



LT Environmental, Inc.

3300 North "A" Street
Building 1, Unit 103
Midland, Texas 79705
432.704.5178

November 26, 2019

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

OP63C-191127-C-1410

**RE: Closure Request
Corral Canyon Central Tank Battery
Remediation Permit Number 2RP-5550
Eddy County, New Mexico**

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following report detailing site assessment and soil sampling activities at the Corral Canyon Central Tank Battery (Site) in Unit P, Section 5, Township 23 South, Range 29 East, in Eddy County, New Mexico (Figure 1). The purpose of the site assessment and soil sampling activities was to confirm the presence or absence of impacts to soil following a release of crude oil at the Site. Based on field observations, field screening, and laboratory analytical results from soil sampling activities, XTO is submitting this Closure Report and requesting no further action for Remediation Permit (RP) Number 2RP-5550.

RELEASE BACKGROUND

On July 4, 2019, the sump pot on the flare line over-filled and caused approximately 0.35 barrels (bbls) of oil to escape from the low-pressure flare. Misted fluids ignited on the pad surface. The fire was immediately extinguished. There were no injuries and no damage to equipment. The sump pot was drained and returned to service. 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 July 17, 2019, and was assigned RP Number 2RP-5550 (Attachment 1).

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 51 and 100 feet below ground surface (bgs) based on the nearest water well data. The closest permitted water well with depth to water data is New Mexico Office of the State Engineer (NM OSE) well #RA7162, located approximately 6,260 feet southeast of the Site. The water well has a depth to groundwater of approximately 40 feet bgs and a total depth of 55 feet bgs. However, as part of remediation





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efforts at a nearby site, Corral Canyon #1H flow line (2RP-5201), LTE installed six monitoring wells (MW01 through MW06) to assess depth to groundwater. The groundwater monitoring wells are located approximately 465 feet southeast of the Site. Static water level measured in monitoring wells MW01 through MW06 on September 13, 2019, ranged from 57.26 feet bgs in monitoring well MW04 to 62.29 feet bgs in monitoring well MW02 with an average depth to water of 58.80 feet bgs. The depth to water measurements are provided in the table below and the location of the monitoring wells is identified on Figure 1.

MONITORING WELL INFORMATION

Sample Name	NM OSE Permit No.	Total Depth (feet bgs)	Depth to Water (feet bgs)	Sample Date
MW01	C-4324 POD 12	68.44	58.17	09/13/2019
MW02	C-4324 POD 8	68.10	62.29	09/13/2019
MW03	C-4324 POD 9	75.58	58.30	09/13/2019
MW04	C-4324 POD 10	69.08	57.26	09/13/2019
MW05	C-4324 POD 11	64.80	58.54	09/13/2019
MW06	C-4324 POD 6	64.11	58.25	09/13/2019

Based on depth to water measured recently in the nearby monitoring wells, depth to water at the Site is estimated to be between 51 and 100 feet bgs. The closest continuously flowing water or significant watercourse to the Site is an unnamed dry wash, located approximately 589 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 located in a medium potential karst area.

CLOSURE CRITERIA

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

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





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SITE ASSESSMENT AND SOIL SAMPLING ACTIVITIES

On August 16, 2019, LTE personnel were at the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. LTE personnel collected 3 discrete soil samples at a depth of 0.5 feet bgs (Figure 2). No staining was observed during the site visit.

On October 4, 2019, LTE personnel advanced 6 potholes via track-mounted backhoe to confirm the presence or absence of impacted soil. Potholes PH01 through PH06 were advanced to a depth of 2 feet bgs. Two delineation soil samples were collected from each pothole from depths of 1 foot and 2 feet bgs. Soil from the potholes was field screened for volatile aromatic hydrocarbons utilizing a photo-ionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. Field screening results and observations for each pothole were logged on lithologic/soil sampling logs, that are presented on Attachment 2. All potholes were backfilled with the removed soil. The potholes and delineation soil sample locations are depicted on Figure 3.

The soil samples from each event 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 shipped at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Xenco Laboratories (Xenco) in Midland, Texas, for analysis of BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following USEPA Method 8015M/D; and chloride following EPA Method 300.0.

Based on laboratory analytical results for the delineation soil samples collected on October 4, 2019, excavation activities did not appear to be warranted. Photographic documentation was conducted during the Site visit. Photographs are included in Attachment 3.

ANALYTICAL RESULTS

Laboratory analytical results indicated benzene, BTEX, GRO and DRO, TPH, and chloride concentrations were compliant with the Closure Criteria in delineation soil samples PH01/PH01A through PH06/PH06A collected at depths of approximately 1 foot and 2 feet bgs. Laboratory analytical results are presented on Figure 3, and summarized in Table 1. The complete laboratory analytical reports are included as Attachment 4.

CONCLUSIONS

Delineation soil samples PH01/PH01A through PH06/PH06A were collected from within the release extent from depths of 1 foot and 2 feet bgs to assess for the presence or absence of soil impacts as a result of the July 4, 2019, release. Laboratory analytical results for all soil samples indicated benzene, BTEX, GRO and DRO, TPH, and chloride concentrations were compliant with





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the Closure Criteria. Additionally, field screening of soil indicated volatile aromatic hydrocarbons and chloride concentrations were not elevated and soil staining and petroleum hydrocarbon odors were not identified within the release extent.

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 produced water release. XTO requests no further action for RP Number 2RP-5550. An updated Form C-141 is included as Attachment 1.

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

Sincerely,

LT ENVIRONMENTAL, INC.

A handwritten signature in blue ink that reads 'Allison S. White'.

Allison S. White, P.E.
Project Engineer

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

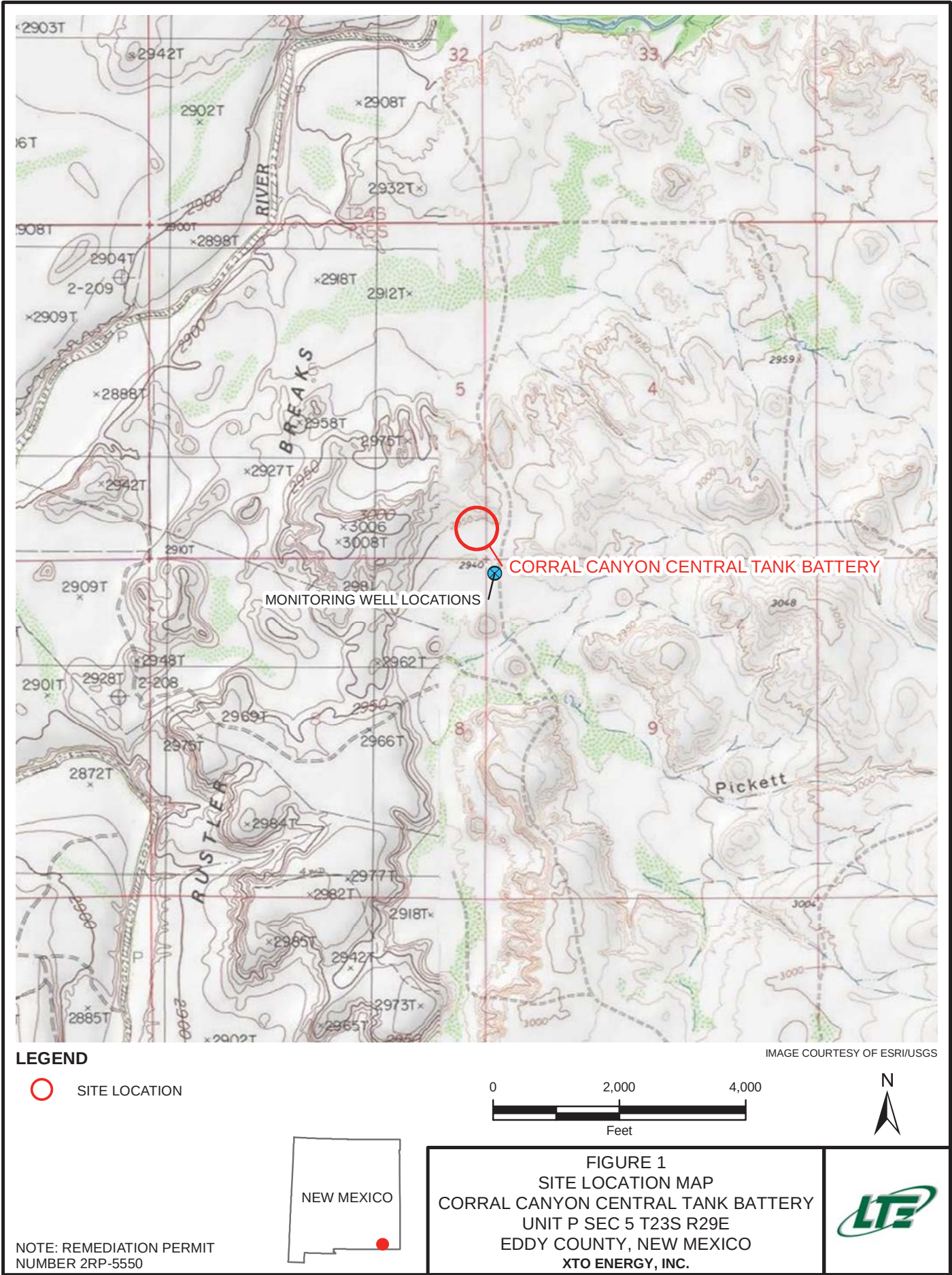
Appendices:

