

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

QBGJQ-191126-C-1410

Incident ID	NCE2002754520
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 32.153746 Longitude -103.998802
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Corral Canyon Expansion	Site Type	Well Location
Date Release Discovered	11/13/2019	API# (if applicable)	30-015-42928 (Corral Canyon Federal Com 16H)

Unit Letter	Section	Township	Range	County
P	5	25S	29E	EDDY

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

Nature and Volume of Release

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

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls)	<1.0	Volume Recovered (bbls)	0.0
<input type="checkbox"/> 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?		<input type="checkbox"/> Yes <input type="checkbox"/> No	
<input type="checkbox"/> Condensate	Volume Released (bbls)		Volume Recovered (bbls)	
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)		Volume Recovered (Mcf)	
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)		Volume/Weight Recovered (provide units)	

Cause of Release: Less than a bbl of oil was released out of the low pressure flare causing a fire at the Corral Canyon Expansion Battery. No property damage and fire stayed on location and extinguished itself. Remediation of de minimis staining around the flare was completed by hand digging and soil was disposed at an approved facility.

Form C-141

Page 2

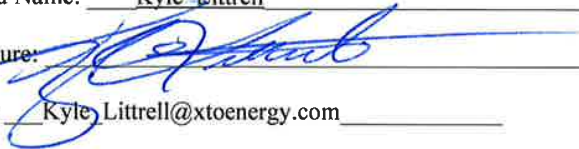
State of New Mexico
Oil Conservation Division

Incident ID	NCE2002754520
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? YES – An unauthorized release of volume that results in a fire or is the result of a fire.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? YES by Amy Ruth : to Mike Bratcher; Rob Hamlet; Victoria Venegas; blm_nm_cfo_spill@blm.gov; "Griswold, Jim, EMNRD" by email on November 13, 2019 1:19 PM	

Initial Response

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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why: There were no fluids released to be contained via the use of berms or dikes, absorbent pads, or other containment devices. There were no fluids released to be removed and managed.	
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: <u>Kyle Littrell</u>	Title: <u>SH&E Supervisor</u>
Signature: 	Date: <u>11/26/19</u>
email: <u>Kyle.Littrell@xtoenergy.com</u>	Telephone: _____
<u>OCD Only</u> Received by: _____ Date: _____	

Incident ID	NCE2002754520
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?	<u>50-100</u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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

Page 4

Incident ID	NCE2002754520
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 SupervisorSignature:  Date: 05/05/2020email: Kyle_Littrell@xtoenergy.com Telephone: (432)-221-7331**OCD Only**Received by: Cristina Eads Date: 05/11/2020

Incident ID	NCE2002754520
District RP	
Facility ID	
Application ID	

Closure

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

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

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature:  Date: 05/05/2020

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

OCD Only

Received by: Cristina Eads Date: 05/11/2020

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: 06/26/2020

Printed Name: Cristina Eads Title: Environmental Specialist



LT Environmental, Inc.

3300 North "A" Street
Building 1, Unit 222
Midland, Texas 79705
432.704.5178

May 6, 2020

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

**RE: Closure Request
Corral Canyon Expansion
Incident ID: NCE2002754520
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 Corral Canyon Expansion (Site) in Unit P, Section 5, Township 25 South, Range 29 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 impacts to soil following a fire and release of crude oil at the Site. Based on field observations, field screening results, and laboratory analytical results following soil sampling events, XTO is submitting this Closure Request and requesting no further action (NFA) for Incident Number NCE2002754520.

RELEASE BACKGROUND

On November 13, 2019, the low-pressure flare malfunctioned and released less than 1.0 barrel (bbl) of crude oil resulting in a small fire. The fire was immediately extinguished and there were no freestanding fluids to recover. There were no injuries reported and no damage to equipment. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 (Form C-141) on November 26, 2019 and was assigned Incident Number NCE2002754520.

SITE CHARACTERIZATION

LTE characterized the Site according to Table 1, *Closure Criteria for Soils Impacted by a Release*, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Depth to groundwater at the Site is estimated to be between 50 feet and 100 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted groundwater well with depth to groundwater data is New Mexico Office of the State Engineer (NMOSE) Well C 04324, located approximately 368 feet south of the Site. The closest groundwater well has a reported depth to groundwater of approximately 65 feet bgs and a total depth of 69 feet bgs. The closest continuously flowing water or significant watercourse to the



Site is an intermittent riverine, located approximately 962 feet southwest 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 unstable geology (medium potential karst designation area). The Site receptors are identified on Figure 1.

CLOSURE CRITERIA

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

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

SITE ASSESSMENT AND SOIL SAMPLING ACTIVITIES

On April 27, 2020, LTE personnel inspected the Site to evaluate the release area based on information provided on the Form C-141 and visual observations. LTE personnel collected three preliminary soil samples (SS01 through SS03) within the release area from a depth of approximately 0.5 feet bgs to assess for the presence or absence of soil impacts at the ground surface. Soil was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photo-ionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. The preliminary soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation of the release was conducted, and a photographic log of the Site is included in Attachment 1.

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



Bratcher, M.
Page 3

Based on laboratory analytical results for the preliminary soil samples, visual observations, and field screening results, excavation activities did not appear warranted; however, additional site assessment activities were scheduled to further confirm the absence of impacted soil.

On April 30, 2020, LTE personnel returned to the Site to oversee additional soil assessment activities. Three potholes (PH01 through PH03) were advanced via track-mounted backhoe, to a depth of approximately 1 foot and 2 feet bgs at the SS01 through SS03 preliminary soil sample locations. Soil samples were collected at depths of approximately 1-foot bgs (PH01 through PH03) and 2 feet bgs (PH01A through PH03A) at each pothole location. Soil from the three potholes was field screened utilizing a PID and Hach® chloride QuanTab® test strips. Field screening results and observations for each pothole were logged on lithologic/soil sampling logs, which are included in Attachment 2. The delineation soil samples were collected, handled, and analyzed as described above at Xenco in Carlsbad, New Mexico. All potholes were backfilled with the same soil removed. The delineation soil sample locations are depicted on Figure 3.

ANALYTICAL RESULTS

Laboratory analytical results indicated benzene, BTEX, GRO and DRO, TPH, and chloride concentrations were compliant with the Closure Criteria in preliminary soil samples SS01 through SS03 collected at a depth of approximately 0.5 feet bgs, and in delineation soil samples collected from potholes PH01 through PH03 at depths ranging from 1 foot and 2 feet bgs. Laboratory analytical results are depicted on Figures 2 and 3 and summarized in Table 1. The laboratory analytical reports are included as Attachment 3.

CONCLUSIONS

Preliminary soil samples SS01 through SS03 and delineation soil samples PH01/PH01A through PH03/PH03A were collected from within the release area from depths ranging from 0.5 feet to 2 feet bgs to assess for the presence or absence of soil impacts as a result of the November 13, 2019, release. Laboratory analytical results for all soil samples indicated that benzene, BTEX, GRO and DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Additionally, field screening of soil indicated volatile aromatic hydrocarbons and chloride concentrations were not elevated and petroleum hydrocarbon odors were not identified within the release area.

Based on initial response efforts, absence of elevated field screening results, and soil sample laboratory analytical results compliant with the Closure Criteria, no impacted soil was identified, and no soil excavation was required as a result of the crude oil fire. XTO requests NFA for Incident Number NCE2002754520.

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



Bratcher, M.
Page 4

Sincerely,

LT ENVIRONMENTAL, INC.

