LT Environmental, Inc.
3300 North "A" Street
Building 1, Unit 103
Midland, Texas 79705
432.704.5178

January 24, 2020

Mr. Bradford Billings
New Mexico Oil Conservation Division
1220 South St. Francis Drive, #3
Santa Fe, New Mexico 87505

RE: Closure Request
Corral Canyon Federal Central Tank Battery
Remediation Permit Number 2RP-4643
Eddy County, New Mexico

Dear Mr. Billings:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following Closure Request report detailing site assessment, soil sampling, and excavation activities at the Corral Canyon Federal Central Tank Battery (Site) in Unit P, Section 5, Township 25 South, Range 29 East, in Eddy County, New Mexico (Figure 1). The purpose of the site assessment, soil sampling, and excavation activities was to address impacts to soil after a release of crude oil and produced water at the Site.

The release is included in the Compliance Agreement for Remediation for Historical Releases (Compliance Agreement) between XTO and the New Mexico Oil Conservation Division (NMOCD) effective November 13, 2018. The purpose of the Compliance Agreement is to ensure reportable releases that occurred prior to August 14, 2018, where XTO is responsible for the corrective action, comply with Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC) as amended on August 14, 2018. The release is categorized as a Tier IV site in the Compliance Agreement, meaning the release occurred prior to August 14, 2018, the effective date of 19.15.29 NMAC; however, remediation was ongoing. Based on the site assessment activities and results of the soil sampling events, XTO is requesting no further action for this release.

RELEASE BACKGROUND

On February 16, 2018, a victaulic coupling failed on a separator inlet riser, causing approximately 18 barrels (bbls) of oil and 13 bbls of produced water to release. The release affected approximately 14,400 square feet of well pad and misted approximately 7,000 square feet of pasture south of the pad. A vacuum truck was used to recover the free-standing fluids; approximately 12 bbls of oil and 8 bbls of produced water were recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 on March 2, 2018, and was assigned Remediation Permit (RP) Number 2RP-4643 (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 6,100 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 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 176 feet northeast 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	Total Depth (feet bgs)	Depth to Water (feet bgs)	Sample Date
MW01	68.44	58.17	09/13/2019
MW02	68.10	62.29	09/13/2019
MW03	75.58	58.30	09/13/2019
MW04	69.08	57.26	09/13/2019
MW05	64.80	58.54	09/13/2019
MW06	64.11	58.25	09/13/2019

Notes:
bgs – below ground surface

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 the Pecos River, located approximately 1,650 feet northwest of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is 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;
- TPH-gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg;
- Total petroleum hydrocarbons (TPH): 2,500 mg/kg; and
- Chloride: 10,000 mg/kg.

SITE ASSESSMENT, EXCAVATION, AND DELINEATION SOIL SAMPLING ACTIVITIES

During April 2018, LTE personnel inspected the Site to evaluate the release extent. Surficial staining was visible in the process equipment area. Based on visible staining and field screening activities, excavation and site assessment activities were scheduled.

Between April 2019 and January 2020, LTE personnel returned to the Site to oversee site assessment and excavation activities.

Impacted soil was excavated from the release area as indicated by visual observations and field screening activities. To direct excavation activities, LTE screened soil for volatile aromatic hydrocarbons and chloride utilizing a calibrated photoionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. Based on field screening results and active process equipment in the release area, three separate excavations were completed. Impacted soil was excavated to depths ranging from 1 foot to 2 feet bgs. Following removal of impacted soil, LTE collected 5-point composite soil samples every 200 square feet from the sidewalls and floors of the excavations. The 5-point composite samples were collected by depositing five aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil sample SW01 was collected from the sidewalls of the central excavation from a depth of 1 foot to 2 feet bgs. Composite soil sample FS01 was collected from the floor of the central excavation from a depth of 1 foot to 2 feet bgs. Composite soil samples FS02 through FS09 were collected from the floors of the eastern and western excavations from a depth of 1 foot bgs. Due to the shallow 1 foot depth of the eastern and western excavations, floor samples FS02 through FS09 were also representative of the sidewalls in these excavations. The excavation extents and excavation soil sample locations are depicted on Figure 2.