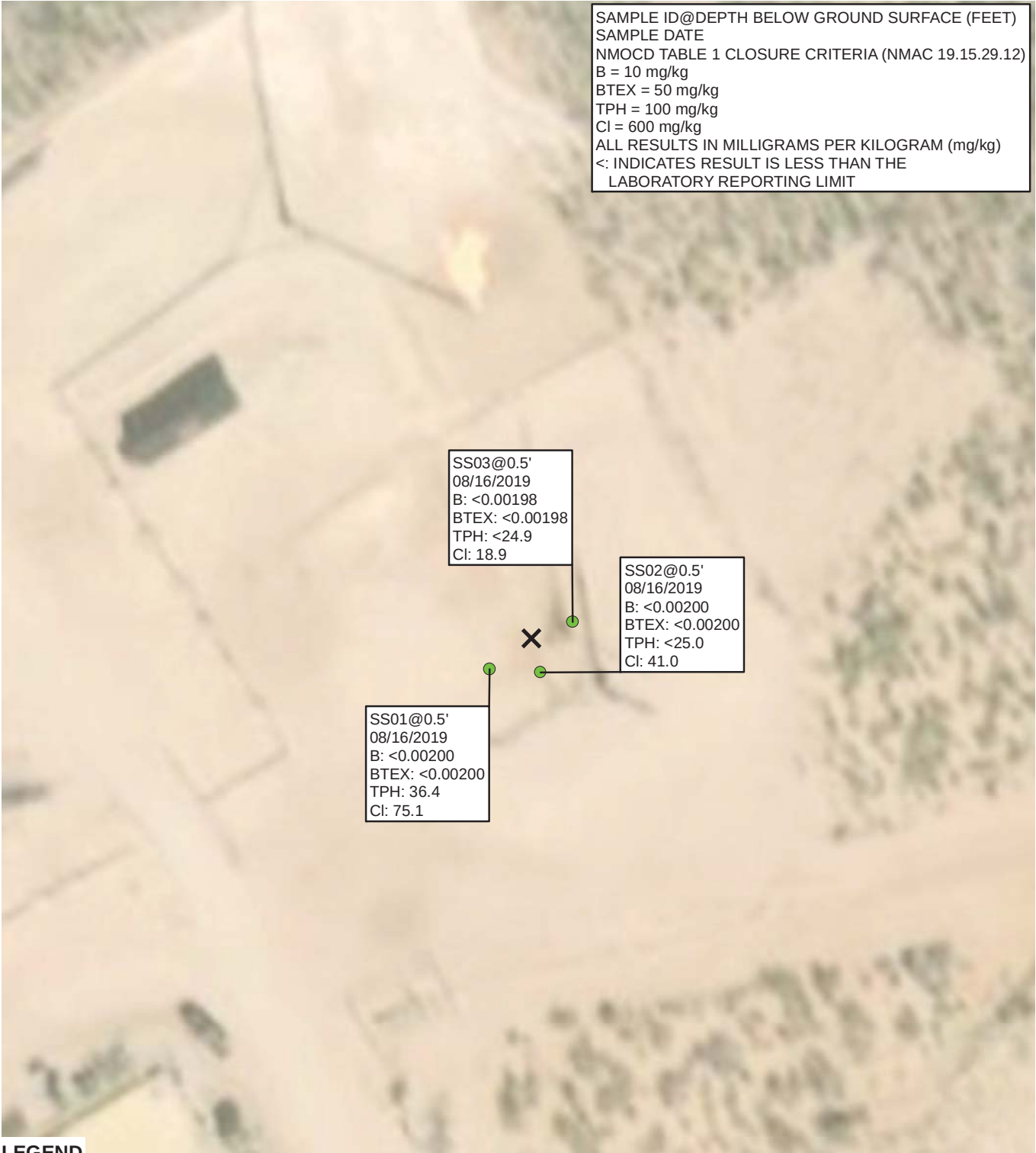
Figure 1 Site Location Map
Figure 2 Preliminary Soil Sample Locations
Figure 3 Delineation Soil Sample Locations
Table 1 Soil Analytical Results
Attachment 1 Initial/Final NMOCD Form C-141 (2RP-5550)
Attachment 2 Lithologic / Soil Sampling Logs
Attachment 3 Photographic Log
Attachment 4 Laboratory Analytical Reports



FIGURES







LEGEND

- X RELEASE LOCATION
- PRELIMINARY SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA

B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
TPH: TOTAL PETROLEUM HYDROCARBONS
Cl: CHLORIDE
NMAC: NEW MEXICO ADMINISTRATIVE CODE
NMOCD: NEW MEXICO OIL CONSERVATION DIVISION
NOTE: REMEDIATION PERMIT NUMBER 2RP-5550

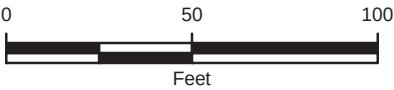
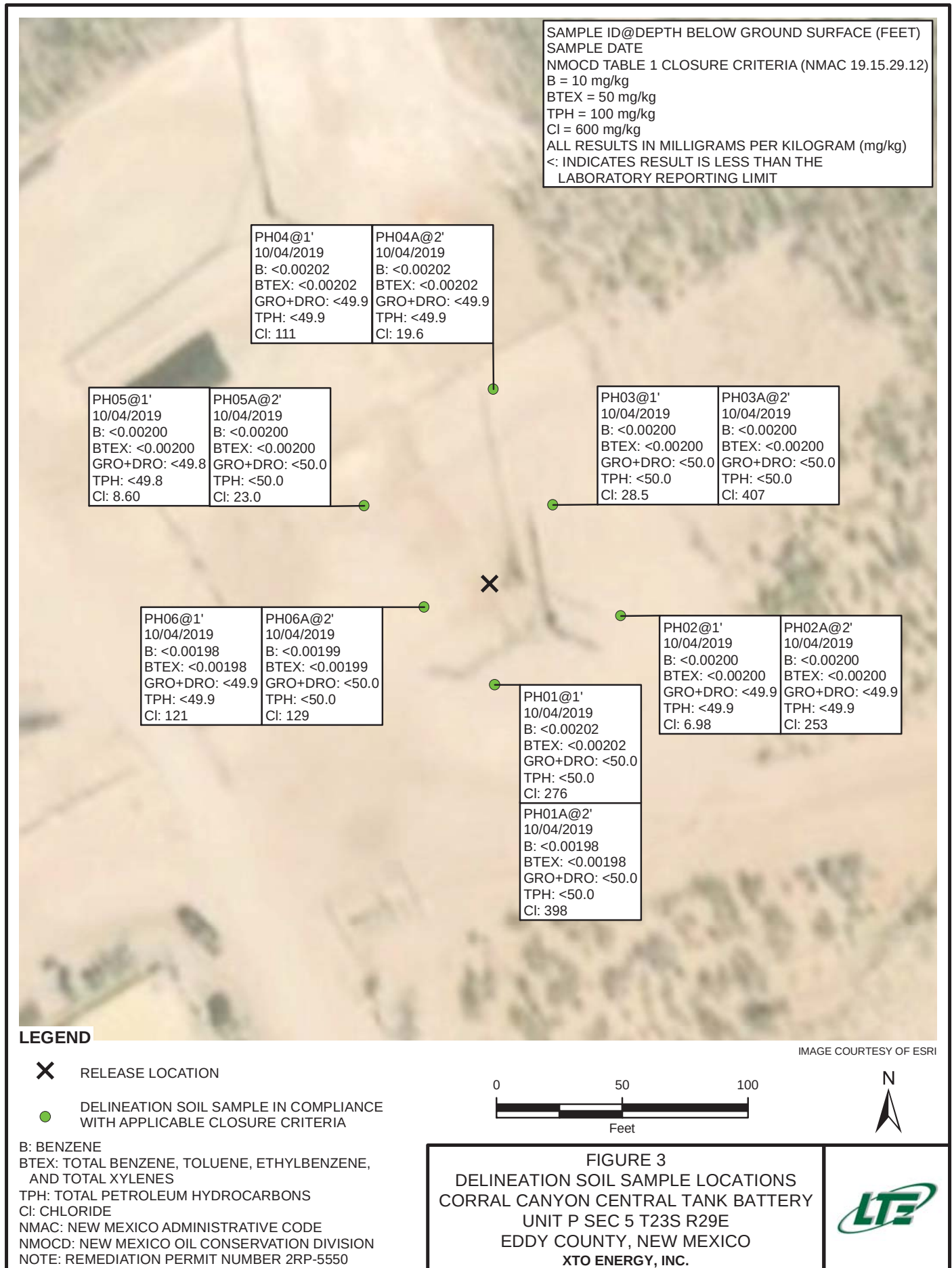


IMAGE COURTESY OF ESRI

FIGURE 2
PRELIMINARY SOIL SAMPLE LOCATIONS
CORRAL CANYON CENTRAL TANK BATTERY
UNIT P SEC 5 T23S R29E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.





TABLE



TABLE 1
SOIL ANALYTICAL RESULTS

CORRAL CANYON CTB
REMEDIATION PERMIT NUMBER 2RP-5550
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
SS01	0.5	08/16/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<25.0	36.4	<25.0	36.4	36.4	75.1
SS02	0.5	08/16/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<25.0	<25.0	<25.0	<25.0	<25.0	41.0
SS03	0.5	08/16/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<24.9	<24.9	<24.9	<24.9	<24.9	18.9
PH01	1	10/04/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.0	<50.0	<50.0	<50.0	<50.0	276
PH01A	2	10/04/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.0	<50.0	<50.0	<50.0	<50.0	398
PH02	1	10/04/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	6.98
PH02A	2	10/04/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	253
PH03	1	10/04/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	28.5
PH03A	2	10/04/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	407
PH04	1	10/04/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.9	<49.9	<49.9	<49.9	<49.9	111
PH04A	2	10/04/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.9	<49.9	<49.9	<49.9	<49.9	19.6
PH05	1	10/04/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	8.60
PH05A	2	10/04/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	23.0
PH06	1	10/04/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	<49.9	121
PH06A	2	10/04/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	129
NMOCDC Table 1 Closure Criteria			10	NE	NE	NE	50	NE	NE	NE	1,000	2,500	10,000

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

NMOCDC - 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: INITIAL/FINAL NMOCD FORM C-141 (2RP-5550)



District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural
Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	NAB1921740575
District RP	2RP-5550
Facility ID	
Application ID	pAB1921740209

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) NAB1921740575
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.153285° Longitude -103.998430°
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Corral Canyon Central Tank Battery	Site Type Bulk Storage and Separation Facility
Date Release Discovered 7/4/2019	API# (if applicable) 30-015-42928 Corral Canyon Fed 16H

Unit Letter	Section	Township	Range	County
P	5	23S	29E	Eddy

** Legas Description appears to be as a Private Surface Owner. XTO confirmed BLM is surface owner.

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

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) 0.35	Volume Recovered (bbls) 0
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

Fire:

The sump pot on the flare line over-filled and caused oil to escape from the low pressure flare. Misted fluids ignited on the pad surface. The fire was immediately extinguished. There were no injuries and no damage to equipment. The pot was drained and returned to service. Additional third party resources have been retained to assist with remediation.

