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	NCE2002937020
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 32.254948 Longitude -103.608717
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Mis Amigos CTB	Site Type Well Location
Date Release Discovered 11/20/2019	API# *(if applicable)* 30-025-40590 (Mis Amigos State 001H)

Unit Letter	Section	Township	Range	County
O	31	23S	33E	LEA

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) 5.03	Volume Recovered (bbls) 3.0
☐ Produced Water	Volume Released (bbls) 0.0	Volume Recovered (bbls) 0.0
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: Sight glass on a knockout broke and released approximately 5.03 bbls of oil. Recovered approximately 3 bbls by vacuum truck. Additional third party resources have been retained to assist in the remediation.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NCE2002937020
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: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 12/4/2019

email: Kyle_Littrell@xtoenergy.com Telephone:

OCD Only

Received by: Cristina Eads Date: 01/29/2020

NCE2002937020

Location:	Mis Amigos CTB	
Spill Date:	11/20/2019	
Area 1		
Approximate Area =	701.00	sq. ft.
Average Saturation (or depth) of spill =	0.75	inches
Average Porosity Factor =	0.20	
VOLUME OF LEAK		
Total Oil =	4.56	bbls
Area 2		
Approximate Area =	2537.00	sq. ft.
Average Saturation (or depth) of spill =	0.06	inches

Approximate oil % =	100.00	
Average Porosity Factor =	0.20	
VOLUME OF LEAK		
Total Oil =	0.47	bbls
TOTAL VOLUME OF LEAK		
Total Oil =	**5.03**	**bbls**
TOTAL VOLUME RECOVERED		
Total Oil =	**3.00**	**bbls**

State of New Mexico
Oil Conservation Division

Incident ID	NCE2002937020
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?	>100 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	NCE2002937020
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: 05/14/2020

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

OCD Only

Received by: Date:

Incident ID	NCE2002937020
District RP	
Facility ID	
Application ID	

Remediation Plan

Remediation Plan Checklist: ***Each of the following items must be included in the plan.***

- ☐ Detailed description of proposed remediation technique
- ☐ Scaled sitemap with GPS coordinates showing delineation points
- ☐ Estimated volume of material to be remediated
- ☐ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☐ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: ***Each of the following items must be confirmed as part of any request for deferral of remediation.***

☒ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.

☒ Extents of contamination must be fully delineated.

☒ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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: 05/14/2020

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

OCD Only

Received by: _____ Date: _____

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: _____

A proud member of WSP

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

May 15, 2020

District I
New Mexico Oil Conservation Division
1625 N. French Drive
Hobbs, New Mexico 88240

RE: Deferral Request Addendum
Mis Amigos CTB
Incident Number NCE2002937020
Lea County, New Mexico

To Whom It May Concern:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following addendum to an original Deferral Request dated February 18, 2020. This addendum provides an update of remediation activities at the Mis Amigos Central Tank Battery (CTB, Site) located in Unit O, Section 31, Township 23 South, Range 33 East, in Lea County, New Mexico (Figure 1) in response to the denial of the previous Deferral Request by the New Mexico Oil Conservation Division (NMOCD). In the denial, NMOCD required XTO to confirm delineation samples meet Table 1 Closure Criteria for ground water at a depth of 50 feet or less. Based on additional work conducted, XTO is again requesting deferral for Incident Number NCE2002937020.

BACKGROUND

On February 18, 2020, LTE submitted a Deferral Request to the NMOCD for impacted soil from a November 20, 2019 crude oil release when a sight glass on a knockout tank broke. Excavation of impacted soil was conducted inside the containment where a liner was encountered at one foot bgs. Approximately 30 cubic yards of impacted soil above the liner were removed within the release footprint with a hydro-excavator until the liner was exposed. Due to the presence of the liner, no excavation confirmation samples could be collected. Instead, LTE personnel conducted a liner integrity inspection and determined the liner was inadequate due to the presence of a hole in the liner. Deferral was requested when laboratory analytical results for the delineation soil samples collected beneath the liner indicated residual soil was compliant with the Closure Criteria collected at approximately nine feet bgs. Residual impacted soil in the area of delineation borehole BH01 was left in place under the lined earthen berm containment in which active operating equipment exists. On April 8, 2020, the NMOCD denied deferral, via email, for the following reason:

The OCD has denied the submitted Closure Report C-141 for incident # NCE2002756541 for the following reason:

- *Depth to groundwater has not been correctly assess. The closest permitted groundwater well with depth to groundwater data is USGS Well 321555103381501, located almost 2 miles northwest of the Site. When nearby wells are used to determine depth to groundwater, the wells should be no further than ½ mile away from the site, and data should be no more than 25 years old, and well construction information should be provided. If evidence of depth to ground water within a ½ mile radius of the site cannot be provided, delineation samples will need to meet Table 1 Closure Criteria for ground water at a depth of 50 feet or less.*

ADDITIONAL SITE ACTIVITIES

On April 28, 2020 LTE returned to the Site, advancing one borehole via hand auger at borehole location BH01 beneath the lined earthen berm containment. Site assessment activities and vertical delineation soil sampling were completed at the location of the repaired tear in the liner found during the liner integrity inspection conducted by XTO (Figure 2). One soil sample was collected at approximately 12.5 feet bgs (BH01B) before encountering auger refusal. A discrete sample collected from the borehole was field screened for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach® chloride QuanTab® test strips, respectively. Field screening results and observations from the borehole were documented on lithologic/soil sampling logs and are included in Attachment 1. The borehole was backfilled with clean fill and XTO repaired the liner. Photographic documentation was conducted during delineation activities and are included in Attachment 2.

The delineation soil sample was placed directly into a pre-cleaned glass jar, labeled with location, date, time, sampler, method of analysis, and immediately placed on ice. The soil sample was transported at 4 degrees Celsius (°C) under strict chain-of-custody procedures to Xenco Laboratories (Xenco) in Carlsbad, New Mexico, for analysis of BTEX following United States Environmental Protection Agency (USEPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following USEPA Method 8015M/D; and chloride following USEPA Method 300.0.

SOIL ANALYTICAL RESULTS

Laboratory analytical results for delineation soil sample BH01B, collected at a depth of approximately 12.5 feet bgs, indicated benzene, BTEX, TPH and chloride concentrations were compliant with the NMOCD Table 1 Closure Criteria for ground water at a depth of 50 feet or less. Laboratory analytical results are presented on Figure 2 and summarized in Table 1. The complete laboratory analytical report is included as Attachment 3.

DEFERRAL REQUEST

XTO recovered free liquids associated with the November 20, 2019 release of crude oil in a lined containment. Impacted soil within the lined containment was identified and removed with a hydroexcavator until the liner was exposed. Following a failed liner integrity inspection, LTE personnel advanced one borehole in the location of the hole in the compromised liner. Delineation soil sample BH01B collected at a depth of approximately 12.5 feet bgs to assess for the presence or absence of soil impacts beneath the liner. Laboratory analytical results indicated benzene, BTEX, TPH and chloride concentrations were compliant with the NMOCD Table 1 Closure Criteria for ground water at a depth of 50 feet or less.

Residual impacted soil in the area of delineation borehole BH01 was left in place under the lined earthen berm containment in which active operating equipment exists. Vertical delineation was achieved at approximately 12.5 feet bgs. The lateral extent of impacted soil remaining in place is defined by the lined earthen berm containment. An estimated 527 cubic yards of impacted soil remains in place surrounding borehole BH01 beneath the lined earthen berm containment, assuming a maximum 12.5-foot depth based on soil sample BH01B collected at a depth of 12.5 feet bgs that was compliant with the Closure Criteria.

XTO requests to complete remediation during any future major construction and/or alteration or final plugging and abandonment, whichever occurs first. LTE and XTO do not believe deferment will result in imminent risk to human health, the environment, or groundwater. XTO requests deferral of final remediation for Incident Number NCE2002937020. An updated Form C-141 is attached to this Deferral Request.

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

Sincerely,

LT ENVIRONMENTAL, INC.