A handwritten signature in black ink that reads 'Kalei Jennings'.

Kalei Jennings
Project Environmental Scientist

A handwritten signature in black ink that reads 'Ashley L. Ager'.

Ashley L. Ager, P.G.
Senior Geologist

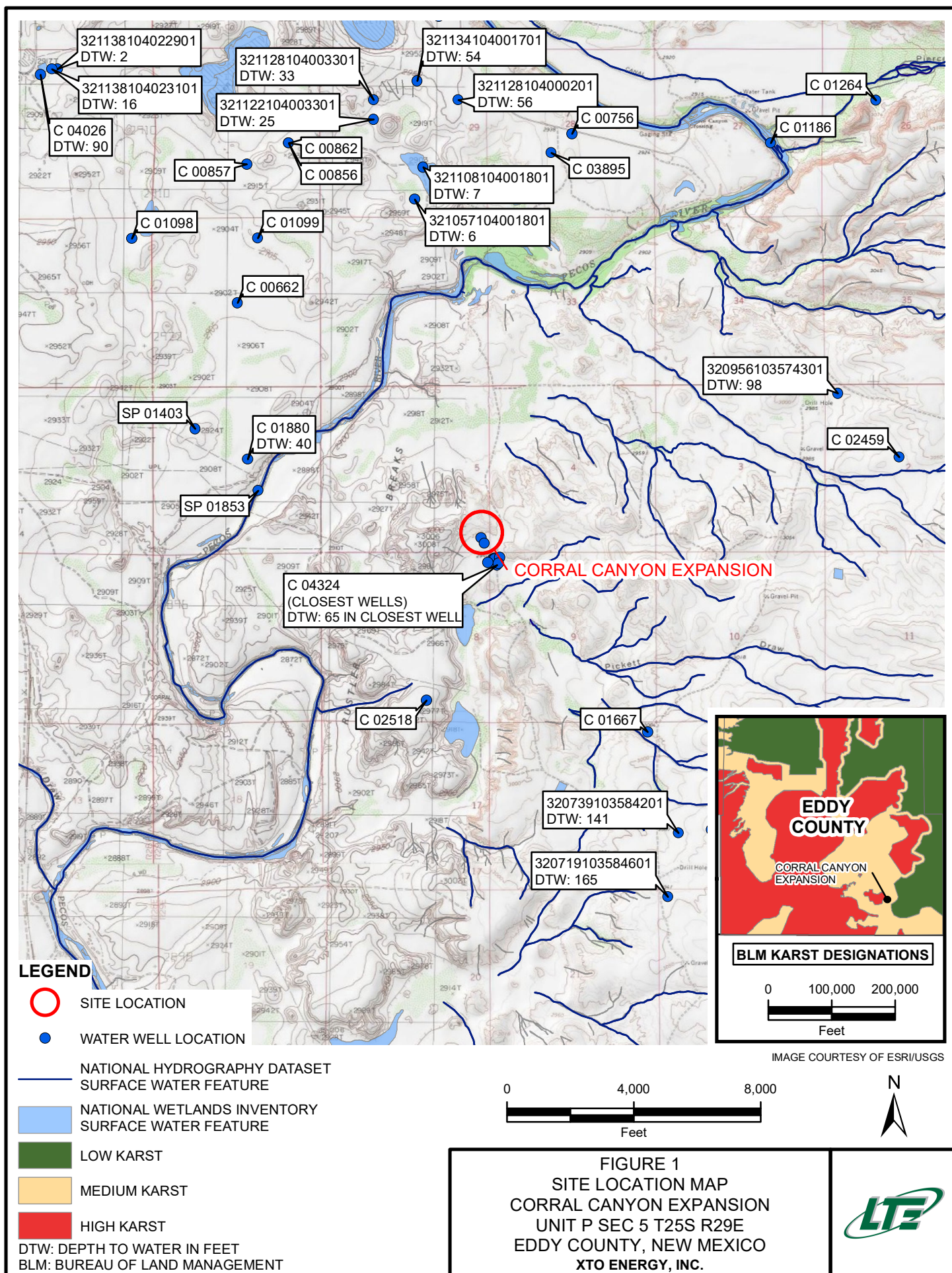
cc: Kyle Littrell, XTO
United States Bureau of Land Management – New Mexico
Robert Hamlet, NMOCD
Victoria Venegas, NMOCD

Appendices:

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

FIGURES





SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)
 SAMPLE DATE
 NMOCD TABLE 1 CLOSURE CRITERIA (NMAC 19.15.29.12)
 B = 10 mg/kg
 BTEX = 50 mg/kg
 GRO+DRO = 1,000 mg/kg
 TPH = 2,500 mg/kg
 Cl = 10,000 mg/kg
 ALL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)
 <: INDICATES RESULT IS LESS THAN THE
 LABORATORY REPORTING LIMIT

SS03@0.5'
 04/27/2020
 B: <0.00199
 BTEX: <0.00199
 GRO+DRO: 190
 TPH: 190
 Cl: 84.9

SS01@0.5'
 04/27/2020
 B: <0.00201
 BTEX: <0.00201
 GRO+DRO: 94.8
 TPH: 94.8
 Cl: 77.7

SS02@0.5'
 04/27/2020
 B: <0.00199
 BTEX: <0.00199
 GRO+DRO: 148
 TPH: 148
 Cl: 35.6

LEGEND

- PRELIMINARY 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 NCE2002754520

IMAGE COURTESY OF ESRI

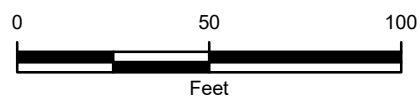


FIGURE 2
 PRELIMINARY SOIL SAMPLE LOCATIONS
 CORRAL CANYON EXPANSION
 UNIT P SEC 5 T25S R29E
 EDDY COUNTY, NEW MEXICO
 XTO ENERGY, INC.



SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)
 SAMPLE DATE
 NMOCD TABLE 1 CLOSURE CRITERIA (NMAC 19.15.29.12)
 B = 10 mg/kg
 BTEX = 50 mg/kg
 GRO+DRO = 1,000 mg/kg
 TPH = 2,500 mg/kg
 Cl = 10,000 mg/kg
 ALL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)
 <: INDICATES RESULT IS LESS THAN THE
 LABORATORY REPORTING LIMIT

PH03@1' 04/30/2020 B: <0.00200 BTEX: <0.00200 GRO+DRO: <50.1 TPH: <50.1 Cl: 51.2	PH03A@2' 04/30/2020 B: <0.00199 BTEX: <0.00199 GRO+DRO: <50.0 TPH: <50.0 Cl: 33.2
--	---

PH01@1' 04/30/2020 B: <0.00201 BTEX: <0.00201 GRO+DRO: <50.2 TPH: <50.2 Cl: 175

PH01A@2' 04/30/2020 B: <0.00200 BTEX: <0.00200 GRO+DRO: <50.0 TPH: <50.0 Cl: 33.4

PH02@1' 04/30/2020 B: <0.00198 BTEX: <0.00198 GRO+DRO: <50.2 TPH: <50.2 Cl: 144	PH02A@2' 04/30/2020 B: <0.00199 BTEX: <0.00199 GRO+DRO: <50.2 TPH: <50.2 Cl: 14.6
---	---

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 NCE2002754520

IMAGE COURTESY OF ESRI

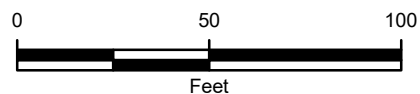


FIGURE 3
 DELINEATION SOIL SAMPLE LOCATIONS
 CORRAL CANYON EXPANSION
 UNIT P SEC 5 T25S R29E
 EDDY COUNTY, NEW MEXICO
 XTO ENERGY, INC.