Form C-141

State of New Mexico
Oil Conservation Division

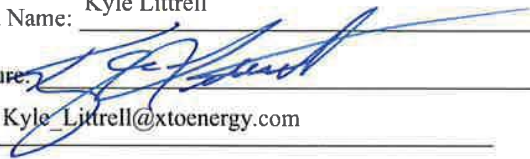
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Incident ID	NAB1921740575
District RP	2RP-5550
Facility ID	
Application ID	pAB1921740209

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? An unauthorized release of a volume 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)? Notice provided by Kyle Littrell to Mike Bratcher, Rob Hamlet, Victoria Venegas, and Jim Griswold (NMOCD), Jim Amos and Deborah McKinney (BLM) on 7/4/2019 by email	

Initial Response

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

☒ The source of the release has been stopped. ☒ The impacted area has been secured to protect human health and the environment. ☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. ☐ All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why: There were no free fluids to be recovered 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> Signature:  email: <u>Kyle_Littrell@xtoenergy.com</u>	Title: <u>SH&E Supervisor</u> Date: <u>7/17/19</u> Telephone: <u>432-221-7331</u>
<u>OCD Only</u> Received by: <u>Amalia Bustamante</u> Date: <u>8/5/2019</u>	

Form C-141

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State of New Mexico
Oil Conservation Division

Incident ID	NAB1921740575
District RP	2RP-5550
Facility ID	
Application ID	pAB1921740209

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?	51-100 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas not on an exploration, development, production, or storage site?	☐ Yes ☒ No

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

<u>Characterization Report Checklist:</u> <i>Each of the following items must be included in the report.</i> ☒ 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
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If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

Form C-141

State of New Mexico
Oil Conservation Division

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Incident ID	NAB1921740575
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I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: _____ Kyle Littrell _____ Title: _____ SH&E Coordinator _____

Signature: _____  _____ Date: _____ 11/26/2019 _____

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

OCD Only

Received by: _____ Date: _____

Form C-141

State of New Mexico
Oil Conservation Division

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Incident ID	NAB1921740575
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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: 11/26/2019

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

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

ATTACHMENT 2: LITHOLOGIC / SOIL SMAPLING LOGS





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

Identifier:

PH01

Date:

10/04/19

Project Name:

Cortal Canyon CTB
Flare

RP Number:

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening:

Logged By:

Robert M

Method:

Pothole

Hole Diameter:

2'

Total Depth:

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
0950 D	380	0.4	N		1	1'	S	CHCE white trace Brown sand
0955 D	580	1.2	N		2	2'	S	↓
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation					Identifier: P+102		Date: 10/04/19		
					Project Name: Corral Canyon CTB flare		RP Number:		
LITHOLOGIC / SOIL SAMPLING LOG									
Lat/Long:				Field Screening:		Logged By: Robert M.		Method: Pothole	
Comments:				Hole Diameter: 2'		Total Depth:			
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks	
					0				
1015 M	124	0.3	N		1	1'	S	SP-SM trace root Brown	
1020 M	200	0.1	N		2	2'	S	SP-SM trace root Brown	
					3				
					4				
					5				
					6				
					7				
					8				
					9				
					10				
					11				
					12				



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

Identifier: **PH03**

Date: **10/04/19**

Project Name:
**Curral Canyon
 CTB flare**

RP Number:

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: **Robert M.**

Method: **Pothole**

Lat/Long:

Field Screening:

Hole Diameter:

2'

Total Depth:

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
1635	M	1124	0.4	N	1	1'	S	SP-SM trace root Brown
1040	M	380	0.7	N	2	2'	S	SP-SM trace root Brown
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

		LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation		Identifier: PH04		Date: 10/04/19		
				Project Name: Corral Canyon CTB flare		RP Number:		
LITHOLOGIC / SOIL SAMPLING LOG				Logged By: Robert M		Method: Pothole		
Lat/Long:				Field Screening:		Hole Diameter: 2'		
Comments:				Total Depth:				
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
					1	1'	S	CHCE trace Brown sand White
					2	2'	S	↓
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation		Identifier: PH05	Date: 10/04/19
		Project Name: Corral Canyon CTB flare	RP Number:
LITHOLOGIC / SOIL SAMPLING LOG		Logged By: Robert M.	Method: Pathok
Lat/Long:		Field Screening:	Hole Diameter: 2'
Total Depth:			
Comments:			

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
1315	M	124	0.6	N				
					1	1'	S	CHCE white tan
1320	M	124	0.7	N		2'	S	
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

		LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation		Identifier: PH06		Date: 10/04/19		
				Project Name: Corral Canyon CTB Flare		RP Number:		
LITHOLOGIC / SOIL SAMPLING LOG				Logged By: Robert M.		Method: Pothole		
Lat/Long:		Field Screening:		Hole Diameter: 2'		Total Depth:		
Comments:								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
					1	01'	S	SP-SM dark Brown
					2	2'	S	SP-SM dark Brown
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

1335

1340

ATTACHMENT 3: PHOTOGRAPHIC LOG



PHOTOGRAPHIC LOG



Photograph 1: View from the south to the north



Photograph 2: View from the west to the east

ATTACHMENT 4: LABORATORY ANALYTICAL REPORTS



Analytical Report 634340

for
LT Environmental, Inc.

Project Manager: Dan Moir

Corral Canyon CTB

2RP-5550

22-AUG-19

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)



22-AUG-19

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

Reference: XENCO Report No(s): **634340**
Corral Canyon CTB
Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 634340. 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. 634340 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 Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

**Sample Cross Reference 634340****LT Environmental, Inc., Arvada, CO**

Corral Canyon CTB

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS 01	S	08-16-19 08:40	.5 ft	634340-001
SS 02	S	08-16-19 08:45	.5 ft	634340-002
SS 03	S	08-16-19 08:50	.5 ft	634340-003



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Corral Canyon CTB

Project ID: 2RP-5550
Work Order Number(s): 634340

Report Date: 22-AUG-19
Date Received: 08/16/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3099158 BTEX by EPA 8021B

Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 634291-001 S, 634291-001 SD.

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



Certificate of Analysis Summary 634340

LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon CTB

Project Id: 2RP-5550

Contact: Dan Moir

Project Location:

Date Received in Lab: Fri Aug-16-19 11:05 am

Report Date: 22-AUG-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	634340-001	634340-002	634340-003		
	Field Id:	SS 01	SS 02	SS 03		
	Depth:	.5- ft	.5- ft	.5- ft		
	Matrix:	SOIL	SOIL	SOIL		
	Sampled:	Aug-16-19 08:40	Aug-16-19 08:45	Aug-16-19 08:50		
BTEx by EPA 8021B SUB: T104704400-18-16	Extracted:	Aug-17-19 12:30	Aug-17-19 12:30	Aug-17-19 12:30		
	Analyzed:	Aug-20-19 11:33	Aug-20-19 11:54	Aug-20-19 12:14		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL		
	Benzene	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198		
	Toluene	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198		
Chloride by EPA 300 SUB: T104704400-18-16	Ethylbenzene	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198		
	m,p-Xylenes	<0.00401 0.00401	<0.00399 0.00399	<0.00397 0.00397		
	o-Xylene	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198		
	Total Xylenes	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198		
	Total BTEx	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198		
TPH by SW8015 Mod SUB: T104704400-18-16	Extracted:	Aug-19-19 12:10	Aug-19-19 12:10	Aug-19-19 12:10		
	Analyzed:	Aug-19-19 14:52	Aug-19-19 15:10	Aug-19-19 15:15		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL		
	Chloride	75.1 5.02	41.0 4.96	18.9 5.00		
Gasoline Range Hydrocarbons (GRO)	Extracted:	Aug-19-19 13:00	Aug-19-19 13:00	Aug-19-19 13:00		
	Analyzed:	Aug-20-19 10:03	Aug-20-19 10:23	Aug-20-19 10:42		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL		
	Diesel Range Organics (DRO)	<25.0 25.0	<25.0 25.0	<24.9 24.9		
	Motor Oil Range Hydrocarbons (MRO)	36.4 25.0	<25.0 25.0	<24.9 24.9		
Total GRO-DRO	Total TPH	<25.0 25.0	<25.0 25.0	<24.9 24.9		
		36.4 25.0	<25.0 25.0	<24.9 24.9		

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

Jessica Kramer
Project Assistant



Certificate of Analytical Results 634340

LT Environmental, Inc., Arvada, CO

Corral Canyon CTB

Sample Id: SS 01	Matrix: Soil	Date Received: 08.16.19 11.05
Lab Sample Id: 634340-001	Date Collected: 08.16.19 08.40	Sample Depth: .5 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 08.19.19 12.10	Basis: Wet Weight
Seq Number: 3099008		SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	75.1	5.02	mg/kg	08.19.19 14.52		1

Analytical Method: TPH by SW8015 Mod	Prep Method: TX1005P
Tech: DVM	% Moisture:
Analyst: ARM	Basis: Wet Weight
Seq Number: 3099047	SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.20.19 10.03	U	1
Diesel Range Organics (DRO)	C10C28DRO	36.4	25.0	mg/kg	08.20.19 10.03		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.20.19 10.03	U	1
Total TPH	PHC635	36.4	25.0	mg/kg	08.20.19 10.03		1
Total GRO-DRO	PHC628	36.4	25.0	mg/kg	08.20.19 10.03		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	08.20.19 10.03	
o-Terphenyl	84-15-1	98	%	70-135	08.20.19 10.03	



Certificate of Analytical Results 634340

LT Environmental, Inc., Arvada, CO

Corral Canyon CTB

Sample Id: SS 01	Matrix: Soil	Date Received: 08.16.19 11.05
Lab Sample Id: 634340-001	Date Collected: 08.16.19 08.40	Sample Depth: .5 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: KTL		% Moisture:
Analyst: AMB	Date Prep: 08.17.19 12.30	Basis: Wet Weight
Seq Number: 3099158		SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.21.19 05.09	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.21.19 05.09	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.21.19 05.09	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.21.19 05.09	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.21.19 05.09	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.21.19 05.09	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.21.19 05.09	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	105	%	70-130	08.20.19 11.33		
4-Bromofluorobenzene	460-00-4	114	%	70-130	08.20.19 11.33		



Certificate of Analytical Results 634340

LT Environmental, Inc., Arvada, CO

Corral Canyon CTB

Sample Id: SS 02	Matrix: Soil	Date Received: 08.16.19 11.05
Lab Sample Id: 634340-002	Date Collected: 08.16.19 08.45	Sample Depth: .5 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 08.19.19 12.10	Basis: Wet Weight
Seq Number: 3099008		SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	41.0	4.96	mg/kg	08.19.19 15.10		1

Analytical Method: TPH by SW8015 Mod	Prep Method: TX1005P
Tech: DVM	% Moisture:
Analyst: ARM	Basis: Wet Weight
Seq Number: 3099047	SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.20.19 10.23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.20.19 10.23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.20.19 10.23	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.20.19 10.23	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.20.19 10.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	08.20.19 10.23	
o-Terphenyl	84-15-1	101	%	70-135	08.20.19 10.23	



Certificate of Analytical Results 634340

LT Environmental, Inc., Arvada, CO

Corral Canyon CTB

Sample Id: SS 02	Matrix: Soil	Date Received: 08.16.19 11.05
Lab Sample Id: 634340-002	Date Collected: 08.16.19 08.45	Sample Depth: .5 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: KTL		% Moisture:
Analyst: AMB	Date Prep: 08.17.19 12.30	Basis: Wet Weight
Seq Number: 3099158		SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.20.19 11.54	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.20.19 11.54	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.20.19 11.54	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.20.19 11.54	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.20.19 11.54	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.20.19 11.54	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.20.19 11.54	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	107	%	70-130	08.20.19 11.54		
1,4-Difluorobenzene	540-36-3	105	%	70-130	08.20.19 11.54		