Kalei Jennings

Ashley L. Ager

Kalei Jennings
Project Environmental Scientist

Ashley L. Ager, M.S., P.G.
Senior Geologist

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

Victoria Venegas, NMOCD
Cristina Eads, NMOCD

Appendices:

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

FIGURES

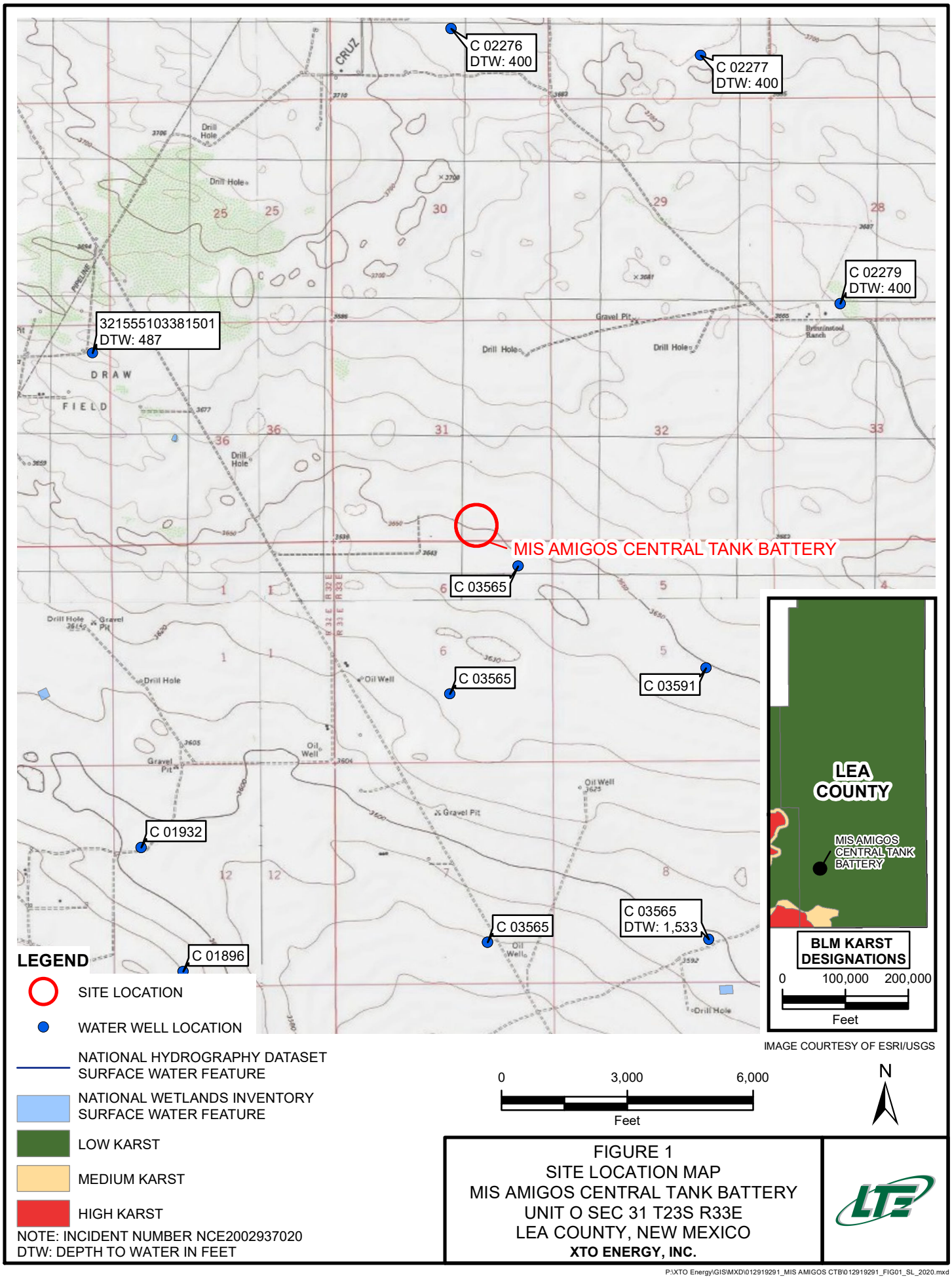
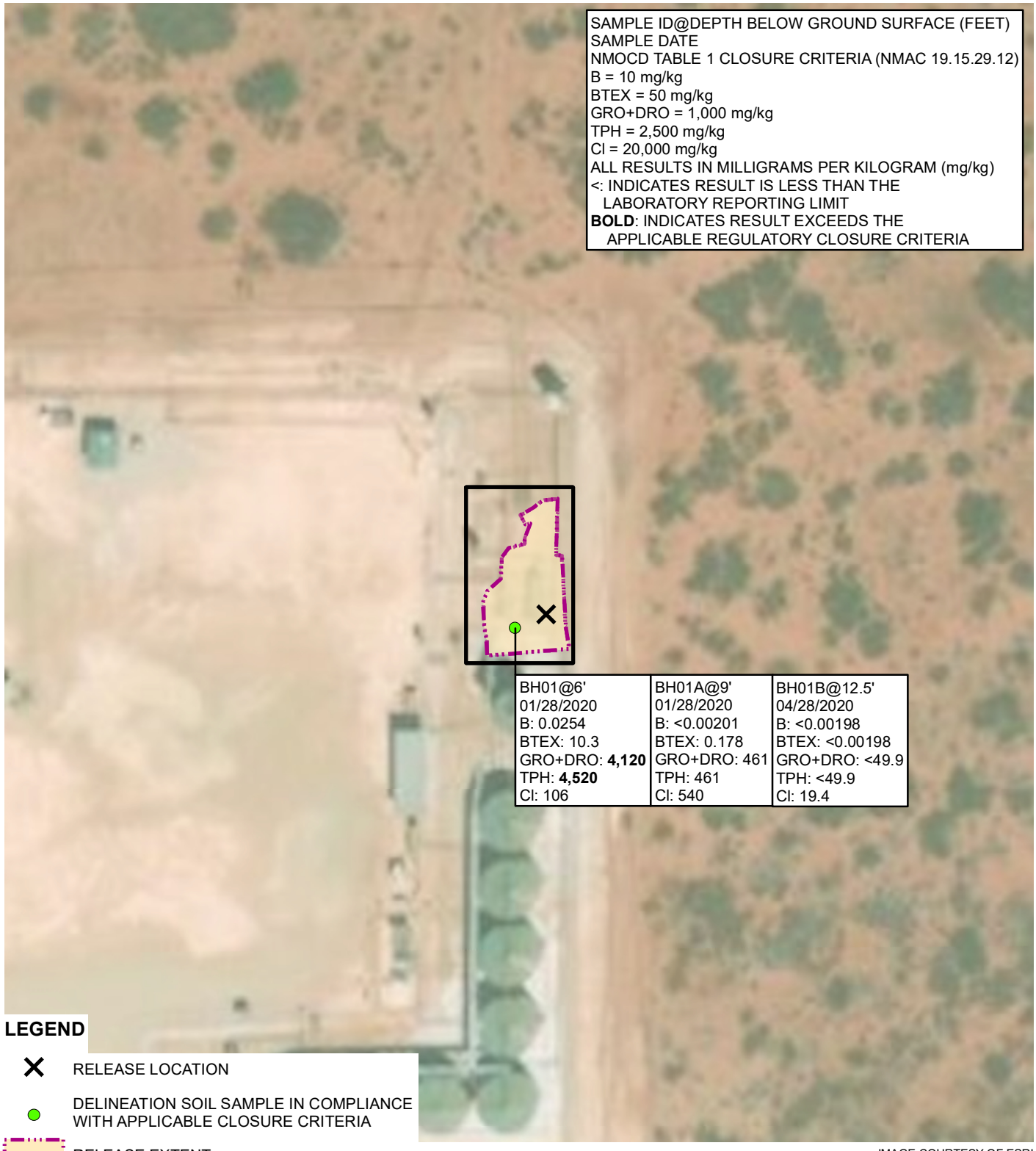