TABLES



TABLE 1
SOIL ANALYTICAL RESULTS

CORRAL CANYON EXPANSION
INCIDENT NUMBER NCE2002754520
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	10,000
SS01	0.5	04/27/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.0	94.8	<50.0	94.8	94.8	77.7
SS02	0.5	04/27/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.2	148	<50.2	148	148	35.6
SS03	0.5	04/27/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.2	190	<50.2	190	190	84.9
PH01	1	04/30/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.2	<50.2	<50.2	<50.2	<50.2	175
PH01A	2	04/30/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	33.4
PH02	1	04/30/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.2	<50.2	<50.2	<50.2	<50.2	144
PH02A	2	04/30/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.2	<50.2	<50.2	<50.2	<50.2	14.6
PH03	1	04/30/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	51.2
PH03A	2	04/30/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	33.2

Notes:

bgs - below ground surface

BTEX - benzene, toluene, ethylbenzene, and total xylenes

DRO - diesel range organics

GRO - gasoline range organics

mg/kg - milligrams per kilogram

MRO - motor oil range organics

NMAC - New Mexico Administrative Code

NMOCD - New Mexico Oil Conservation Division

NE - not established

TPH - total petroleum hydrocarbons

Bold - indicates result exceeds the applicable regulatory standard

< - indicates result is below laboratory reporting limits

Table 1 - closure criteria for soils impacted by a release per NMAC 19.15.29 August 2018

ATTACHMENT 1: PHOTOGRAPHIC LOG



PHOTOGRAPHIC LOG




Photograph 1: View of preliminary samples SS02 and SS03 facing southeast.




Photograph 2: View of preliminary sample SS01 facing northeast.

ATTACHMENT 2: LITHOLOGIC SOIL SAMPLE LOGS



 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 A proud member of WSP Compliance · Engineering · Remediation		BH or PH Name: <u>PIT 1</u>		Date: <u>4-30-20</u>
		SSD1A-B		
Site Name: <u>The Corral Canyon Expansion</u>				
RP or Incident Number:				
LTE Job Number: <u>01299053</u>				
Lat/Long: <u>32.153746, -103.998802</u>		Field Screening: Chloride, PID <u>CLIPID</u>		Logged By: <u>Travis Cooney</u>
Comments:		Hole Diameter: <u>N/A</u>		Method: <u>Extraction</u> Total Depth: <u>1'-2'</u>

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		
					1'	1		CHCE Trace sand tan/white
					2'	2		CHCE tan/brown sp-sc
						3		
						4		
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		

 <div style="margin-top: 10px;"> LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 </div> <div style="margin-top: 10px;"> A proud member of WSP </div>		BH or PH Name: <u>PH03</u> <u>SS03A-B</u>		Date: <u>4-30-20</u>	
		Site Name: <u>The Corral Corral Expansion</u> RP or Incident Number: _____ LTE Job Number: <u>012920053</u>			
LITHOLOGIC / SOIL SAMPLING LOG					
Lat/Long: <u>32.153746, -103.995402</u>		Field Screening: <u>Chloride, PID</u>		Logged By: <u>Tavis / uscy</u>	
Comments: _____		Hole Diameter: <u>N/A</u>		Method: <u>Excavator</u> Total Depth: <u>1'-2'</u>	

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		
D	<124	0.1	N	SS03A	1'	1		LTCC Trace of Sand Tan/bk. etc
D	<124	0.0	N	SS03B	2'	2		LTCC tan / brown SP-SC
						3		
						4		
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		





Analytical Report 659884

for

LT Environmental, Inc.

Project Manager: Kalei Jennings

Corral Canyon Expansion

012920053

04.28.2020

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)



04.28.2020

Project Manager: **Kalei Jennings**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **659884**

Corral Canyon Expansion

Project Address:

Kalei Jennings:

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) 659884. 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. 659884 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,

A handwritten signature in black ink that reads 'Jessica Kramer'. The signature is written in a cursive, flowing style.

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 659884

LT Environmental, Inc., Arvada, CO

Corral Canyon Expansion

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	04.27.2020 12:08	0.5 ft	659884-001
SS02	S	04.27.2020 13:00	0.5 ft	659884-002
SS03	S	04.27.2020 13:20	0.5 ft	659884-003



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Corral Canyon Expansion

Project ID: 012920053
Work Order Number(s): 659884

Report Date: 04.28.2020
Date Received: 04.27.2020

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None



Certificate of Analysis Summary 659884

LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon Expansion

Project Id: 012920053
Contact: Kalei Jennings
Project Location:

Date Received in Lab: Mon 04.27.2020 15:42
Report Date: 04.28.2020 12:02
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	659884-001	659884-002	659884-003			
	Field Id:	SS01	SS02	SS03			
	Depth:	0.5- ft	0.5- ft	0.5- ft			
	Matrix:	SOIL	SOIL	SOIL			
	Sampled:	04.27.2020 12:08	04.27.2020 13:00	04.27.2020 13:20			
BTEX by EPA 8021B	Extracted:	04.27.2020 17:40	04.27.2020 17:40	04.27.2020 17:40			
	Analyzed:	04.28.2020 00:31	04.28.2020 00:53	04.28.2020 01:14			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
Benzene		<0.00201 0.00201	<0.00199 0.00199	<0.00199 0.00199			
Toluene		<0.00201 0.00201	<0.00199 0.00199	<0.00199 0.00199			
Ethylbenzene		<0.00201 0.00201	<0.00199 0.00199	<0.00199 0.00199			
m,p-Xylenes		<0.00402 0.00402	<0.00398 0.00398	<0.00398 0.00398			
o-Xylene		<0.00201 0.00201	<0.00199 0.00199	<0.00199 0.00199			
Total Xylenes		<0.00201 0.00201	<0.00199 0.00199	<0.00199 0.00199			
Total BTEX		<0.00201 0.00201	<0.00199 0.00199	<0.00199 0.00199			
Chloride by EPA 300	Extracted:	04.27.2020 17:04	04.27.2020 17:04	04.27.2020 17:04			
	Analyzed:	04.27.2020 17:32	04.27.2020 17:37	04.27.2020 17:43			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
Chloride		77.7 50.2	35.6 9.94	84.9 50.1			
TPH by SW8015 Mod	Extracted:	04.27.2020 17:00	04.27.2020 17:00	04.27.2020 17:00			
	Analyzed:	04.27.2020 19:04	04.27.2020 19:24	04.27.2020 19:44			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<50.2 50.2	<50.2 50.2			
Diesel Range Organics (DRO)		94.8 50.0	148 50.2	190 50.2			
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<50.2 50.2	<50.2 50.2			
Total GRO-DRO		94.8 50.0	148 50.2	190 50.2			
Total TPH		94.8 50.0	148 50.2	190 50.2			

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Jessica Kramer
Project Manager



Certificate of Analytical Results 659884

LT Environmental, Inc., Arvada, CO

Corral Canyon Expansion

Sample Id: **SS01**
Lab Sample Id: 659884-001

Matrix: Soil
Date Collected: 04.27.2020 12:08

Date Received: 04.27.2020 15:42
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3124306

Date Prep: 04.27.2020 17:04

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	77.7	50.2	mg/kg	04.27.2020 17:32		5