Certificate of Analytical Results 634340

LT Environmental, Inc., Arvada, CO

Corral Canyon CTB

Sample Id: SS 03 Matrix: Soil Date Received: 08.16.19 11.05
 Lab Sample Id: 634340-003 Date Collected: 08.16.19 08.50 Sample Depth: .5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 08.19.19 12.10 Basis: Wet Weight
 Seq Number: 3099008 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	18.9	5.00	mg/kg	08.19.19 15.15		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.19.19 13.00 Basis: Wet Weight
 Seq Number: 3099047 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	08.20.19 10.42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	08.20.19 10.42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	08.20.19 10.42	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	08.20.19 10.42	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	08.20.19 10.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	08.20.19 10.42	
o-Terphenyl	84-15-1	98	%	70-135	08.20.19 10.42	



Certificate of Analytical Results 634340

LT Environmental, Inc., Arvada, CO

Corral Canyon CTB

Sample Id: SS 03

Matrix: Soil

Date Received: 08.16.19 11.05

Lab Sample Id: 634340-003

Date Collected: 08.16.19 08.50

Sample Depth: .5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: AMB

Date Prep: 08.17.19 12.30

Basis: Wet Weight

Seq Number: 3099158

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.20.19 12.14	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.20.19 12.14	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.20.19 12.14	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	08.20.19 12.14	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.20.19 12.14	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.20.19 12.14	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.20.19 12.14	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	08.20.19 12.14		
4-Bromofluorobenzene	460-00-4	106	%	70-130	08.20.19 12.14		



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.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



QC Summary 634340

LT Environmental, Inc.
 Corral Canyon CTB
Analytical Method: Chloride by EPA 300

Seq Number: 3099008

MB Sample Id: 7684488-1-BLK

Matrix: Solid

LCS Sample Id: 7684488-1-BKS

Prep Method: E300P

Date Prep: 08.19.19

LCSD Sample Id: 7684488-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	245	98	240	96	90-110	2	20	mg/kg	08.19.19 14:40	

Analytical Method: Chloride by EPA 300

Seq Number: 3099008

Parent Sample Id: 634340-001

Matrix: Soil

MS Sample Id: 634340-001 S

Prep Method: E300P

Date Prep: 08.19.19

MSD Sample Id: 634340-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	75.1	251	351	110	351	110	90-110	0	20	mg/kg	08.19.19 14:58	

Analytical Method: Chloride by EPA 300

Seq Number: 3099008

Parent Sample Id: 634403-001

Matrix: Soil

MS Sample Id: 634403-001 S

Prep Method: E300P

Date Prep: 08.19.19

MSD Sample Id: 634403-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	14.6	248	285	109	284	109	90-110	0	20	mg/kg	08.19.19 16:19	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3099047

MB Sample Id: 7684493-1-BLK

Matrix: Solid

LCS Sample Id: 7684493-1-BKS

Prep Method: TX1005P

Date Prep: 08.19.19

LCSD Sample Id: 7684493-1-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)	<15.0	1000	959	96	936	94	70-135	2	20	mg/kg	08.20.19 04:33	
Diesel Range Organics (DRO)	<25.0	1000	1000	100	977	98	70-135	2	20	mg/kg	08.20.19 04:33	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	97		122		119		70-135	%	08.20.19 04:33
o-Terphenyl	100		103		100		70-135	%	08.20.19 04:33

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



QC Summary 634340

LT Environmental, Inc.

Corral Canyon CTB

Analytical Method: TPH by SW8015 Mod

Seq Number: 3099047

Parent Sample Id: 634301-001

Matrix: Soil

MS Sample Id: 634301-001 S

Prep Method: TX1005P

Date Prep: 08.19.19

MSD Sample Id: 634301-001 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)	<15.0	998	973	97	976	98	70-135	0	20	mg/kg	08.20.19 05:30	
Diesel Range Organics (DRO)	<25.0	998	1020	102	1030	103	70-135	1	20	mg/kg	08.20.19 05:30	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	115		118		70-135	%	08.20.19 05:30
o-Terphenyl	105		106		70-135	%	08.20.19 05:30

Analytical Method: BTEX by EPA 8021B

Seq Number: 3099158

MB Sample Id: 7684441-1-BLK

Matrix: Solid

LCS Sample Id: 7684441-1-BKS

Prep Method: SW5030B

Date Prep: 08.17.19

LCSD Sample Id: 7684441-1-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	0.0898	90	0.0909	91	70-130	1	35	mg/kg	08.20.19 02:53	
Toluene	<0.000456	0.100	0.0945	95	0.0982	98	70-130	4	35	mg/kg	08.20.19 02:53	
Ethylbenzene	<0.00200	0.100	0.0946	95	0.102	102	70-130	8	35	mg/kg	08.20.19 02:53	
m,p-Xylenes	<0.00101	0.200	0.181	91	0.196	98	70-130	8	35	mg/kg	08.20.19 02:53	
o-Xylene	<0.000344	0.100	0.0951	95	0.103	103	70-130	8	35	mg/kg	08.20.19 02:53	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	96		95		95		70-130	%	08.20.19 02:53
4-Bromofluorobenzene	102		107		109		70-130	%	08.20.19 02:53

Analytical Method: BTEX by EPA 8021B

Seq Number: 3099158

Parent Sample Id: 634291-001

Matrix: Soil

MS Sample Id: 634291-001 S

Prep Method: SW5030B

Date Prep: 08.17.19

MSD Sample Id: 634291-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	0.00139	0.0998	0.0611	60	0.0563	55	70-130	8	35	mg/kg	08.20.19 03:33	X
Toluene	0.0373	0.0998	0.0644	27	0.0547	17	70-130	16	35	mg/kg	08.20.19 03:33	X
Ethylbenzene	0.0180	0.0998	0.0518	34	0.0291	11	70-130	56	35	mg/kg	08.20.19 03:33	XF
m,p-Xylenes	0.0673	0.200	0.0652	0	0.0640	0	70-130	2	35	mg/kg	08.20.19 03:33	X
o-Xylene	0.107	0.0998	0.118	11	0.111	4	70-130	6	35	mg/kg	08.20.19 03:33	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		103		70-130	%	08.20.19 03:33
4-Bromofluorobenzene	186	**	207	**	70-130	%	08.20.19 03:33

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. = $\text{Log}(\text{Sample Duplicate}) - \text{Log}(\text{Original Sample})$

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.:

63434D

Page 1 of 1

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Midland, Tx 79705
Phone:	432.704.5178	Email:	ggreen@ltenv.com ; dmoir@ltenv.com

Work Order Comments			
Program: UST/PST ☐ PRP ☐ brownfields ☐ RC ☐ Superfund ☐			
State of Project:			
Reporting Level II ☐ Level III ☐ ST/UST ☐ RRP ☐ Level IV ☐			
Deliverables: EDD ☐ ADaPT ☐ Other: ☐			

Project Name:	Central Canyon CTB	ANALYSIS REQUEST	Work Order Notes
Project Number:			
P.O. Number:	2AP-5550		
Sampler's Name:	Garrett Green		
	Turn Around		
	Routine ☒		
	Rush:		
	Due Date:		

SAMPLE RECEIPT			
Temp Blank:	Yes ☐ No ☒	Wet Ice:	Yes ☒ No ☐
Temperature (°C):	4.4 Thermometer ID		
Received Intact:	Yes ☒ No ☐	T-NUM-004	
Cooler Custody Seals:	Yes ☒ No ☐	Correction Factor:	-0.2
Sample Custody Seals:	Yes ☒ No ☐	Total Containers:	3

Number of Containers

PA 8015)

PA 0=8021)

EPA 300.0)

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number	TPH (EP)	BTEX (E)	Chloride	Sample Comments
SS01	S	08/16/19	0840	1.5'	1	X	X	X	
SS02	↓	↓	0845	↓	1	↓	↓	↓	
SS03	↓	↓	0850	↓	1	↓	↓	↓	

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

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenoco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenoco 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 Xenoco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenoco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 <i>Scott J. ...</i>	<i>Carol ...</i>	8/16/19 11:05	2		
3			4		
5			6		



Inter-Office Shipment

Page 1 of 1

IOS Number **46463**

Date/Time: 08/16/19 14:28

Created by: Elizabeth McClellan

Please send report to: Jessica Kramer

Lab# From: **Carlsbad**

Delivery Priority:

Address: 1089 N Canal Street

Lab# To: **Midland**

Air Bill No.: 7760 0892 0480

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
634340-001	S	SS 01	08/16/19 08:40	SW8021B	BTEX by EPA 8021B	08/22/19	08/30/19	JKR	BR4FBZ BZ BZME EBZ X	
634340-001	S	SS 01	08/16/19 08:40	SW8015MOD_NM	TPH by SW8015 Mod	08/22/19	08/30/19	JKR	GRO-DRO PHCC10C28 P1	
634340-001	S	SS 01	08/16/19 08:40	E300_CL	Chloride by EPA 300	08/22/19	02/12/20	JKR	CL	
634340-002	S	SS 02	08/16/19 08:45	SW8015MOD_NM	TPH by SW8015 Mod	08/22/19	08/30/19	JKR	GRO-DRO PHCC10C28 P1	
634340-002	S	SS 02	08/16/19 08:45	SW8021B	BTEX by EPA 8021B	08/22/19	08/30/19	JKR	BR4FBZ BZ BZME EBZ X	
634340-002	S	SS 02	08/16/19 08:45	E300_CL	Chloride by EPA 300	08/22/19	02/12/20	JKR	CL	
634340-003	S	SS 03	08/16/19 08:50	SW8015MOD_NM	TPH by SW8015 Mod	08/22/19	08/30/19	JKR	GRO-DRO PHCC10C28 P1	
634340-003	S	SS 03	08/16/19 08:50	SW8021B	BTEX by EPA 8021B	08/22/19	08/30/19	JKR	BR4FBZ BZ BZME EBZ X	
634340-003	S	SS 03	08/16/19 08:50	E300_CL	Chloride by EPA 300	08/22/19	02/12/20	JKR	CL	

Inter Office Shipment or Sample Comments:

Relinquished By:

Elizabeth McClellan

Received By:

Katie Lowe

Date Relinquished: 08/16/2019

Date Received: 08/17/2019 12:15

Cooler Temperature: 3.8



XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 46463

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

Sent By: Elizabeth McClellan

Date Sent: 08/16/2019 02:28 PM

Received By: Katie Lowe

Date Received: 08/17/2019 12:15 PM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	3.8
#2 *Shipping container in good condition?	Yes
#3 *Samples received with appropriate temperature?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 *Custody Seals Signed and dated for Containers/coolers	N/A
#6 *IOS present?	Yes
#7 Any missing/extra samples?	No
#8 IOS agrees with sample label(s)/matrix?	Yes
#9 Sample matrix/ properties agree with IOS?	Yes
#10 Samples in proper container/ bottle?	Yes
#11 Samples properly preserved?	Yes
#12 Sample container(s) intact?	Yes
#13 Sufficient sample amount for indicated test(s)?	Yes
#14 All samples received within hold time?	Yes