Potholes and boreholes were advanced via shovel or hand-auger at 9 locations on the well pad and pasture area south of the pad to assess for the presence or absence of additional impacted soil. Potholes PH01 through PH05 and boreholes BH01 through BH04 were advanced to depths ranging from 1 foot to 2 feet bgs. Two delineation soil samples were collected from each pothole and borehole from depths ranging from 0.5 feet to 2 feet bgs. Soil from the potholes and boreholes was field screened for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach® chloride QuanTab® test strips, respectively. Field screening results and observations for

the potholes and boreholes were logged on lithologic/soil sampling logs, which are included in Attachment 2. The delineation soil sample locations are depicted on Figure 3.

The excavation and delineation soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were 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 (USEPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following USEPA Method 8015M/D; and chloride following USEPA Method 300.0. Photographic documentation was conducted during the Site visits. Photographs are included in Attachment 3.

The combined excavations measured approximately 1,640 square feet in area and were completed to depths ranging from 1 foot bgs to 2 feet bgs. A total of approximately 60 cubic yards of impacted soil were removed from the excavations. The impacted soil was transported and properly disposed of at the R360 Landfill located in Hobbs, New Mexico.

ANALYTICAL RESULTS

Laboratory analytical results for excavation soil samples SW01 and FS01 through FS09 indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Laboratory analytical results for the delineation soil samples, collected from potholes PH01 through PH05 and boreholes BH01 through BH04, indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Attachment 4.

CLOSURE REQUEST

Impacted soil was excavated from the Site to address the February 16, 2018, release of crude oil and produced water at the Site. Laboratory analytical results for the excavation soil samples collected from the final excavation extents indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Delineation soil sampling was completed in the release area on the pad and pasture area south of the pad to assess for the presence or absence of additional impacted soil. Laboratory analytical results for the delineation soil samples indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Based on the excavation and delineation soil sample analytical results, no further remediation was required.

Initial response efforts, natural attenuation, and excavation of impacted soil have mitigated impacts at this Site. XTO requests no further action for RP Number 2RP-4643. XTO will backfill the

excavations with material purchased locally and recontour the Site to match pre-existing site conditions. An updated NMOCD Form C-141 is included in Attachment 1.

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

Sincerely,

LT ENVIRONMENTAL, INC.

Aimee Cole
Project Environmental Scientist

Ashley L. Ager, P.G.
Senior Geologist

cc: Kyle Littrell, XTO
Bureau of Land Management
Mike Bratcher, NMOCD

Attachments:

Figure 1	Site Location Map
Figure 2	Excavation Soil Sample Locations
Figure 3	Delineation Soil Sample Locations
Table 1	Soil Analytical Results
Attachment 1	Initial/Final NMOCD Form C-141 (2RP-4643)
Attachment 2	Lithologic / Soil Sample Logs
Attachment 3	Photographic Log
Attachment 4	Laboratory Analytical Reports