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3124321

Date Prep: 04.27.2020 17:00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	04.27.2020 19:04	U	1
Diesel Range Organics (DRO)	C10C28DRO	94.8	50.0	mg/kg	04.27.2020 19:04		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	04.27.2020 19:04	U	1
Total GRO-DRO	PHC628	94.8	50.0	mg/kg	04.27.2020 19:04		1
Total TPH	PHC635	94.8	50.0	mg/kg	04.27.2020 19:04		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	04.27.2020 19:04	
o-Terphenyl	84-15-1	113	%	70-135	04.27.2020 19:04	



Certificate of Analytical Results 659884

LT Environmental, Inc., Arvada, CO

Corral Canyon Expansion

Sample Id: **SS01**
Lab Sample Id: 659884-001

Matrix: Soil
Date Collected: 04.27.2020 12:08

Date Received: 04.27.2020 15:42
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.27.2020 17:40

Basis: Wet Weight

Seq Number: 3124302

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.28.2020 00:31	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.28.2020 00:31	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.28.2020 00:31	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.28.2020 00:31	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.28.2020 00:31	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.28.2020 00:31	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.28.2020 00:31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	114	%	70-130	04.28.2020 00:31	
4-Bromofluorobenzene	460-00-4	106	%	70-130	04.28.2020 00:31	



Certificate of Analytical Results 659884

LT Environmental, Inc., Arvada, CO

Corral Canyon Expansion

Sample Id: **SS02**
Lab Sample Id: 659884-002

Matrix: Soil
Date Collected: 04.27.2020 13:00

Date Received: 04.27.2020 15:42
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3124306

Date Prep: 04.27.2020 17:04

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	35.6	9.94	mg/kg	04.27.2020 17:37		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3124321

Date Prep: 04.27.2020 17:00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	04.27.2020 19:24	U	1
Diesel Range Organics (DRO)	C10C28DRO	148	50.2	mg/kg	04.27.2020 19:24		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	04.27.2020 19:24	U	1
Total GRO-DRO	PHC628	148	50.2	mg/kg	04.27.2020 19:24		1
Total TPH	PHC635	148	50.2	mg/kg	04.27.2020 19:24		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	04.27.2020 19:24	
o-Terphenyl	84-15-1	111	%	70-135	04.27.2020 19:24	



Certificate of Analytical Results 659884

LT Environmental, Inc., Arvada, CO

Corral Canyon Expansion

Sample Id: **SS02**
 Lab Sample Id: 659884-002

Matrix: Soil
 Date Collected: 04.27.2020 13:00

Date Received: 04.27.2020 15:42
 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.27.2020 17:40

Basis: Wet Weight

Seq Number: 3124302

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.28.2020 00:53	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.28.2020 00:53	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.28.2020 00:53	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.28.2020 00:53	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.28.2020 00:53	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.28.2020 00:53	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.28.2020 00:53	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	116	%	70-130	04.28.2020 00:53		
4-Bromofluorobenzene	460-00-4	105	%	70-130	04.28.2020 00:53		



Certificate of Analytical Results 659884

LT Environmental, Inc., Arvada, CO

Corral Canyon Expansion

Sample Id: **SS03**
Lab Sample Id: 659884-003

Matrix: Soil
Date Collected: 04.27.2020 13:20

Date Received: 04.27.2020 15:42
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3124306

Date Prep: 04.27.2020 17:04

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	84.9	50.1	mg/kg	04.27.2020 17:43		5

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3124321

Date Prep: 04.27.2020 17:00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	04.27.2020 19:44	U	1
Diesel Range Organics (DRO)	C10C28DRO	190	50.2	mg/kg	04.27.2020 19:44		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	04.27.2020 19:44	U	1
Total GRO-DRO	PHC628	190	50.2	mg/kg	04.27.2020 19:44		1
Total TPH	PHC635	190	50.2	mg/kg	04.27.2020 19:44		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	04.27.2020 19:44	
o-Terphenyl	84-15-1	111	%	70-135	04.27.2020 19:44	



Certificate of Analytical Results 659884

LT Environmental, Inc., Arvada, CO

Corral Canyon Expansion

Sample Id: **SS03**
 Lab Sample Id: 659884-003

Matrix: Soil
 Date Collected: 04.27.2020 13:20

Date Received: 04.27.2020 15:42
 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.27.2020 17:40

Basis: Wet Weight

Seq Number: 3124302

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.28.2020 01:14	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.28.2020 01:14	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.28.2020 01:14	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.28.2020 01:14	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.28.2020 01:14	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.28.2020 01:14	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.28.2020 01:14	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	103	%	70-130	04.28.2020 01:14		
1,4-Difluorobenzene	540-36-3	115	%	70-130	04.28.2020 01:14		



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



LT Environmental, Inc.
Corral Canyon Expansion

Analytical Method: Chloride by EPA 300

Seq Number: 3124306

MB Sample Id: 7702149-1-BLK

Matrix: Solid

LCS Sample Id: 7702149-1-BKS

Prep Method: E300P

Date Prep: 04.27.2020

LCSD Sample Id: 7702149-1-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	250	100	90-110	0	20	mg/kg	04.27.2020 16:26	

Analytical Method: Chloride by EPA 300

Seq Number: 3124306

Parent Sample Id: 659876-001

Matrix: Soil

MS Sample Id: 659876-001 S

Prep Method: E300P

Date Prep: 04.27.2020

MSD Sample Id: 659876-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1230	201	1410	90	1420	95	90-110	1	20	mg/kg	04.27.2020 16:43	

Analytical Method: Chloride by EPA 300

Seq Number: 3124306

Parent Sample Id: 659890-002

Matrix: Soil

MS Sample Id: 659890-002 S

Prep Method: E300P

Date Prep: 04.27.2020

MSD Sample Id: 659890-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	330	199	548	110	548	110	90-110	0	20	mg/kg	04.27.2020 17:59	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3124321

MB Sample Id: 7702167-1-BLK

Matrix: Solid

LCS Sample Id: 7702167-1-BKS

Prep Method: SW8015P

Date Prep: 04.27.2020

LCSD Sample Id: 7702167-1-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	858	86	967	97	70-135	12	35	mg/kg	04.27.2020 13:00	
Diesel Range Organics (DRO)	<50.0	1000	958	96	1090	109	70-135	13	35	mg/kg	04.27.2020 13:00	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	121		127		132		70-135	%	04.27.2020 13:00
o-Terphenyl	131		127		122		70-135	%	04.27.2020 13:00

Analytical Method: TPH by SW8015 Mod

Seq Number: 3124321

Matrix: Solid

MB Sample Id: 7702167-1-BLK

Prep Method: SW8015P

Date Prep: 04.27.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	04.27.2020 12:40	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * | (C - E) / (C + E) |$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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



LT Environmental, Inc.
Corral Canyon Expansion

Analytical Method: TPH by SW8015 Mod

Seq Number: 3124321

Parent Sample Id: 659819-001

Matrix: Soil

MS Sample Id: 659819-001 S

Prep Method: SW8015P

Date Prep: 04.27.2020

MSD Sample Id: 659819-001 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)	<50.3	1010	935	93	935	94	70-135	0	35	mg/kg	04.27.2020 14:01	
Diesel Range Organics (DRO)	<50.3	1010	1060	105	1060	106	70-135	0	35	mg/kg	04.27.2020 14:01	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	118		114		70-135	%	04.27.2020 14:01
o-Terphenyl	115		114		70-135	%	04.27.2020 14:01