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ Contacted by : _____ Date: _____

Checklist reviewed by:

Katie Lowe

Date: 08/17/2019



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 08/16/2019 11:05:00 AM

Work Order #: 634340

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	4.4
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	No
#5 Custody Seals intact on sample bottles?	No
#6* Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	Yes Subbed To Xenco Midland.
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Elizabeth McClellan

Date: 08/16/2019

Checklist reviewed by:

Jessica Kramer

Date: 08/21/2019

Analytical Report 639111

**for
LT Environmental, Inc.**

**Project Manager: Dan Moir
Corral Canyon CTB Flare**

09-OCT-19

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 (2017-142), North Carolina (681)

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-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)



09-OCT-19

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **639111**

Corral Canyon CTB Flare

Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 639111. 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. 639111 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 Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

**Sample Cross Reference 639111****LT Environmental, Inc., Arvada, CO**

Corral Canyon CTB Flare

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH01	S	10-04-19 09:50	1 ft	639111-001
PH01A	S	10-04-19 09:55	2 ft	639111-002
PH02	S	10-04-19 10:15	1 ft	639111-003
PH02A	S	10-04-19 10:20	2 ft	639111-004
PH03	S	10-04-19 10:35	1 ft	639111-005
PH03A	S	10-04-19 10:40	2 ft	639111-006
PH04	S	10-04-19 12:40	1 ft	639111-007
PH04A	S	10-04-19 12:45	2 ft	639111-008
PH05	S	10-04-19 13:15	1 ft	639111-009
PH05A	S	10-04-19 13:20	2 ft	639111-010
PH06	S	10-04-19 13:35	1 ft	639111-011
PH06A	S	10-04-19 13:40	2 ft	639111-012



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Corral Canyon CTB Flare

Project ID:

Work Order Number(s): 639111

Report Date: 09-OCT-19

Date Received: 10/04/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3103706 Chloride by EPA 300

Lab Sample ID 639111-011 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 639111-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012.

The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3103749 BTEX by EPA 8021B

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



Certificate of Analysis Summary 639111

LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon CTB Flare

Project Id:

Contact: Dan Moir

Project Location:

Date Received in Lab: Fri Oct-04-19 04:13 pm

Report Date: 09-OCT-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>		<i>Lab Id:</i>	639111-001	639111-002	639111-003	639111-004	639111-005	639111-006
		<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>	Oct-04-19 09:50	Oct-04-19 09:55	Oct-04-19 10:15	Oct-04-19 10:20	Oct-04-19 10:35	Oct-04-19 10:40
BTEx by EPA 8021B SUB: T104704400-19-19		<i>Extracted:</i>	Oct-08-19 14:15	Oct-08-19 14:15	Oct-08-19 14:15	Oct-08-19 14:15	Oct-08-19 14:15	Oct-08-19 14:15
		<i>Analyzed:</i>	Oct-09-19 02:48	Oct-09-19 03:08	Oct-09-19 03:28	Oct-09-19 03:48	Oct-09-19 04:08	Oct-09-19 04:29
		<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Benzene		<0.00202 0.00202	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
	Toluene		<0.00202 0.00202	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Chloride by EPA 300 SUB: T104704400-19-19	Ethylbenzene		<0.00202 0.00202	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
	m,p-Xylenes		<0.00404 0.00404	<0.00397 0.00397	<0.00400 0.00400	<0.00399 0.00399	<0.00399 0.00399	<0.00399 0.00399
	o-Xylene		<0.00202 0.00202	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
	Total Xylenes		<0.00202 0.00202	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
	Total BTEx		<0.00202 0.00202	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
TPH by SW8015 Mod SUB: T104704400-19-19		<i>Extracted:</i>	Oct-08-19 13:30	Oct-08-19 13:30	Oct-08-19 13:30	Oct-08-19 13:30	Oct-08-19 13:30	Oct-08-19 13:30
		<i>Analyzed:</i>	Oct-08-19 14:08	Oct-08-19 14:24	Oct-08-19 14:30	Oct-08-19 14:35	Oct-08-19 14:40	Oct-08-19 14:56
		<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Chloride		276 5.00	398 4.96	6.98 4.99	253 4.95	28.5 4.95	407 5.02
			Oct-08-19 15:00	Oct-08-19 15:00	Oct-08-19 15:00	Oct-08-19 15:00	Oct-08-19 15:00	Oct-08-19 15:00
Gasoline Range Hydrocarbons (GRO)		<i>Extracted:</i>	Oct-08-19 21:18	Oct-08-19 22:13	Oct-08-19 22:32	Oct-08-19 22:50	Oct-08-19 23:09	Oct-08-19 23:27
		<i>Analyzed:</i>						
		<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Diesel Range Organics (DRO)		<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.9 49.9	<50.0 50.0	<50.0 50.0
	Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.9 49.9	<50.0 50.0	<50.0 50.0
Total GRO-DRO			<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.9 49.9	<50.0 50.0	<50.0 50.0
	Total TPH		<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.9 49.9	<50.0 50.0	<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

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 639111

LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon CTB Flare

Project Id:

Contact: Dan Moir

Project Location:

Date Received in Lab: Fri Oct-04-19 04:13 pm

Report Date: 09-OCT-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>		<i>Lab Id:</i>	639111-007	639111-008	639111-009	639111-010	639111-011	639111-012
		<i>Field Id:</i>	PH04	PH04A	PH05	PH05A	PH06	PH06A
		<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>	Oct-04-19 12:40	Oct-04-19 12:45	Oct-04-19 13:15	Oct-04-19 13:20	Oct-04-19 13:35	Oct-04-19 13:40
BTEx by EPA 8021B SUB: T104704400-19-19		<i>Extracted:</i>	Oct-08-19 14:15	Oct-08-19 14:15	Oct-08-19 14:15	Oct-08-19 14:15	Oct-08-19 14:15	Oct-08-19 14:15
		<i>Analyzed:</i>	Oct-09-19 04:49	Oct-09-19 05:09	Oct-09-19 05:29	Oct-09-19 05:49	Oct-09-19 07:07	Oct-09-19 07:28
		<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Benzene		<0.00202 0.00202	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199
	Toluene		<0.00202 0.00202	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199
Chloride by EPA 300 SUB: T104704400-19-19	Ethylbenzene		<0.00202 0.00202	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199
	m,p-Xylenes		<0.00403 0.00403	<0.00404 0.00404	<0.00399 0.00399	<0.00400 0.00400	<0.00396 0.00396	<0.00398 0.00398
	o-Xylene		<0.00202 0.00202	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199
	Total Xylenes		<0.00202 0.00202	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199
TPH by SW8015 Mod SUB: T104704400-19-19	Total BTEx		<0.00202 0.00202	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199
	Chloride		111 5.00	19.6 5.05	8.60 4.98	23.0 5.00	121 4.99	129 5.04
		<i>Extracted:</i>	Oct-08-19 13:30	Oct-08-19 13:30	Oct-08-19 13:30	Oct-08-19 13:30	Oct-08-19 13:30	Oct-08-19 13:30
		<i>Analyzed:</i>	Oct-08-19 15:01	Oct-08-19 15:07	Oct-08-19 15:12	Oct-08-19 15:17	Oct-08-19 15:23	Oct-08-19 15:38
		<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Total TPH			<49.9 49.9	<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9	<50.0 50.0
	Gasoline Range Hydrocarbons (GRO)		<49.9 49.9	<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9	<50.0 50.0
	Diesel Range Organics (DRO)		<49.9 49.9	<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9	<50.0 50.0
	Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9	<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9	<50.0 50.0
	Total GRO-DRO		<49.9 49.9	<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9	<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.

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analytical Results 639111

LT Environmental, Inc., Arvada, CO

Corral Canyon CTB Flare

Sample Id: **PH01** Matrix: Soil Date Received: 10.04.19 16.13
 Lab Sample Id: 639111-001 Date Collected: 10.04.19 09.50 Sample Depth: 1 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 10.08.19 13.30 Basis: Wet Weight
 Seq Number: 3103706 SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	276	5.00	mg/kg	10.08.19 14.08		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 10.08.19 15.00 Basis: Wet Weight
 Seq Number: 3103715 SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	10.08.19 21.18	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	10.08.19 21.18	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.08.19 21.18	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	10.08.19 21.18	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.08.19 21.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	10.08.19 21.18	
o-Terphenyl	84-15-1	99	%	70-135	10.08.19 21.18	



Certificate of Analytical Results 639111

LT Environmental, Inc., Arvada, CO

Corral Canyon CTB Flare

Sample Id: PH01	Matrix: Soil	Date Received: 10.04.19 16.13
Lab Sample Id: 639111-001	Date Collected: 10.04.19 09.50	Sample Depth: 1 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: KTL		% Moisture:
Analyst: KTL	Date Prep: 10.08.19 14.15	Basis: Wet Weight
Seq Number: 3103749		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	10.09.19 02.48	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	10.09.19 02.48	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	10.09.19 02.48	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	10.09.19 02.48	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	10.09.19 02.48	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	10.09.19 02.48	U	1
Total BTEX		<0.00202	0.00202	mg/kg	10.09.19 02.48	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	114	%	70-130	10.09.19 02.48		
1,4-Difluorobenzene	540-36-3	98	%	70-130	10.09.19 02.48		



Certificate of Analytical Results 639111

LT Environmental, Inc., Arvada, CO

Corral Canyon CTB Flare

Sample Id: PH01A	Matrix: Soil	Date Received: 10.04.19 16.13
Lab Sample Id: 639111-002	Date Collected: 10.04.19 09.55	Sample Depth: 2 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 10.08.19 13.30	Basis: Wet Weight
Seq Number: 3103706		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	398	4.96	mg/kg	10.08.19 14.24		1

Analytical Method: TPH by SW8015 Mod	Prep Method: SW8015P
Tech: DVM	% Moisture:
Analyst: ARM	Basis: Wet Weight
Seq Number: 3103715	SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	10.08.19 22.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	10.08.19 22.13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.08.19 22.13	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	10.08.19 22.13	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.08.19 22.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	10.08.19 22.13	
o-Terphenyl	84-15-1	98	%	70-135	10.08.19 22.13	



Certificate of Analytical Results 639111

LT Environmental, Inc., Arvada, CO

Corral Canyon CTB Flare

Sample Id: PH01A	Matrix: Soil	Date Received: 10.04.19 16.13
Lab Sample Id: 639111-002	Date Collected: 10.04.19 09.55	Sample Depth: 2 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: KTL		% Moisture:
Analyst: KTL	Date Prep: 10.08.19 14.15	Basis: Wet Weight
Seq Number: 3103749		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	10.09.19 03.08	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	10.09.19 03.08	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	10.09.19 03.08	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	10.09.19 03.08	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	10.09.19 03.08	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	10.09.19 03.08	U	1
Total BTEX		<0.00198	0.00198	mg/kg	10.09.19 03.08	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	112	%	70-130	10.09.19 03.08		
1,4-Difluorobenzene	540-36-3	100	%	70-130	10.09.19 03.08		