FIGURE 1
SITE LOCATION MAP
MIS AMIGOS CENTRAL TANK BATTERY
UNIT O SEC 31 T23S R33E
LEA COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012919291_MIS AMIGOS CTB\012919291_FIG01_SL_2020.mxd



B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
GRO: GASOLINE RANGE ORGANICS
DRO: DIESEL RANGE ORGANICS
TPH: TOTAL PETROLEUM HYDROCARBONS
Cl: CHLORIDE
NMAC: NEW MEXICO ADMINISTRATIVE CODE
NMOCD: NEW MEXICO OIL CONSERVATION DIVISION
NOTE: INCIDENT NUMBER NCE2002937020

FIGURE 2
DELINEATION SOIL SAMPLE LOCATIONS
MIS AMIGOS CENTRAL TANK BATTERY
UNIT O SEC 31 T23S R33E
LEA COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012919291_MIS AMIGOS CTB\012919291_FIG03_DELINEATION_2020.mxd

TABLES

TABLE 1
SOIL ANALYTICAL RESULTS

MIS AMIGOS CTB
INCIDENT NUMBER NCE2002937020
LEA 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**
SS01	0.5	12/10/2019	**95.4**	393	78.2	332	**899**	11,200	14,000	1,830	**25,200**	**27,000**	225
SS02	0.5	12/10/2019	0.00394	0.00759	<0.00201	0.00674	0.0183	<50.0	583	90.6	583	674	20.4
SS03	0.5	12/10/2019	**154**	642	134	598	**1,530**	25,400	58,500	7,300	**83,900**	**91,200**	65.6
BH01	6	01/28/2020	0.0254	1.77	1.34	7.17	10.3	322	3,800	402	**4,120**	**4,520**	106
BH01A	9	01/28/2020	<0.00201	0.0285	0.0235	0.126	0.178	<50.0	461	<50.0	461	461	540
BH01B	12.5	04/28/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	<49.9	19.4

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
Text - indicates removal of impacted soil

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ATTACHMENT 1: LITHOLOGIC SOIL SAMPLE LOGS

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

Identifier: BH01	Date: 1/28/20	
Project Nam: Mis Amigos CTB	RP Number: 11-20-19	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Armando Trejo	Method: Hand Auger
Lat/Long: (32.254948, -103.608717)	Field Screening: Chlorides, PID	Hole Diame 2.5" / Total Depth: 12.75'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
moist	173.6	222	N		5		SW	
moist	<173.6	109	N	BH01	6	6'	SW	SAND, moist, brown, well-graded, medium-grained, staining, strong odor.
moist	<173.6	207	N		7		SW	
moist	<173.6	297	N		8		SW	
moist	649.6	72.0	N	BH01A	9	9'	SW-SM	SAND/w silt, medium-fine grain, well-graded, poorly sorted, low plasticity, non cohesive, staining, strong odor.
moist	649.6	200	N		10			
moist	1,187	199	N		11			
moist	929	144	N		12			
moist	593	49.0	N		12.75			Auger Refusal
								Total Depth 12.75 feet bgs

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

BH or PH Name: BH01	Date: 4/28/2020
Site Name: Mis Amigos CTB	
RP or Incident Number: NCE20029370	
LTE Job Number: 012919291	
LITHOLOGIC / SOIL SAMPLING LOG Logged By: FS	Method: Hand auger
Lat/Long: 32.254948, -103.608717 Field Screening: Hatch chloride strips, TPH	Hole Diameter: 6" / Total Depth: 12.5'

Comments: All chloride screenings include a 40% error factor, auger refusal at 12.5 feet

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		
						5		Previously boreholed
D	308	85.1	N		10'	10	SM	SILTY sand, dry, reddish brown, fine-very fine, soft, slight odor, no stain
D	308	23.8	N		11'			
D	207	46.4	N		12'			
D	207	20.0	N	BH01	12.5'			Total depth 12.5 feet bgs- Auger Refusal
						20		

ATTACHMENT 2: PHOTOGRAPHIC LOG

PHOTOGRAPHIC LOG

Photograph 1: View of delineation borehole location BH01B.

Photograph 2: View of auger location facing east.

ATTACHMENT 3: LABORATORY ANALYTICAL REPORTS

Analytical Report 660035

for

LT Environmental, Inc.

Project Manager: Dan Moir

Mis Amigos CTB

012919291

04.29.2020

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
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)

04.29.2020

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

Reference: XENCO Report No(s): **660035**
Mis Amigos CTB
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) 660035. 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. 660035 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 660035

LT Environmental, Inc., Arvada, CO

Mis Amigos CTB

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH01	S	04.28.2020 12:55	12.5 ft	660035-001

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Mis Amigos CTB

Project ID: *012919291*
Work Order Number(s): *660035*

Report Date: *04.29.2020*
Date Received: *04.28.2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analysis Summary 660035

LT Environmental, Inc., Arvada, CO

Project Name: Mis Amigos CTB

Project Id: 012919291
Contact: Dan Moir
Project Location:

Date Received in Lab: Tue 04.28.2020 16:28
Report Date: 04.29.2020 12:51
Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	660035-001					
	Field Id:	BH01					
	Depth:	12.5- ft					
	Matrix:	SOIL					
	Sampled:	04.28.2020 12:55					
BTEX by EPA 8021B	***Extracted:***	04.28.2020 18:00					
	Analyzed:	04.29.2020 04:58					
	Units/RL:	mg/kg	RL				
Benzene		<0.00198	0.00198				
Toluene		<0.00198	0.00198				
Ethylbenzene		<0.00198	0.00198				
m,p-Xylenes		<0.00395	0.00395				
o-Xylene		<0.00198	0.00198				
Total Xylenes		<0.00198	0.00198				
Total BTEX		<0.00198	0.00198				
Chloride by EPA 300	***Extracted:***	04.28.2020 17:30					
	Analyzed:	04.28.2020 19:53					
	Units/RL:	mg/kg	RL				
Chloride		19.4	9.98				
TPH by SW8015 Mod	***Extracted:***	04.28.2020 17:30					
	Analyzed:	04.29.2020 01:46					
	Units/RL:	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<49.9	49.9				
Diesel Range Organics (DRO)		<49.9	49.9				
Motor Oil Range Hydrocarbons (MRO)		<49.9	49.9				
Total GRO-DRO		<49.9	49.9				
Total TPH		<49.9	49.9				

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

Jessica Kramer
Project Manager

Certificate of Analytical Results 660035

LT Environmental, Inc., Arvada, CO

Mis Amigos CTB

Sample Id:	**BH01**	Matrix:	Soil	Date Received:	04.28.2020 16:28
Lab Sample Id:	660035-001	Date Collected:	04.28.2020 12:55	Sample Depth:	12.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.28.2020 17:30	Basis:	Wet Weight
Seq Number:	3124455				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**19.4**	9.98	mg/kg	04.28.2020 19:53		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.28.2020 17:30	Basis:	Wet Weight
Seq Number:	3124494				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	04.29.2020 01:46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	04.29.2020 01:46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	04.29.2020 01:46	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	04.29.2020 01:46	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	04.29.2020 01:46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	04.29.2020 01:46	
o-Terphenyl	84-15-1	106	%	70-135	04.29.2020 01:46	

Certificate of Analytical Results 660035

LT Environmental, Inc., Arvada, CO

Mis Amigos CTB

Sample Id:	**BH01**	Matrix:	Soil	Date Received:	04.28.2020 16:28
Lab Sample Id:	660035-001	Date Collected:	04.28.2020 12:55	Sample Depth:	12.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.28.2020 18:00	Basis:	Wet Weight
Seq Number:	3124449				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	04.29.2020 04:58	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	04.29.2020 04:58	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	04.29.2020 04:58	U	1
m,p-Xylenes	179601-23-1	<0.00395	0.00395	mg/kg	04.29.2020 04:58	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	04.29.2020 04:58	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	04.29.2020 04:58	U	1
Total BTEX		<0.00198	0.00198	mg/kg	04.29.2020 04:58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	108	%	70-130	04.29.2020 04:58	
1,4-Difluorobenzene	540-36-3	115	%	70-130	04.29.2020 04:58	

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 660035

LT Environmental, Inc.

Mis Amigos CTB

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3124455 — Matrix: Solid — Date Prep: 04.28.2020
MB Sample Id: 7702278-1-BLK — LCS Sample Id: 7702278-1-BKS — LCSD Sample Id: 7702278-1-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	253	101	254	102	90-110	0	20	mg/kg	04.28.2020 18:46	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3124455 — Matrix: Soil — Date Prep: 04.28.2020
Parent Sample Id: 660027-001 — MS Sample Id: 660027-001 S — MSD Sample Id: 660027-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	48.4	200	257	104	258	105	90-110	0	20	mg/kg	04.28.2020 19:02	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3124455 — Matrix: Soil — Date Prep: 04.28.2020
Parent Sample Id: 660037-003 — MS Sample Id: 660037-003 S — MSD Sample Id: 660037-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1130	200	1330	100	1330	100	90-110	0	20	mg/kg	04.28.2020 20:21	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3124494 — Matrix: Solid — Date Prep: 04.28.2020
MB Sample Id: 7702304-1-BLK — LCS Sample Id: 7702304-1-BKS — LCSD Sample Id: 7702304-1-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	975	98	937	94	70-135	4	35	mg/kg	04.28.2020 23:23	
Diesel Range Organics (DRO)	<50.0	1000	1080	108	1070	107	70-135	1	35	mg/kg	04.28.2020 23:23	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	132		127		131		70-135	%	04.28.2020 23:23
o-Terphenyl	123		122		128		70-135	%	04.28.2020 23:23

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3124494 — Matrix: Solid — Date Prep: 04.28.2020
MB Sample Id: 7702304-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	04.28.2020 23:03	

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 660035

LT Environmental, Inc.