Analytical Method: BTEX by EPA 8021B

Seq Number: 3124302

MB Sample Id: 7702139-1-BLK

Matrix: Solid

LCS Sample Id: 7702139-1-BKS

Prep Method: SW5035A

Date Prep: 04.27.2020

LCSD Sample Id: 7702139-1-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	0.114	114	0.123	123	70-130	8	35	mg/kg	04.27.2020 22:02	
Toluene	<0.00200	0.100	0.101	101	0.112	112	70-130	10	35	mg/kg	04.27.2020 22:02	
Ethylbenzene	<0.00200	0.100	0.0950	95	0.104	104	71-129	9	35	mg/kg	04.27.2020 22:02	
m,p-Xylenes	<0.00400	0.200	0.185	93	0.201	101	70-135	8	35	mg/kg	04.27.2020 22:02	
o-Xylene	<0.00200	0.100	0.0953	95	0.105	105	71-133	10	35	mg/kg	04.27.2020 22:02	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	114		108		111		70-130	%	04.27.2020 22:02
4-Bromofluorobenzene	106		96		97		70-130	%	04.27.2020 22:02

Analytical Method: BTEX by EPA 8021B

Seq Number: 3124302

Parent Sample Id: 659820-011

Matrix: Soil

MS Sample Id: 659820-011 S

Prep Method: SW5035A

Date Prep: 04.27.2020

MSD Sample Id: 659820-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.130	130	0.129	129	70-130	1	35	mg/kg	04.27.2020 22:44	
Toluene	<0.00200	0.0998	0.114	114	0.114	114	70-130	0	35	mg/kg	04.27.2020 22:44	
Ethylbenzene	<0.00200	0.0998	0.107	107	0.106	106	71-129	1	35	mg/kg	04.27.2020 22:44	
m,p-Xylenes	<0.00399	0.200	0.207	104	0.205	103	70-135	1	35	mg/kg	04.27.2020 22:44	
o-Xylene	<0.00200	0.0998	0.107	107	0.105	105	71-133	2	35	mg/kg	04.27.2020 22:44	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	111		109		70-130	%	04.27.2020 22:44
4-Bromofluorobenzene	98		100		70-130	%	04.27.2020 22:44

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

Project Manager:		Kalei Jennings	Bill to: (if different)	Kyle Littrell
Company Name:		LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:		3300 North A Street	Address:	3104 E Green Street
City, State ZIP:		Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:		432.236.3849	Email:	atrejo@ltenv.com



Work Order Comments	
Program: UST/PST <input type="checkbox"/> PRP <input type="checkbox"/> brownfields <input type="checkbox"/> RC <input type="checkbox"/> unperfund <input type="checkbox"/>	
State of Project:	
Reporting Level II <input type="checkbox"/> Level III <input type="checkbox"/> UST/UST <input type="checkbox"/> RRP <input type="checkbox"/> bvel IV <input type="checkbox"/>	
Deliverables: EDD <input type="checkbox"/> ADAPT <input type="checkbox"/> Other:	

[illegible]

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.

Date/Time	by: (Signature)

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		4/10/20 1542



Certificate of Analysis Summary 660344

LT Environmental, Inc., Arvada, CO

Project Name: The Corral Canyon Expansion

Project Id: 012920053
Contact: Tacoma Morrissey
Project Location:

Date Received in Lab: Thu 04.30.2020 17:13

Report Date: 05.06.2020 07:48

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	660344-001	660344-002	660344-003	660344-004	660344-005	660344-006
	<i>Field Id:</i>	PH01	PH01A	PH02	PH02A	PH03	PH03A
	<i>Depth:</i>	1- ft	2- ft	1- ft	2- ft	1- ft	2- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	04.30.2020 09:23	04.30.2020 09:25	04.30.2020 09:33	04.30.2020 09:38	04.30.2020 09:43	04.30.2020 09:45
BTEX by EPA 8021B	<i>Extracted:</i>	05.01.2020 11:30	05.01.2020 11:30	05.01.2020 11:30	04.30.2020 17:30	04.30.2020 17:30	04.30.2020 17:30
	<i>Analyzed:</i>	05.01.2020 13:27	05.01.2020 13:48	05.01.2020 14:10	05.01.2020 03:10	05.01.2020 03:31	05.01.2020 03:52
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199
Toluene		<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199
Ethylbenzene		<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199
m,p-Xylenes		<0.00402 0.00402	<0.00400 0.00400	<0.00397 0.00397	<0.00398 0.00398	<0.00399 0.00399	<0.00398 0.00398
o-Xylene		<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199
Total Xylenes		<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199
Total BTEX		<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199
Chloride by EPA 300	<i>Extracted:</i>	04.30.2020 17:48	04.30.2020 17:48	04.30.2020 17:48	04.30.2020 17:48	05.01.2020 07:59	05.01.2020 07:59
	<i>Analyzed:</i>	04.30.2020 22:48	04.30.2020 22:53	04.30.2020 22:59	04.30.2020 23:05	05.01.2020 08:49	05.01.2020 09:06
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		175 10.0	33.4 9.90	141 9.88	14.6 9.92	51.2 9.92	33.2 9.98
TPH by SW8015 Mod	<i>Extracted:</i>	04.30.2020 17:30	04.30.2020 17:30	04.30.2020 17:30	04.30.2020 17:30	04.30.2020 17:30	04.30.2020 17:30
	<i>Analyzed:</i>	04.30.2020 19:18	04.30.2020 19:18	04.30.2020 20:19	04.30.2020 20:40	04.30.2020 21:00	04.30.2020 21:21
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.2 50.2	<50.0 50.0	<50.2 50.2	<50.2 50.2	<50.1 50.1	<50.0 50.0
Diesel Range Organics (DRO)		<50.2 50.2	<50.0 50.0	<50.2 50.2	<50.2 50.2	<50.1 50.1	<50.0 50.0
Motor Oil Range Hydrocarbons (MRO)		<50.2 50.2	<50.0 50.0	<50.2 50.2	<50.2 50.2	<50.1 50.1	<50.0 50.0
Total GRO-DRO		<50.2 50.2	<50.0 50.0	<50.2 50.2	<50.2 50.2	<50.1 50.1	<50.0 50.0
Total TPH		<50.2 50.2	<50.0 50.0	<50.2 50.2	<50.2 50.2	<50.1 50.1	<50.0 50.0

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Jessica Kramer
Project Manager



Analytical Report 660344

for

LT Environmental, Inc.

Project Manager: Tacoma Morrissey

The Corral Canyon Expansion

012920053

05.06.2020

Collected By: Client

**1089 N Canal Street
Carlsbad, NM 88220**

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

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

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



05.06.2020

Project Manager: **Tacoma Morrissey**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **660344**

The Corral Canyon Expansion

Project Address:

Tacoma Morrissey:

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) 660344. 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. 660344 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,

A handwritten signature in black ink that reads 'Jessica Kramer'. The signature is written in a cursive, flowing style.