Certificate of Analytical Results 639111

LT Environmental, Inc., Arvada, CO

Corral Canyon CTB Flare

Sample Id: PH02	Matrix: Soil	Date Received: 10.04.19 16.13
Lab Sample Id: 639111-003	Date Collected: 10.04.19 10.15	Sample Depth: 1 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 10.08.19 13.30	Basis: Wet Weight
Seq Number: 3103706		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6.98	4.99	mg/kg	10.08.19 14.30		1

Analytical Method: TPH by SW8015 Mod	Prep Method: SW8015P
Tech: DVM	% Moisture:
Analyst: ARM	Basis: Wet Weight
Seq Number: 3103715	SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	10.08.19 22.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	10.08.19 22.32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	10.08.19 22.32	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	10.08.19 22.32	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	10.08.19 22.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	10.08.19 22.32	
o-Terphenyl	84-15-1	96	%	70-135	10.08.19 22.32	



Certificate of Analytical Results 639111

LT Environmental, Inc., Arvada, CO

Corral Canyon CTB Flare

Sample Id: PH02	Matrix: Soil	Date Received: 10.04.19 16.13
Lab Sample Id: 639111-003	Date Collected: 10.04.19 10.15	Sample Depth: 1 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: KTL		% Moisture:
Analyst: KTL	Date Prep: 10.08.19 14.15	Basis: Wet Weight
Seq Number: 3103749		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.09.19 03.28	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.09.19 03.28	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.09.19 03.28	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	10.09.19 03.28	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.09.19 03.28	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.09.19 03.28	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.09.19 03.28	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	110	%	70-130	10.09.19 03.28		
1,4-Difluorobenzene	540-36-3	100	%	70-130	10.09.19 03.28		



Certificate of Analytical Results 639111

LT Environmental, Inc., Arvada, CO

Corral Canyon CTB Flare

Sample Id: PH02A	Matrix: Soil	Date Received: 10.04.19 16.13
Lab Sample Id: 639111-004	Date Collected: 10.04.19 10.20	Sample Depth: 2 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 10.08.19 13.30	Basis: Wet Weight
Seq Number: 3103706		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	253	4.95	mg/kg	10.08.19 14.35		1

Analytical Method: TPH by SW8015 Mod	Prep Method: SW8015P
Tech: DVM	% Moisture:
Analyst: ARM	Basis: Wet Weight
Seq Number: 3103715	SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	10.08.19 22.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	10.08.19 22.50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	10.08.19 22.50	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	10.08.19 22.50	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	10.08.19 22.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	10.08.19 22.50	
o-Terphenyl	84-15-1	94	%	70-135	10.08.19 22.50	



Certificate of Analytical Results 639111

LT Environmental, Inc., Arvada, CO

Corral Canyon CTB Flare

Sample Id: **PH02A**

Matrix: Soil

Date Received: 10.04.19 16.13

Lab Sample Id: 639111-004

Date Collected: 10.04.19 10.20

Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 10.08.19 14.15

Basis: Wet Weight

Seq Number: 3103749

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.09.19 03.48	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.09.19 03.48	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.09.19 03.48	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	10.09.19 03.48	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.09.19 03.48	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.09.19 03.48	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.09.19 03.48	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	116	%	70-130	10.09.19 03.48		
1,4-Difluorobenzene	540-36-3	101	%	70-130	10.09.19 03.48		



Certificate of Analytical Results 639111

LT Environmental, Inc., Arvada, CO

Corral Canyon CTB Flare

Sample Id: PH03	Matrix: Soil	Date Received: 10.04.19 16.13
Lab Sample Id: 639111-005	Date Collected: 10.04.19 10.35	Sample Depth: 1 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 10.08.19 13.30	Basis: Wet Weight
Seq Number: 3103706		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	28.5	4.95	mg/kg	10.08.19 14.40		1

Analytical Method: TPH by SW8015 Mod	Prep Method: SW8015P
Tech: DVM	% Moisture:
Analyst: ARM	Basis: Wet Weight
Seq Number: 3103715	SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	10.08.19 23.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	10.08.19 23.09	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.08.19 23.09	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	10.08.19 23.09	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.08.19 23.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	10.08.19 23.09	
o-Terphenyl	84-15-1	94	%	70-135	10.08.19 23.09	



Certificate of Analytical Results 639111

LT Environmental, Inc., Arvada, CO

Corral Canyon CTB Flare

Sample Id: PH03	Matrix: Soil	Date Received: 10.04.19 16.13
Lab Sample Id: 639111-005	Date Collected: 10.04.19 10.35	Sample Depth: 1 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: KTL		% Moisture:
Analyst: KTL	Date Prep: 10.08.19 14.15	Basis: Wet Weight
Seq Number: 3103749		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.09.19 04.08	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.09.19 04.08	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.09.19 04.08	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	10.09.19 04.08	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.09.19 04.08	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.09.19 04.08	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.09.19 04.08	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	102	%	70-130	10.09.19 04.08		
4-Bromofluorobenzene	460-00-4	115	%	70-130	10.09.19 04.08		



Certificate of Analytical Results 639111

LT Environmental, Inc., Arvada, CO

Corral Canyon CTB Flare

Sample Id: **PH03A** Matrix: Soil Date Received: 10.04.19 16.13
 Lab Sample Id: 639111-006 Date Collected: 10.04.19 10.40 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 10.08.19 13.30 Basis: Wet Weight
 Seq Number: 3103706 SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	407	5.02	mg/kg	10.08.19 14.56		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 10.08.19 15.00 Basis: Wet Weight
 Seq Number: 3103715 SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	10.08.19 23.27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	10.08.19 23.27	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.08.19 23.27	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	10.08.19 23.27	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.08.19 23.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	10.08.19 23.27	
o-Terphenyl	84-15-1	92	%	70-135	10.08.19 23.27	



Certificate of Analytical Results 639111

LT Environmental, Inc., Arvada, CO

Corral Canyon CTB Flare

Sample Id: **PH03A**

Matrix: Soil

Date Received: 10.04.19 16.13

Lab Sample Id: 639111-006

Date Collected: 10.04.19 10.40

Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 10.08.19 14.15

Basis: Wet Weight

Seq Number: 3103749

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.09.19 04.29	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.09.19 04.29	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.09.19 04.29	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	10.09.19 04.29	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.09.19 04.29	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.09.19 04.29	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.09.19 04.29	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	101	%	70-130	10.09.19 04.29		
4-Bromofluorobenzene	460-00-4	114	%	70-130	10.09.19 04.29		



Certificate of Analytical Results 639111

LT Environmental, Inc., Arvada, CO

Corral Canyon CTB Flare

Sample Id: **PH04** Matrix: Soil Date Received: 10.04.19 16.13
 Lab Sample Id: 639111-007 Date Collected: 10.04.19 12.40 Sample Depth: 1 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 10.08.19 13.30 Basis: Wet Weight
 Seq Number: 3103706 SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	111	5.00	mg/kg	10.08.19 15.01		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 10.08.19 15.00 Basis: Wet Weight
 Seq Number: 3103715 SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	10.08.19 23.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	10.08.19 23.46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	10.08.19 23.46	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	10.08.19 23.46	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	10.08.19 23.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	10.08.19 23.46	
o-Terphenyl	84-15-1	100	%	70-135	10.08.19 23.46	



Certificate of Analytical Results 639111

LT Environmental, Inc., Arvada, CO

Corral Canyon CTB Flare

Sample Id: PH04	Matrix: Soil	Date Received: 10.04.19 16.13
Lab Sample Id: 639111-007	Date Collected: 10.04.19 12.40	Sample Depth: 1 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: KTL		% Moisture:
Analyst: KTL	Date Prep: 10.08.19 14.15	Basis: Wet Weight
Seq Number: 3103749		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	10.09.19 04.49	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	10.09.19 04.49	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	10.09.19 04.49	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	10.09.19 04.49	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	10.09.19 04.49	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	10.09.19 04.49	U	1
Total BTEX		<0.00202	0.00202	mg/kg	10.09.19 04.49	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	125	%	70-130	10.09.19 04.49		
1,4-Difluorobenzene	540-36-3	104	%	70-130	10.09.19 04.49		



Certificate of Analytical Results 639111

LT Environmental, Inc., Arvada, CO

Corral Canyon CTB Flare

Sample Id: PH04A	Matrix: Soil	Date Received: 10.04.19 16.13
Lab Sample Id: 639111-008	Date Collected: 10.04.19 12.45	Sample Depth: 2 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 10.08.19 13.30	Basis: Wet Weight
Seq Number: 3103706		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	19.6	5.05	mg/kg	10.08.19 15.07		1

Analytical Method: TPH by SW8015 Mod	Prep Method: SW8015P
Tech: DVM	% Moisture:
Analyst: ARM	Basis: Wet Weight
Seq Number: 3103715	SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	10.09.19 00.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	10.09.19 00.05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	10.09.19 00.05	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	10.09.19 00.05	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	10.09.19 00.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	10.09.19 00.05	
o-Terphenyl	84-15-1	93	%	70-135	10.09.19 00.05	



Certificate of Analytical Results 639111

LT Environmental, Inc., Arvada, CO

Corral Canyon CTB Flare

Sample Id: **PH04A**

Matrix: Soil

Date Received: 10.04.19 16.13

Lab Sample Id: 639111-008

Date Collected: 10.04.19 12.45

Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 10.08.19 14.15

Basis: Wet Weight

Seq Number: 3103749

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	10.09.19 05.09	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	10.09.19 05.09	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	10.09.19 05.09	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	10.09.19 05.09	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	10.09.19 05.09	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	10.09.19 05.09	U	1
Total BTEX		<0.00202	0.00202	mg/kg	10.09.19 05.09	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	103	%	70-130	10.09.19 05.09		
4-Bromofluorobenzene	460-00-4	122	%	70-130	10.09.19 05.09		



Certificate of Analytical Results 639111

LT Environmental, Inc., Arvada, CO

Corral Canyon CTB Flare

Sample Id: **PH05** Matrix: Soil Date Received: 10.04.19 16.13
 Lab Sample Id: 639111-009 Date Collected: 10.04.19 13.15 Sample Depth: 1 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 10.08.19 13.30 Basis: Wet Weight
 Seq Number: 3103706 SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.60	4.98	mg/kg	10.08.19 15.12		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 10.08.19 15.00 Basis: Wet Weight
 Seq Number: 3103715 SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	10.09.19 00.24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	10.09.19 00.24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	10.09.19 00.24	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	10.09.19 00.24	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	10.09.19 00.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	10.09.19 00.24	
o-Terphenyl	84-15-1	96	%	70-135	10.09.19 00.24	