Mis Amigos CTB

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3124494 Matrix: Soil Date Prep: 04.28.2020
Parent Sample Id: 659919-037 MS Sample Id: 659919-037 S MSD Sample Id: 659919-037 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	1000	879	88	905	90	70-135	3	35	mg/kg	04.29.2020 00:25	
Diesel Range Organics (DRO)	<50.0	1000	968	97	977	97	70-135	1	35	mg/kg	04.29.2020 00:25	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	122		112		70-135	%	04.29.2020 00:25
o-Terphenyl	119		111		70-135	%	04.29.2020 00:25

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3124449 Matrix: Solid Date Prep: 04.28.2020
MB Sample Id: 7702273-1-BLK LCS Sample Id: 7702273-1-BKS LCSD Sample Id: 7702273-1-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	0.110	110	0.117	117	70-130	6	35	mg/kg	04.28.2020 22:12	
Toluene	<0.00200	0.100	0.0984	98	0.106	106	70-130	7	35	mg/kg	04.28.2020 22:12	
Ethylbenzene	<0.00200	0.100	0.0929	93	0.0989	99	71-129	6	35	mg/kg	04.28.2020 22:12	
m,p-Xylenes	<0.00400	0.200	0.181	91	0.193	97	70-135	6	35	mg/kg	04.28.2020 22:12	
o-Xylene	<0.00200	0.100	0.0932	93	0.0996	100	71-133	7	35	mg/kg	04.28.2020 22:12	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	113		108		112		70-130	%	04.28.2020 22:12
4-Bromofluorobenzene	108		98		100		70-130	%	04.28.2020 22:12

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3124449 Matrix: Soil Date Prep: 04.28.2020
Parent Sample Id: 660036-001 MS Sample Id: 660036-001 S MSD Sample Id: 660036-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.126	125	0.120	120	70-130	5	35	mg/kg	04.28.2020 22:55	
Toluene	<0.00202	0.101	0.113	112	0.105	105	70-130	7	35	mg/kg	04.28.2020 22:55	
Ethylbenzene	<0.00202	0.101	0.106	105	0.0982	98	71-129	8	35	mg/kg	04.28.2020 22:55	
m,p-Xylenes	<0.00404	0.202	0.206	102	0.191	96	70-135	8	35	mg/kg	04.28.2020 22:55	
o-Xylene	<0.00202	0.101	0.105	104	0.0989	99	71-133	6	35	mg/kg	04.28.2020 22:55	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		108		70-130	%	04.28.2020 22:55
4-Bromofluorobenzene	92		96		70-130	%	04.28.2020 22:55

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

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, Carlsbad, NM (575) 988-3199, Phoenix, AZ (480) 355-0900
Tampa, FL (813) 620-2000, Tallahassee, FL (850) 756-0747, Delray Beach, FL (561) 689-6701
Atlanta, GA (770) 449-8800

Work Order No: 660035

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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, Inc.
Address:	3300 North A Street	Address:	3104 E Greene St
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	fsmith@ltenv.com, dmoir@ltenv.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfield ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/US ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Mis Amigos CTB	Turn Around	
Project Number:	01291291	Routine:	☑
PO #:	11/20/19 spill date	Rush:	
Sampler's Name:	Fatima Smith	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes ~~No~~	Wet Ice:	Yes No
Temperature (°C):	1.0	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:	1

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
BH01	S	4/28/20	1255	12.5'	1	X	X	X

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U **1631 / 245.1 / 7470 / 7471** : Hg

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		4/28/20 14:28	2		
3			4		
5			6		

Revised Date 101419 Rev. 2019.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 04.28.2020 04.28.00 PM

Work Order #: 660035

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	
#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: 04.28.2020

Checklist reviewed by: Jessica Kramer Date: 04.29.2020