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 660344****LT Environmental, Inc., Arvada, CO**

The Corral Canyon Expansion

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH01	S	04.30.2020 09:23	1 ft	660344-001
PH01A	S	04.30.2020 09:25	2 ft	660344-002
PH02	S	04.30.2020 09:33	1 ft	660344-003
PH02A	S	04.30.2020 09:38	2 ft	660344-004
PH03	S	04.30.2020 09:43	1 ft	660344-005
PH03A	S	04.30.2020 09:45	2 ft	660344-006



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: The Corral Canyon Expansion

Project ID: 012920053
Work Order Number(s): 660344

Report Date: 05.06.2020
Date Received: 04.30.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 660344

LT Environmental, Inc., Arvada, CO

The Corral Canyon Expansion

Sample Id: **PH01**
Lab Sample Id: 660344-001

Matrix: Soil
Date Collected: 04.30.2020 09:23

Date Received: 04.30.2020 17:13
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3124742

Date Prep: 04.30.2020 17:48

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	175	10.0	mg/kg	04.30.2020 22:48		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3124745

Date Prep: 04.30.2020 17:30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	04.30.2020 19:18	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	04.30.2020 19:18	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	04.30.2020 19:18	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	04.30.2020 19:18	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	04.30.2020 19:18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	04.30.2020 19:18	
o-Terphenyl	84-15-1	105	%	70-135	04.30.2020 19:18	



Certificate of Analytical Results 660344

LT Environmental, Inc., Arvada, CO

The Corral Canyon Expansion

Sample Id: **PH01**
 Lab Sample Id: 660344-001

Matrix: Soil
 Date Collected: 04.30.2020 09:23

Date Received: 04.30.2020 17:13
 Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 05.01.2020 11:30

Basis: Wet Weight

Seq Number: 3124843

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	05.01.2020 13:27	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	05.01.2020 13:27	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	05.01.2020 13:27	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	05.01.2020 13:27	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	05.01.2020 13:27	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	05.01.2020 13:27	U	1
Total BTEX		<0.00201	0.00201	mg/kg	05.01.2020 13:27	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	113	%	70-130	05.01.2020 13:27		
4-Bromofluorobenzene	460-00-4	106	%	70-130	05.01.2020 13:27		



Certificate of Analytical Results 660344

LT Environmental, Inc., Arvada, CO

The Corral Canyon Expansion

Sample Id: **PH01A**
Lab Sample Id: 660344-002

Matrix: Soil
Date Collected: 04.30.2020 09:25

Date Received: 04.30.2020 17:13
Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3124742

Date Prep: 04.30.2020 17:48

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	33.4	9.90	mg/kg	04.30.2020 22:53		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3124749

Date Prep: 04.30.2020 17:30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	04.30.2020 19:18	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	04.30.2020 19:18	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	04.30.2020 19:18	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	04.30.2020 19:18	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	04.30.2020 19:18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	04.30.2020 19:18	
o-Terphenyl	84-15-1	118	%	70-135	04.30.2020 19:18	



Certificate of Analytical Results 660344

LT Environmental, Inc., Arvada, CO

The Corral Canyon Expansion

Sample Id: **PH01A**
 Lab Sample Id: 660344-002

Matrix: Soil
 Date Collected: 04.30.2020 09:25

Date Received: 04.30.2020 17:13
 Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 05.01.2020 11:30

Basis: Wet Weight

Seq Number: 3124843

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.01.2020 13:48	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.01.2020 13:48	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.01.2020 13:48	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	05.01.2020 13:48	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.01.2020 13:48	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.01.2020 13:48	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.01.2020 13:48	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	106	%	70-130	05.01.2020 13:48		
1,4-Difluorobenzene	540-36-3	113	%	70-130	05.01.2020 13:48		



Certificate of Analytical Results 660344

LT Environmental, Inc., Arvada, CO

The Corral Canyon Expansion

Sample Id: **PH02**
Lab Sample Id: 660344-003

Matrix: Soil
Date Collected: 04.30.2020 09:33

Date Received: 04.30.2020 17:13
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3124742

Date Prep: 04.30.2020 17:48

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	141	9.88	mg/kg	04.30.2020 22:59		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3124749

Date Prep: 04.30.2020 17:30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	04.30.2020 20:19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	04.30.2020 20:19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	04.30.2020 20:19	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	04.30.2020 20:19	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	04.30.2020 20:19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	04.30.2020 20:19	
o-Terphenyl	84-15-1	110	%	70-135	04.30.2020 20:19	



Certificate of Analytical Results 660344

LT Environmental, Inc., Arvada, CO

The Corral Canyon Expansion

Sample Id: **PH02**
 Lab Sample Id: 660344-003

Matrix: Soil
 Date Collected: 04.30.2020 09:33

Date Received: 04.30.2020 17:13
 Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 05.01.2020 11:30

Basis: Wet Weight

Seq Number: 3124843

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	05.01.2020 14:10	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	05.01.2020 14:10	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	05.01.2020 14:10	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	05.01.2020 14:10	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	05.01.2020 14:10	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	05.01.2020 14:10	U	1
Total BTEX		<0.00198	0.00198	mg/kg	05.01.2020 14:10	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	113	%	70-130	05.01.2020 14:10		
1,4-Difluorobenzene	540-36-3	117	%	70-130	05.01.2020 14:10		



Certificate of Analytical Results 660344

LT Environmental, Inc., Arvada, CO

The Corral Canyon Expansion

Sample Id: **PH02A**
Lab Sample Id: 660344-004

Matrix: Soil
Date Collected: 04.30.2020 09:38

Date Received: 04.30.2020 17:13
Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3124742

Date Prep: 04.30.2020 17:48

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	14.6	9.92	mg/kg	04.30.2020 23:05		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3124749

Date Prep: 04.30.2020 17:30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	04.30.2020 20:40	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	04.30.2020 20:40	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	04.30.2020 20:40	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	04.30.2020 20:40	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	04.30.2020 20:40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	04.30.2020 20:40	
o-Terphenyl	84-15-1	96	%	70-135	04.30.2020 20:40	



Certificate of Analytical Results 660344

LT Environmental, Inc., Arvada, CO

The Corral Canyon Expansion

Sample Id: **PH02A**
 Lab Sample Id: 660344-004

Matrix: Soil
 Date Collected: 04.30.2020 09:38

Date Received: 04.30.2020 17:13
 Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.30.2020 17:30

Basis: Wet Weight

Seq Number: 3124718

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	05.01.2020 03:10	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	05.01.2020 03:10	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	05.01.2020 03:10	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	05.01.2020 03:10	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	05.01.2020 03:10	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	05.01.2020 03:10	U	1
Total BTEX		<0.00199	0.00199	mg/kg	05.01.2020 03:10	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	115	%	70-130	05.01.2020 03:10		
4-Bromofluorobenzene	460-00-4	111	%	70-130	05.01.2020 03:10		



Certificate of Analytical Results 660344

LT Environmental, Inc., Arvada, CO

The Corral Canyon Expansion

Sample Id: **PH03**
Lab Sample Id: 660344-005

Matrix: Soil
Date Collected: 04.30.2020 09:43

Date Received: 04.30.2020 17:13
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3124857

Date Prep: 05.01.2020 07:59

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	51.2	9.92	mg/kg	05.01.2020 08:49		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3124749

Date Prep: 04.30.2020 17:30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	04.30.2020 21:00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	04.30.2020 21:00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	04.30.2020 21:00	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	04.30.2020 21:00	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	04.30.2020 21:00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-135	04.30.2020 21:00	
o-Terphenyl	84-15-1	92	%	70-135	04.30.2020 21:00	



Certificate of Analytical Results 660344

LT Environmental, Inc., Arvada, CO

The Corral Canyon Expansion

Sample Id: **PH03**
 Lab Sample Id: 660344-005

Matrix: Soil
 Date Collected: 04.30.2020 09:43

Date Received: 04.30.2020 17:13
 Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.30.2020 17:30