Certificate of Analytical Results 639111

LT Environmental, Inc., Arvada, CO

Corral Canyon CTB Flare

Sample Id: PH05	Matrix: Soil	Date Received: 10.04.19 16.13
Lab Sample Id: 639111-009	Date Collected: 10.04.19 13.15	Sample Depth: 1 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: KTL		% Moisture:
Analyst: KTL	Date Prep: 10.08.19 14.15	Basis: Wet Weight
Seq Number: 3103749		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.09.19 05.29	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.09.19 05.29	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.09.19 05.29	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	10.09.19 05.29	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.09.19 05.29	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.09.19 05.29	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.09.19 05.29	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	119	%	70-130	10.09.19 05.29		
1,4-Difluorobenzene	540-36-3	102	%	70-130	10.09.19 05.29		



Certificate of Analytical Results 639111

LT Environmental, Inc., Arvada, CO

Corral Canyon CTB Flare

Sample Id: PH05A	Matrix: Soil	Date Received: 10.04.19 16.13
Lab Sample Id: 639111-010	Date Collected: 10.04.19 13.20	Sample Depth: 2 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 10.08.19 13.30	Basis: Wet Weight
Seq Number: 3103706		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	23.0	5.00	mg/kg	10.08.19 15.17		1

Analytical Method: TPH by SW8015 Mod	Prep Method: SW8015P
Tech: DVM	% Moisture:
Analyst: ARM	Basis: Wet Weight
Seq Number: 3103715	SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	10.09.19 00.42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	10.09.19 00.42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.09.19 00.42	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	10.09.19 00.42	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.09.19 00.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	10.09.19 00.42	
o-Terphenyl	84-15-1	97	%	70-135	10.09.19 00.42	



Certificate of Analytical Results 639111

LT Environmental, Inc., Arvada, CO

Corral Canyon CTB Flare

Sample Id: **PH05A**

Matrix: Soil

Date Received: 10.04.19 16.13

Lab Sample Id: 639111-010

Date Collected: 10.04.19 13.20

Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 10.08.19 14.15

Basis: Wet Weight

Seq Number: 3103749

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.09.19 05.49	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.09.19 05.49	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.09.19 05.49	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	10.09.19 05.49	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.09.19 05.49	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.09.19 05.49	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.09.19 05.49	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	110	%	70-130	10.09.19 05.49		
1,4-Difluorobenzene	540-36-3	102	%	70-130	10.09.19 05.49		



Certificate of Analytical Results 639111

LT Environmental, Inc., Arvada, CO

Corral Canyon CTB Flare

Sample Id: PH06	Matrix: Soil	Date Received: 10.04.19 16.13
Lab Sample Id: 639111-011	Date Collected: 10.04.19 13.35	Sample Depth: 1 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 10.08.19 13.30	Basis: Wet Weight
Seq Number: 3103706		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	121	4.99	mg/kg	10.08.19 15.23		1

Analytical Method: TPH by SW8015 Mod	Prep Method: SW8015P
Tech: DVM	% Moisture:
Analyst: ARM	Basis: Wet Weight
Seq Number: 3103715	SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	10.09.19 01.20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	10.09.19 01.20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	10.09.19 01.20	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	10.09.19 01.20	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	10.09.19 01.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	10.09.19 01.20	
o-Terphenyl	84-15-1	97	%	70-135	10.09.19 01.20	



Certificate of Analytical Results 639111

LT Environmental, Inc., Arvada, CO

Corral Canyon CTB Flare

Sample Id: PH06	Matrix: Soil	Date Received: 10.04.19 16.13
Lab Sample Id: 639111-011	Date Collected: 10.04.19 13.35	Sample Depth: 1 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: KTL		% Moisture:
Analyst: KTL	Date Prep: 10.08.19 14.15	Basis: Wet Weight
Seq Number: 3103749		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	10.09.19 07.07	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	10.09.19 07.07	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	10.09.19 07.07	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	10.09.19 07.07	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	10.09.19 07.07	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	10.09.19 07.07	U	1
Total BTEX		<0.00198	0.00198	mg/kg	10.09.19 07.07	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	101	%	70-130	10.09.19 07.07		
4-Bromofluorobenzene	460-00-4	112	%	70-130	10.09.19 07.07		



Certificate of Analytical Results 639111

LT Environmental, Inc., Arvada, CO

Corral Canyon CTB Flare

Sample Id: PH06A	Matrix: Soil	Date Received: 10.04.19 16.13
Lab Sample Id: 639111-012	Date Collected: 10.04.19 13.40	Sample Depth: 2 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 10.08.19 13.30	Basis: Wet Weight
Seq Number: 3103706		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	129	5.04	mg/kg	10.08.19 15.38		1

Analytical Method: TPH by SW8015 Mod	Prep Method: SW8015P
Tech: DVM	% Moisture:
Analyst: ARM	Basis: Wet Weight
Seq Number: 3103715	SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	10.09.19 01.39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	10.09.19 01.39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.09.19 01.39	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	10.09.19 01.39	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.09.19 01.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	10.09.19 01.39	
o-Terphenyl	84-15-1	97	%	70-135	10.09.19 01.39	



Certificate of Analytical Results 639111

LT Environmental, Inc., Arvada, CO

Corral Canyon CTB Flare

Sample Id: PH06A	Matrix: Soil	Date Received: 10.04.19 16.13
Lab Sample Id: 639111-012	Date Collected: 10.04.19 13.40	Sample Depth: 2 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: KTL		% Moisture:
Analyst: KTL	Date Prep: 10.08.19 14.15	Basis: Wet Weight
Seq Number: 3103749		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	10.09.19 07.28	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	10.09.19 07.28	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	10.09.19 07.28	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	10.09.19 07.28	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	10.09.19 07.28	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	10.09.19 07.28	U	1
Total BTEX		<0.00199	0.00199	mg/kg	10.09.19 07.28	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	121	%	70-130	10.09.19 07.28		
1,4-Difluorobenzene	540-36-3	95	%	70-130	10.09.19 07.28		



Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

PQL Practical Quantitation Limit **SQL** Sample Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



QC Summary 639111

LT Environmental, Inc.

Corral Canyon CTB Flare

Analytical Method: Chloride by EPA 300

Seq Number: 3103706

MB Sample Id: 7687684-1-BLK

Matrix: Solid

LCS Sample Id: 7687684-1-BKS

Prep Method: E300P

Date Prep: 10.08.19

LCSD Sample Id: 7687684-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	243	97	242	97	90-110	0	20	mg/kg	10.08.19 13:58	

Analytical Method: Chloride by EPA 300

Seq Number: 3103706

Parent Sample Id: 639111-001

Matrix: Soil

MS Sample Id: 639111-001 S

Prep Method: E300P

Date Prep: 10.08.19

MSD Sample Id: 639111-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	276	250	482	82	482	82	90-110	0	20	mg/kg	10.08.19 14:14	X

Analytical Method: Chloride by EPA 300

Seq Number: 3103706

Parent Sample Id: 639111-011

Matrix: Soil

MS Sample Id: 639111-011 S

Prep Method: E300P

Date Prep: 10.08.19

MSD Sample Id: 639111-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	121	250	337	86	339	87	90-110	1	20	mg/kg	10.08.19 15:28	X

Analytical Method: TPH by SW8015 Mod

Seq Number: 3103715

MB Sample Id: 7687732-1-BLK

Matrix: Solid

LCS Sample Id: 7687732-1-BKS

Prep Method: SW8015P

Date Prep: 10.08.19

LCSD Sample Id: 7687732-1-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)	<15.0	1000	1170	117	1180	118	70-135	1	20	mg/kg	10.08.19 20:41	
Diesel Range Organics (DRO)	<15.0	1000	1110	111	1180	118	70-135	6	20	mg/kg	10.08.19 20:41	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	105		126		130		70-135	%	10.08.19 20:41
o-Terphenyl	107		107		120		70-135	%	10.08.19 20:41

Analytical Method: TPH by SW8015 Mod

Seq Number: 3103715

Matrix: Solid
MB Sample Id: 7687732-1-BLK

Prep Method: SW8015P

Date Prep: 10.08.19

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	10.08.19 20:22	

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



QC Summary 639111

LT Environmental, Inc.

Corral Canyon CTB Flare

Analytical Method: TPH by SW8015 Mod

Seq Number: 3103715

Parent Sample Id: 639111-001

Matrix: Soil

MS Sample Id: 639111-001 S

Prep Method: SW8015P

Date Prep: 10.08.19

MSD Sample Id: 639111-001 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)	16.8	997	1130	112	1120	111	70-135	1	20	mg/kg	10.08.19 21:36	
Diesel Range Organics (DRO)	21.3	997	1050	103	1070	105	70-135	2	20	mg/kg	10.08.19 21:36	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	129		129		70-135	%	10.08.19 21:36
o-Terphenyl	112		113		70-135	%	10.08.19 21:36

Analytical Method: BTEX by EPA 8021B

Seq Number: 3103749

MB Sample Id: 7687709-1-BLK

Matrix: Solid

LCS Sample Id: 7687709-1-BKS

Prep Method: SW5030B

Date Prep: 10.08.19

LCSD Sample Id: 7687709-1-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	0.0817	82	0.0854	85	70-130	4	35	mg/kg	10.09.19 00:48	
Toluene	<0.00200	0.100	0.0781	78	0.0803	80	70-130	3	35	mg/kg	10.09.19 00:48	
Ethylbenzene	<0.00200	0.100	0.0808	81	0.0817	82	70-130	1	35	mg/kg	10.09.19 00:48	
m,p-Xylenes	<0.00400	0.200	0.162	81	0.162	81	70-130	0	35	mg/kg	10.09.19 00:48	
o-Xylene	<0.00200	0.100	0.0836	84	0.0843	84	70-130	1	35	mg/kg	10.09.19 00:48	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		99		100		70-130	%	10.09.19 00:48
4-Bromofluorobenzene	109		112		110		70-130	%	10.09.19 00:48

Analytical Method: BTEX by EPA 8021B

Seq Number: 3103749

Parent Sample Id: 639111-001

Matrix: Soil

MS Sample Id: 639111-001 S

Prep Method: SW5030B

Date Prep: 10.08.19

MSD Sample Id: 639111-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.101	0.0752	74	0.0703	70	70-130	7	35	mg/kg	10.09.19 01:29	
Toluene	<0.00201	0.101	0.0720	71	0.0697	70	70-130	3	35	mg/kg	10.09.19 01:29	
Ethylbenzene	<0.00201	0.101	0.0738	73	0.0706	71	70-130	4	35	mg/kg	10.09.19 01:29	
m,p-Xylenes	<0.00402	0.201	0.148	74	0.143	72	70-130	3	35	mg/kg	10.09.19 01:29	
o-Xylene	<0.00201	0.101	0.0772	76	0.0743	74	70-130	4	35	mg/kg	10.09.19 01:29	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		101		70-130	%	10.09.19 01:29
4-Bromofluorobenzene	125		125		70-130	%	10.09.19 01:29

