EPA 8021B	***Extracted:***	05.18.2020 17:37					
	Analyzed:	05.19.2020 02:20					
	Units/RL:	mg/kg	RL				
Benzene		<0.00198	0.00198				
Toluene		<0.00198	0.00198				
Ethylbenzene		<0.00198	0.00198				
m,p-Xylenes		<0.00396	0.00396				
o-Xylene		<0.00198	0.00198				
Total Xylenes		<0.00198	0.00198				
Total BTEX		<0.00198	0.00198				
Chloride by EPA 300	***Extracted:***	05.18.2020 17:31					
	Analyzed:	05.18.2020 19:51					
	Units/RL:	mg/kg	RL				
Chloride		279	50.0				
TPH by SW8015 Mod	***Extracted:***	05.18.2020 17:30					
	Analyzed:	05.18.2020 21:22					
	Units/RL:	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<50.1	50.1				
Diesel Range Organics (DRO)		<50.1	50.1				
Motor Oil Range Hydrocarbons (MRO)		<50.1	50.1				
Total GRO-DRO		<50.1	50.1				
Total TPH		<50.1	50.1				

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

Jessica Kramer
Project Manager

Analytical Report 661910

for

LT Environmental, Inc.

Project Manager: Dan Moir

Phantom Banks 4-26-31

012920075

05.19.2020

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 (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

05.19.2020

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

Reference: XENCO Report No(s): **661910**
Phantom Banks 4-26-31
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) 661910. 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. 661910 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 661910

LT Environmental, Inc., Arvada, CO

Phantom Banks 4-26-31

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH01	S	05.18.2020 12:45	1 ft	661910-001

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Phantom Banks 4-26-31

Project ID: *012920075*
Work Order Number(s): *661910*

Report Date: *05.19.2020*
Date Received: *05.18.2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analytical Results 661910

LT Environmental, Inc., Arvada, CO

Phantom Banks 4-26-31

Sample Id:	**BH01**	Matrix:	Soil	Date Received:	05.18.2020 17:00
Lab Sample Id:	661910-001	Date Collected:	05.18.2020 12:45	Sample Depth:	1 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	**279**	50.0	mg/kg	05.18.2020 19:51		5

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 21:22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	05.18.2020 21:22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	05.18.2020 21:22	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	05.18.2020 21:22	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	05.18.2020 21:22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	118	%	70-135	05.18.2020 21:22	
o-Terphenyl	84-15-1	120	%	70-135	05.18.2020 21:22	

Certificate of Analytical Results 661910

LT Environmental, Inc., Arvada, CO

Phantom Banks 4-26-31

Sample Id:	**BH01**	Matrix:	Soil	Date Received:	05.18.2020 17:00
Lab Sample Id:	661910-001	Date Collected:	05.18.2020 12:45	Sample Depth:	1 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	<0.00198	0.00198	mg/kg	05.19.2020 02:20	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	05.19.2020 02:20	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	05.19.2020 02:20	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	05.19.2020 02:20	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	05.19.2020 02:20	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	05.19.2020 02:20	U	1
Total BTEX		<0.00198	0.00198	mg/kg	05.19.2020 02:20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	70-130	05.19.2020 02:20	
1,4-Difluorobenzene	540-36-3	107	%	70-130	05.19.2020 02:20	

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 661910

LT Environmental, Inc.

Phantom Banks 4-26-31

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 661910

LT Environmental, Inc.

Phantom Banks 4-26-31

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
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

Chain of Custody

Work Order No: 666910

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:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 East Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	slo@ltenv.com, dmoir@ltenv.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐

State of Project:

Reporting: Level II ☐ Level III ☐ ST/UST ☐ RRP ☐ Level IV ☐

Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Phantom Banks 4-26-31	**Turn Around**	
Project Number:	012920075	Routine	☐
P.O. Number:		Rush:	24H
Sampler's Name:	Spencer Lo	Due Date:	

SAMPLE RECEIPT	Temp Blank: (Yes) No	Wet Ice: (Yes) No	
Temperature (°C):	4.4	Thermometer ID	T-NM-007
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	1

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	Sample Comments
BH01	S	5.18.20	1245	1'	1	X	X	X	

Work Order Notes

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

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 [signature]	[signature]	5/18/20 17:00	2		
3			4		
5			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 #: 661910

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

Certificate of Analysis Summary 661911

LT Environmental, Inc., Arvada, CO

Project Name: Phantom Banks 4-26-31

Project Id: 012920075
Contact: Dan Moir
Project Location:

Date Received in Lab: Mon 05.18.2020 17:00
Report Date: 05.19.2020 10:25
Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	661911-001					
	Field Id:	BH01A					
	Depth:	2- ft					
	Matrix:	SOIL					
	Sampled:	05.18.2020 13:00					
BTEX by EPA 8021B	***Extracted:***	05.18.2020 17:37					
	Analyzed:	05.19.2020 02:41					
	Units/RL:	mg/kg	RL				
Benzene		<0.00200	0.00200				
Toluene		<0.00200	0.00200				
Ethylbenzene		<0.00200	0.00200				
m,p-Xylenes		<0.00400	0.00400				
o-Xylene		<0.00200	0.00200				
Total Xylenes		<0.00200	0.00200				
Total BTEX		<0.00200	0.00200				
Chloride by EPA 300	***Extracted:***	05.18.2020 17:31					
	Analyzed:	05.18.2020 19:57					
	Units/RL:	mg/kg	RL				
Chloride		530	9.98				
TPH by SW8015 Mod	***Extracted:***	05.18.2020 17:30					
	Analyzed:	05.18.2020 21:42					
	Units/RL:	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0				
Diesel Range Organics (DRO)		<50.0	50.0				
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0				
Total GRO-DRO		<50.0	50.0				
Total TPH		<50.0	50.0				

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

Jessica Kramer
Project Manager

Analytical Report 661911

for

LT Environmental, Inc.

Project Manager: Dan Moir

Phantom Banks 4-26-31

012920075

05.19.2020

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 (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

05.19.2020

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

Reference: XENCO Report No(s): **661911**
Phantom Banks 4-26-31
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) 661911. 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. 661911 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 661911

LT Environmental, Inc., Arvada, CO

Phantom Banks 4-26-31

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH01A	S	05.18.2020 13:00	2 ft	661911-001

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Phantom Banks 4-26-31

Project ID: *012920075*
Work Order Number(s): *661911*

Report Date: *05.19.2020*
Date Received: *05.18.2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analytical Results 661911

LT Environmental, Inc., Arvada, CO

Phantom Banks 4-26-31

Sample Id:	**BH01A**	Matrix:	Soil	Date Received:	05.18.2020 17:00
Lab Sample Id:	661911-001	Date Collected:	05.18.2020 13:00	Sample Depth:	2 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	**530**	9.98	mg/kg	05.18.2020 19:57		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	<50.0	50.0	mg/kg	05.18.2020 21:42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	05.18.2020 21:42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	05.18.2020 21:42	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	05.18.2020 21:42	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	05.18.2020 21:42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	05.18.2020 21:42	
o-Terphenyl	84-15-1	121	%	70-135	05.18.2020 21:42	

Certificate of Analytical Results 661911

LT Environmental, Inc., Arvada, CO

Phantom Banks 4-26-31

Sample Id:	**BH01A**	Matrix:	Soil	Date Received:	05.18.2020 17:00
Lab Sample Id:	661911-001	Date Collected:	05.18.2020 13:00	Sample Depth:	2 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	<0.00200	0.00200	mg/kg	05.19.2020 02:41	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.19.2020 02:41	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.19.2020 02:41	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	05.19.2020 02:41	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.19.2020 02:41	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.19.2020 02:41	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.19.2020 02:41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	05.19.2020 02:41	
1,4-Difluorobenzene	540-36-3	108	%	70-130	05.19.2020 02:41	

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 661911

LT Environmental, Inc.

Phantom Banks 4-26-31

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 661911

LT Environmental, Inc.

Phantom Banks 4-26-31

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
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

XENCO LABORATORIES

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)

Work Order No: 660911

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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 Street	Address:	3104 East Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	slo@ltenv.com, dmoir@ltenv.com

Work Order Comments

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

Project Name:	Phantom Banks 4-26-31	Turn Around	
Project Number:	0129 20075	Routine ☐	
P.O. Number:		Rush: 24H	
Sampler's Name:	Spencer Lo	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes (circled) No	Wet Ice:	Yes (circled) No
Temperature (°C):	1.4	Thermometer ID	T-NM-007
Received Intact:	Yes (circled) No		
Cooler Custody Seals:	Yes No (circled) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (circled) N/A	Total Containers:	1

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	Sample Comments
BH01A	S	5-18-20	1300	2'	1	x	x	x	

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

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of $75.00 will be applied to each project and a charge of $5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 [signature]	[signature]	5/18/20 1700	2		
3			4		
5			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 #: 661911

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 recieved 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