Basis: Wet Weight

Seq Number: 3124718

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.01.2020 03:31	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.01.2020 03:31	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.01.2020 03:31	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	05.01.2020 03:31	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.01.2020 03:31	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.01.2020 03:31	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.01.2020 03:31	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	114	%	70-130	05.01.2020 03:31		
4-Bromofluorobenzene	460-00-4	108	%	70-130	05.01.2020 03:31		



Certificate of Analytical Results 660344

LT Environmental, Inc., Arvada, CO

The Corral Canyon Expansion

Sample Id: **PH03A**
Lab Sample Id: 660344-006

Matrix: Soil
Date Collected: 04.30.2020 09:45

Date Received: 04.30.2020 17:13
Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3124857

Date Prep: 05.01.2020 07:59

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	33.2	9.98	mg/kg	05.01.2020 09:06		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3124749

Date Prep: 04.30.2020 17:30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	04.30.2020 21:21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	04.30.2020 21:21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	04.30.2020 21:21	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	04.30.2020 21:21	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	04.30.2020 21:21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	04.30.2020 21:21	
o-Terphenyl	84-15-1	99	%	70-135	04.30.2020 21:21	



Certificate of Analytical Results 660344

LT Environmental, Inc., Arvada, CO

The Corral Canyon Expansion

Sample Id: **PH03A**
 Lab Sample Id: 660344-006

Matrix: Soil
 Date Collected: 04.30.2020 09:45

Date Received: 04.30.2020 17:13
 Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.30.2020 17:30

Basis: Wet Weight

Seq Number: 3124718

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	05.01.2020 03:52	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	05.01.2020 03:52	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	05.01.2020 03:52	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	05.01.2020 03:52	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	05.01.2020 03:52	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	05.01.2020 03:52	U	1
Total BTEX		<0.00199	0.00199	mg/kg	05.01.2020 03:52	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	114	%	70-130	05.01.2020 03:52		
4-Bromofluorobenzene	460-00-4	106	%	70-130	05.01.2020 03:52		



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



LT Environmental, Inc.
The Corral Canyon Expansion

Analytical Method: Chloride by EPA 300

Seq Number: 3124742

MB Sample Id: 7702475-1-BLK

Matrix: Solid

LCS Sample Id: 7702475-1-BKS

Prep Method: E300P

Date Prep: 04.30.2020

LCSD Sample Id: 7702475-1-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	257	103	257	103	90-110	0	20	mg/kg	04.30.2020 20:20	

Analytical Method: Chloride by EPA 300

Seq Number: 3124857

MB Sample Id: 7702477-1-BLK

Matrix: Solid

LCS Sample Id: 7702477-1-BKS

Prep Method: E300P

Date Prep: 05.01.2020

LCSD Sample Id: 7702477-1-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	260	104	260	104	90-110	0	20	mg/kg	05.01.2020 08:37	

Analytical Method: Chloride by EPA 300

Seq Number: 3124742

Parent Sample Id: 660346-001

Matrix: Soil

MS Sample Id: 660346-001 S

Prep Method: E300P

Date Prep: 04.30.2020

MSD Sample Id: 660346-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	189	200	393	102	391	101	90-110	1	20	mg/kg	04.30.2020 20:37	

Analytical Method: Chloride by EPA 300

Seq Number: 3124742

Parent Sample Id: 660346-011

Matrix: Soil

MS Sample Id: 660346-011 S

Prep Method: E300P

Date Prep: 04.30.2020

MSD Sample Id: 660346-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	105	200	317	106	308	102	90-110	3	20	mg/kg	04.30.2020 21:57	

Analytical Method: Chloride by EPA 300

Seq Number: 3124857

Parent Sample Id: 660344-005

Matrix: Soil

MS Sample Id: 660344-005 S

Prep Method: E300P

Date Prep: 05.01.2020

MSD Sample Id: 660344-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	51.2	199	258	104	263	106	90-110	2	20	mg/kg	05.01.2020 08:54	

Analytical Method: Chloride by EPA 300

Seq Number: 3124857

Parent Sample Id: 660345-009

Matrix: Soil

MS Sample Id: 660345-009 S

Prep Method: E300P

Date Prep: 05.01.2020

MSD Sample Id: 660345-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	12.0	199	221	105	228	109	90-110	3	20	mg/kg	05.01.2020 10:14	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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



LT Environmental, Inc.
The Corral Canyon Expansion

Analytical Method: TPH by SW8015 Mod

Seq Number: 3124745

MB Sample Id: 7702485-1-BLK

Matrix: Solid

LCS Sample Id: 7702485-1-BKS

Prep Method: SW8015P

Date Prep: 04.30.2020

LCSD Sample Id: 7702485-1-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	1090	109	857	86	70-135	24	35	mg/kg	04.30.2020 12:30	
Diesel Range Organics (DRO)	<50.0	1000	1120	112	961	96	70-135	15	35	mg/kg	04.30.2020 12:30	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits			Units	Analysis Date	
1-Chlorooctane	94		127		111		70-135			%	04.30.2020 12:30	
o-Terphenyl	101		120		108		70-135			%	04.30.2020 12:30	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3124749

MB Sample Id: 7702481-1-BLK

Matrix: Solid

LCS Sample Id: 7702481-1-BKS

Prep Method: SW8015P

Date Prep: 04.30.2020

LCSD Sample Id: 7702481-1-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	951	95	839	84	70-135	13	35	mg/kg	04.30.2020 12:30	
Diesel Range Organics (DRO)	<50.0	1000	1070	107	921	92	70-135	15	35	mg/kg	04.30.2020 12:30	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag		LCSD %Rec	LCSD Flag	Limits		Units	Analysis Date	
1-Chlorooctane	99		123			120		70-135		%	04.30.2020 12:30	
o-Terphenyl	109		122			106		70-135		%	04.30.2020 12:30	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3124745

Matrix: Solid

MB Sample Id: 7702485-1-BLK

Prep Method: SW8015P

Date Prep: 04.30.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	04.30.2020 12:10	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3124749

Matrix: Solid

MB Sample Id: 7702481-1-BLK

Prep Method: SW8015P

Date Prep: 04.30.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	04.30.2020 12:10	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * | (C - E) / (C + E) |$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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



LT Environmental, Inc.
The Corral Canyon Expansion

Analytical Method: TPH by SW8015 Mod

Seq Number: 3124745

Parent Sample Id: 660344-001

Matrix: Soil

MS Sample Id: 660344-001 S

Prep Method: SW8015P

Date Prep: 04.30.2020

MSD Sample Id: 660344-001 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)	<50.3	1010	916	91	928	93	70-135	1	35	mg/kg	04.30.2020 19:38	
Diesel Range Organics (DRO)	<50.3	1010	1020	101	1040	104	70-135	2	35	mg/kg	04.30.2020 19:38	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	116		118		70-135	%	04.30.2020 19:38
o-Terphenyl	115		118		70-135	%	04.30.2020 19:38

Analytical Method: TPH by SW8015 Mod

Seq Number: 3124749

Parent Sample Id: 660344-002

Matrix: Soil

MS Sample Id: 660344-002 S

Prep Method: SW8015P

Date Prep: 04.30.2020

MSD Sample Id: 660344-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.8	995	888	89	888	89	70-135	0	35	mg/kg	04.30.2020 19:38	
Diesel Range Organics (DRO)	<49.8	995	1000	101	1000	100	70-135	0	35	mg/kg	04.30.2020 19:38	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	116		109		70-135	%	04.30.2020 19:38
o-Terphenyl	115		114		70-135	%	04.30.2020 19:38