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



Chain of Custody

Work Order No: 1639111

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

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Project Manager:	Dan Moir	Bill to: (if different)	Kyle Little
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO-Energy
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM
Phone:	432-704-5178	Email:	dmoir@ltenv.com kmlittle@ltenv.com

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RC ☐ Superfund ☐ State of Project: Reporting Level: I ☐ II ☐ III ☐ IV ☐ RRP ☐ Level IV ☐ Deliverables: EDD ☐ ADAPT ☐ Other:		Work Order Comments
--	--	----------------------------

Project Name:	Corral Canyon CTB Flare	Turn Around	
Project Number:		Routine	☐
P.O. Number:	2RP-5550	Rush: 24hr	
Sampler's Name:	Robert McAfee	Due Date:	

SAMPLE RECEIPT	Temp Blank:	☒ Yes ☐ No	Wet Ice:	☒ Yes ☐ No
Temperature (°C):	0.2	Thermometer ID		
Received intact:	☒ Yes ☐ No	Correction Factor:	-0.2	
Cooler Custody Seals:	☒ Yes ☐ No	Total Containers:	12	
Sample Custody Seals:	☒ Yes ☐ No			

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	ANALYSIS REQUEST																Work Order Notes			
PH01	S	10/01/19	0950	1'																				
PH01A			0955	2'																				
PH02			1015	1'																				
PH02A			1020	2'																				
PH05			1035	1'																				
PH03A			1040	2'																				
PH04			1240	1'																				
PH04A			1245	2'																				
PH05			1315	1'																				
PH05A			1320	2'																				

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		10/4/19 16:15			



Chain of Custody

Work Order No:

63914

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334
Midland, TX (432-704-5440) EL Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296
Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813) 291-1111
Hobbs, NM (575-392-7550)

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Page 2 of 2

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrel
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO-Energy
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM
Phone:	432.704.5178	Email:	dmoir@ltenv.com mmcafee@ltenv.com

Work Order Comments	
Program: UST/PST	☐ PRP ☐ Brownfields ☐ RC ☐ Superfund ☐
State of Project:	
Reporting: Level II	☐ Level III ☐ ST/UST ☐ RRP ☐ Level IV ☐
Deliverables: EDD	☐ ADAPT ☐ Other:

[illegible]



Inter-Office Shipment

Page 1 of 2

IOS Number **49466**

Date/Time: 10/07/19 10:47

Created by: Elizabeth McClellan

Please send report to: Jessica Kramer

Lab# From: **Carlsbad**

Delivery Priority:

Address: 1089 N Canal Street

Lab# To: **Midland**

Air Bill No.: 776506919 9822

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
6391111-001	S	PH01	10/04/19 09:50	E300_CL	Chloride by EPA 300	10/07/19	04/01/20	JKR	CL	
6391111-001	S	PH01	10/04/19 09:50	SW8021B	BTEX by EPA 8021B	10/07/19	10/18/19	JKR	BR4FBZ BZ BZME EBZ X	
6391111-001	S	PH01	10/04/19 09:50	SW8015MOD_NM	TPH by SW8015 Mod	10/07/19	10/18/19	JKR	GRO-DRO PHCC10C28 P1	
6391111-002	S	PH01A	10/04/19 09:55	SW8015MOD_NM	TPH by SW8015 Mod	10/07/19	10/18/19	JKR	GRO-DRO PHCC10C28 P1	
6391111-002	S	PH01A	10/04/19 09:55	SW8021B	BTEX by EPA 8021B	10/07/19	10/18/19	JKR	BR4FBZ BZ BZME EBZ X	
6391111-002	S	PH01A	10/04/19 09:55	E300_CL	Chloride by EPA 300	10/07/19	04/01/20	JKR	CL	
6391111-003	S	PH02	10/04/19 10:15	SW8021B	BTEX by EPA 8021B	10/07/19	10/18/19	JKR	BR4FBZ BZ BZME EBZ X	
6391111-003	S	PH02	10/04/19 10:15	SW8015MOD_NM	TPH by SW8015 Mod	10/07/19	10/18/19	JKR	GRO-DRO PHCC10C28 P1	
6391111-003	S	PH02	10/04/19 10:15	E300_CL	Chloride by EPA 300	10/07/19	04/01/20	JKR	CL	
6391111-004	S	PH02A	10/04/19 10:20	SW8021B	BTEX by EPA 8021B	10/07/19	10/18/19	JKR	BR4FBZ BZ BZME EBZ X	
6391111-004	S	PH02A	10/04/19 10:20	SW8015MOD_NM	TPH by SW8015 Mod	10/07/19	10/18/19	JKR	GRO-DRO PHCC10C28 P1	
6391111-004	S	PH02A	10/04/19 10:20	E300_CL	Chloride by EPA 300	10/07/19	04/01/20	JKR	CL	
6391111-005	S	PH03	10/04/19 10:35	SW8021B	BTEX by EPA 8021B	10/07/19	10/18/19	JKR	BR4FBZ BZ BZME EBZ X	
6391111-005	S	PH03	10/04/19 10:35	SW8015MOD_NM	TPH by SW8015 Mod	10/07/19	10/18/19	JKR	GRO-DRO PHCC10C28 P1	
6391111-005	S	PH03	10/04/19 10:35	E300_CL	Chloride by EPA 300	10/07/19	04/01/20	JKR	CL	
6391111-006	S	PH03A	10/04/19 10:40	SW8021B	BTEX by EPA 8021B	10/07/19	10/18/19	JKR	BR4FBZ BZ BZME EBZ X	
6391111-006	S	PH03A	10/04/19 10:40	SW8015MOD_NM	TPH by SW8015 Mod	10/07/19	10/18/19	JKR	GRO-DRO PHCC10C28 P1	
6391111-006	S	PH03A	10/04/19 10:40	E300_CL	Chloride by EPA 300	10/07/19	04/01/20	JKR	CL	
6391111-007	S	PH04	10/04/19 12:40	E300_CL	Chloride by EPA 300	10/07/19	04/01/20	JKR	CL	
6391111-007	S	PH04	10/04/19 12:40	SW8021B	BTEX by EPA 8021B	10/07/19	10/18/19	JKR	BR4FBZ BZ BZME EBZ X	
6391111-007	S	PH04	10/04/19 12:40	SW8015MOD_NM	TPH by SW8015 Mod	10/07/19	10/18/19	JKR	GRO-DRO PHCC10C28 P1	
6391111-008	S	PH04A	10/04/19 12:45	SW8015MOD_NM	TPH by SW8015 Mod	10/07/19	10/18/19	JKR	GRO-DRO PHCC10C28 P1	
6391111-008	S	PH04A	10/04/19 12:45	SW8021B	BTEX by EPA 8021B	10/07/19	10/18/19	JKR	BR4FBZ BZ BZME EBZ X	
6391111-008	S	PH04A	10/04/19 12:45	E300_CL	Chloride by EPA 300	10/07/19	04/01/20	JKR	CL	
6391111-009	S	PH05	10/04/19 13:15	SW8015MOD_NM	TPH by SW8015 Mod	10/07/19	10/18/19	JKR	GRO-DRO PHCC10C28 P1	



Inter-Office Shipment

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IOS Number **49466**

Date/Time: 10/07/19 10:47

Created by: Elizabeth McClellan

Please send report to: Jessica Kramer

Lab# From: **Carlsbad**

Delivery Priority:

Address: 1089 N Canal Street

Lab# To: **Midland**

Air Bill No.: 776506919 9822

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
6391111-009	S	PH05	10/04/19 13:15	SW8021B	BTEX by EPA 8021B	10/07/19	10/18/19	JKR	BR4FBZ BZ BZME EBZ X	
6391111-009	S	PH05	10/04/19 13:15	E300_CL	Chloride by EPA 300	10/07/19	04/01/20	JKR	CL	
6391111-010	S	PH05A	10/04/19 13:20	SW8021B	BTEX by EPA 8021B	10/07/19	10/18/19	JKR	BR4FBZ BZ BZME EBZ X	
6391111-010	S	PH05A	10/04/19 13:20	E300_CL	Chloride by EPA 300	10/07/19	04/01/20	JKR	CL	
6391111-010	S	PH05A	10/04/19 13:20	SW8015MOD_NM	TPH by SW8015 Mod	10/07/19	10/18/19	JKR	GRO-DRO PHCC10C28 PH	
6391111-011	S	PH06	10/04/19 13:35	SW8021B	BTEX by EPA 8021B	10/07/19	10/18/19	JKR	BR4FBZ BZ BZME EBZ X	
6391111-011	S	PH06	10/04/19 13:35	E300_CL	Chloride by EPA 300	10/07/19	04/01/20	JKR	CL	
6391111-011	S	PH06	10/04/19 13:35	SW8015MOD_NM	TPH by SW8015 Mod	10/07/19	10/18/19	JKR	GRO-DRO PHCC10C28 PH	
6391111-012	S	PH06A	10/04/19 13:40	SW8015MOD_NM	TPH by SW8015 Mod	10/07/19	10/18/19	JKR	GRO-DRO PHCC10C28 PH	
6391111-012	S	PH06A	10/04/19 13:40	E300_CL	Chloride by EPA 300	10/07/19	04/01/20	JKR	CL	
6391111-012	S	PH06A	10/04/19 13:40	SW8021B	BTEX by EPA 8021B	10/07/19	10/18/19	JKR	BR4FBZ BZ BZME EBZ X	

Inter Office Shipment or Sample Comments:

Relinquished By:

Elizabeth McClellan

Received By:

Brianna Teel

Date Relinquished: 10/07/2019

Date Received: 10/08/2019 11:15

Cooler Temperature:



XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 49466

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sent By: Elizabeth McClellan

Date Sent: 10/07/2019 10:47 AM

Received By: Brianna Teel

Date Received: 10/08/2019 11:15 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	
#2 *Shipping container in good condition?	Yes
#3 *Samples received with appropriate temperature?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 *Custody Seals Signed and dated for Containers/coolers	Yes
#6 *IOS present?	Yes
#7 Any missing/extra samples?	No
#8 IOS agrees with sample label(s)/matrix?	Yes
#9 Sample matrix/ properties agree with IOS?	Yes
#10 Samples in proper container/ bottle?	Yes
#11 Samples properly preserved?	Yes
#12 Sample container(s) intact?	Yes
#13 Sufficient sample amount for indicated test(s)?	Yes
#14 All samples received within hold time?	Yes

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ Contacted by : _____ Date: _____

Checklist reviewed by:

Brianna Teel

Date: 10/08/2019



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

Date/ Time Received: 10/04/2019 04:13:00 PM

Work Order #: 639111

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)?	.2
#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)?	Yes Midland
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Elizabeth McClellan

Date: 10/07/2019

Checklist reviewed by:

Jessica Kramer

Date: 10/07/2019