Analytical Method: BTEX by EPA 8021B

Seq Number: 3124718

MB Sample Id: 7702473-1-BLK

Matrix: Solid

LCS Sample Id: 7702473-1-BKS

Prep Method: SW5035A

Date Prep: 04.30.2020

LCSD Sample Id: 7702473-1-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	0.0978	98	0.106	106	70-130	8	35	mg/kg	04.30.2020 18:36	
Toluene	<0.00200	0.100	0.0899	90	0.0974	97	70-130	8	35	mg/kg	04.30.2020 18:36	
Ethylbenzene	<0.00200	0.100	0.0829	83	0.0909	91	71-129	9	35	mg/kg	04.30.2020 18:36	
m,p-Xylenes	<0.00400	0.200	0.164	82	0.178	89	70-135	8	35	mg/kg	04.30.2020 18:36	
o-Xylene	<0.00200	0.100	0.0880	88	0.0951	95	71-133	8	35	mg/kg	04.30.2020 18:36	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	112		110		108		70-130	%	04.30.2020 18:36
4-Bromofluorobenzene	102		101		97		70-130	%	04.30.2020 18:36

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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



LT Environmental, Inc.
The Corral Canyon Expansion

Analytical Method: BTEX by EPA 8021B

Seq Number: 3124843

Matrix: Solid

Prep Method: SW5035A

Date Prep: 05.01.2020

MB Sample Id: 7702532-1-BLK

LCS Sample Id: 7702532-1-BKS

LCSD Sample Id: 7702532-1-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	0.108	108	0.113	113	70-130	5	35	mg/kg	05.01.2020 11:40	
Toluene	<0.00200	0.100	0.0998	100	0.109	109	70-130	9	35	mg/kg	05.01.2020 11:40	
Ethylbenzene	<0.00200	0.100	0.0942	94	0.101	101	71-129	7	35	mg/kg	05.01.2020 11:40	
m,p-Xylenes	<0.00400	0.200	0.184	92	0.200	100	70-135	8	35	mg/kg	05.01.2020 11:40	
o-Xylene	<0.00200	0.100	0.0955	96	0.103	103	71-133	8	35	mg/kg	05.01.2020 11:40	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits			Units	Analysis Date	
1,4-Difluorobenzene	113		108		107		70-130			%	05.01.2020 11:40	
4-Bromofluorobenzene	107		99		101		70-130			%	05.01.2020 11:40	

Analytical Method: BTEX by EPA 8021B

Seq Number: 3124718

Matrix: Soil

Prep Method: SW5035A

Date Prep: 04.30.2020

Parent Sample Id: 660346-003

MS Sample Id: 660346-003 S

MSD Sample Id: 660346-003 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	0.105	104	0.104	104	70-130	1	35	mg/kg	04.30.2020 19:19	
Toluene	<0.00202	0.101	0.0947	94	0.0956	96	70-130	1	35	mg/kg	04.30.2020 19:19	
Ethylbenzene	<0.00202	0.101	0.0865	86	0.0868	87	71-129	0	35	mg/kg	04.30.2020 19:19	
m,p-Xylenes	<0.00403	0.202	0.166	82	0.168	84	70-135	1	35	mg/kg	04.30.2020 19:19	
o-Xylene	<0.00202	0.101	0.0836	83	0.0843	84	71-133	1	35	mg/kg	04.30.2020 19:19	
Surrogate			MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits			Units	Analysis Date	
1,4-Difluorobenzene			110		107		70-130			%	04.30.2020 19:19	
4-Bromofluorobenzene			100		107		70-130			%	04.30.2020 19:19	

Analytical Method: BTEX by EPA 8021B

Seq Number: 3124843

Matrix: Soil

Prep Method: SW5035A

Date Prep: 05.01.2020

Parent Sample Id: 660344-001

MS Sample Id: 660344-001 S

MSD Sample Id: 660344-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.117	117	0.0952	95	70-130	21	35	mg/kg	05.01.2020 17:01	
Toluene	<0.00200	0.100	0.105	105	0.0864	86	70-130	19	35	mg/kg	05.01.2020 17:01	
Ethylbenzene	<0.00200	0.100	0.0986	99	0.0812	81	71-129	19	35	mg/kg	05.01.2020 17:01	
m,p-Xylenes	<0.00401	0.200	0.191	96	0.159	80	70-135	18	35	mg/kg	05.01.2020 17:01	
o-Xylene	<0.00200	0.100	0.0999	100	0.0817	82	71-133	20	35	mg/kg	05.01.2020 17:01	
Surrogate			MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits			Units	Analysis Date	
1,4-Difluorobenzene			110		111		70-130			%	05.01.2020 17:01	
4-Bromofluorobenzene			100		103		70-130			%	05.01.2020 17:01	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

Work Order No: 6060579

Page 1 of 1

www.xenco.com

Chain of Custody

Project Manager:		Tacoma Morrissey	Bill to: (if different)	Kyle Littlell
Company Name:		LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:		3300 North A St. Bldg 1, Unit 222	Address:	
City, State ZIP:		Midland, TX 79705	City, State ZIP:	Carlsbad, NM
Phone:		(432) 704-5178	Email:	tmorrissey@ltenv.com tcasey@ltenv.com ab

Work Order Comments									
Program: UST/PST <input type="checkbox"/> RP <input type="checkbox"/> Brownfields <input type="checkbox"/> RC <input type="checkbox"/> Superfund <input type="checkbox"/>									
State of Project: NM									
Reporting Level II <input type="checkbox"/> Level III <input type="checkbox"/> UST/UST <input type="checkbox"/> RP <input type="checkbox"/> Level IV <input type="checkbox"/>									
Deliverables: EDD <input type="checkbox"/> ADAPT <input type="checkbox"/> Other:									

Project Name:		The Central Canyon Expansion			Turn Around		ANALYSIS REQUEST												Work Order Notes								
Project Number:		012920053			Routine <input checked="" type="checkbox"/>																						
P.O. Number:					Rush:																						
Sampler's Name:		Travis Casey			Due Date:																						
SAMPLE RECEIPT						Temp Blank:		<input checked="" type="radio"/> Yes <input type="radio"/> No		Wet Ice:		<input checked="" type="radio"/> Yes <input type="radio"/> No															
Temperature (°C):						1.8				Thermometer ID		T-NH-2007															
Received Intact:						<input checked="" type="radio"/> Yes <input type="radio"/> No																					
Cooler Custody Seals:						<input checked="" type="radio"/> Yes <input type="radio"/> No		N/A		Correction Factor:		-0.2															
Sample Custody Seals:						<input checked="" type="radio"/> Yes <input type="radio"/> No		N/A		Total Containers:		10															
Sample Identification				Matrix		Date Sampled		Time Sampled		Depth		Number of Containers												TAT starts the day received by the lab, if received by 4:30pm Sample Comments			
SS01A				S		4/30/20		0923		1'		1															
SS01B								0925		2'		1															
SS02A								0933		1'		1															
SS02B								0938		2'		1															
SS03A								0943		1'		1															
SS03B								0945		2'		1															
														X													

[illegible]

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time

Tom S. Cap	4/30/20	1713	2		
John					

[illegible]

XENCO Laboratories**Prelogin/Nonconformance Report- Sample Log-In****Client:** LT Environmental, Inc.**Date/ Time Received:** 04.30.2020 05.13.00 PM**Work Order #:** 660344**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)?	1.8
#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
#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

Samples received in bulk containers

*** 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: 04.30.2020

Checklist reviewed by:

 Jessica Kramer

Date: 05.01.2020