FIGURES

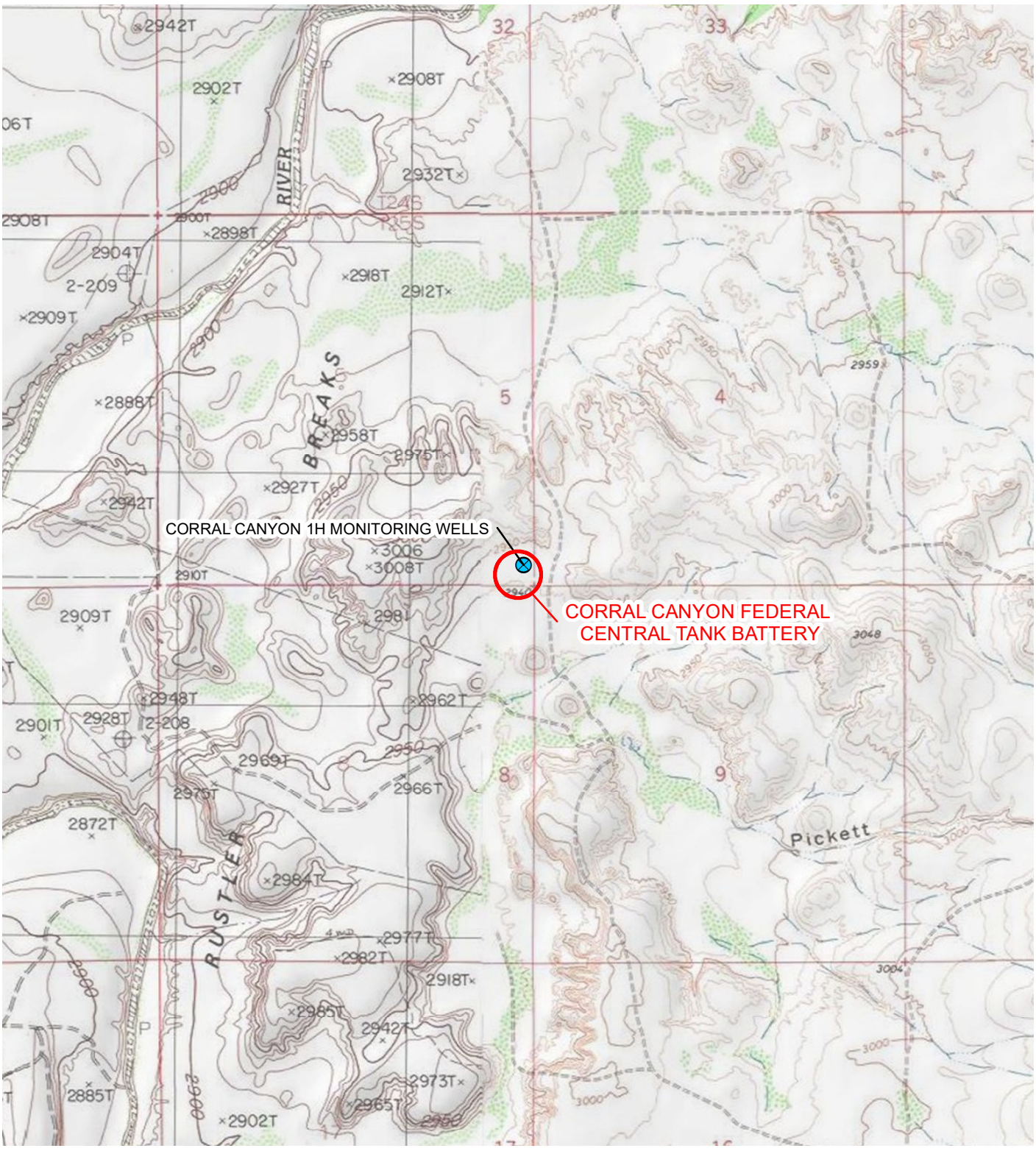

IMAGE COURTESY OF ESRI/USGS

LEGEND

SITE LOCATION

0 2,000 4,000

Feet

N

NEW MEXICO

NOTE: REMEDIATION PERMIT NUMBER 2RP-4643

FIGURE 1
SITE LOCATION MAP
CORRAL CANYON FEDERAL CENTRAL TANK BATTERY
UNIT P SEC 5 T25S R29E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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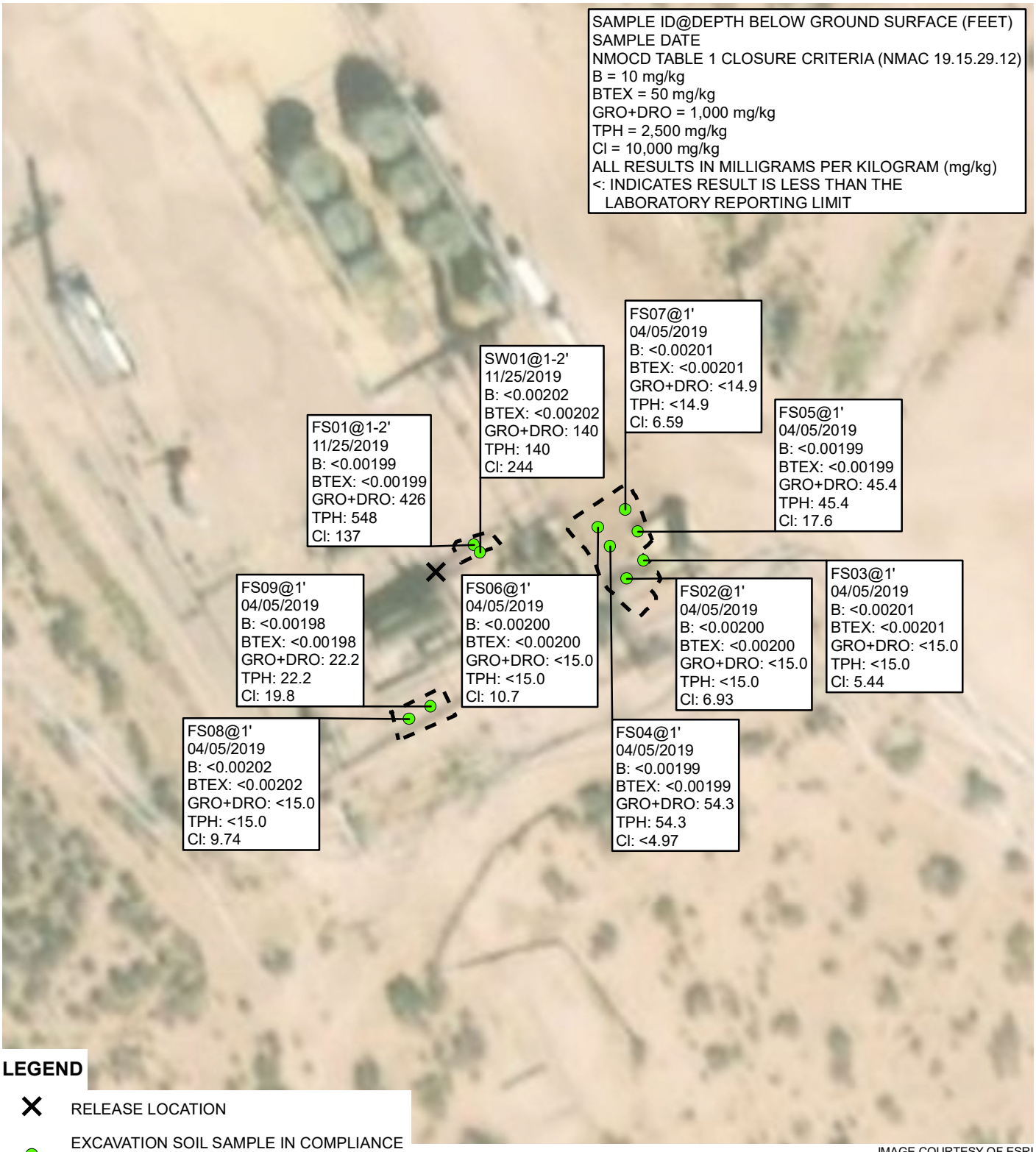

B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
GRO: GASOLINE RANGE ORGANICS
DRO: DIESEL RANGE ORGANICS
TPH: TOTAL PETROLEUM HYDROCARBONS
Cl: CHLORIDE
NMAC: NEW MEXICO ADMINISTRATIVE CODE
NMOCD: NEW MEXICO OIL CONSERVATION DIVISION
NOTE: REMEDIATION PERMIT NUMBER 2RP-3176

FIGURE 2
EXCAVATION SOIL SAMPLE LOCATIONS
CORRAL CANYON FEDERAL
CENTRAL TANK BATTERY
UNIT P SEC 5 T25S R29E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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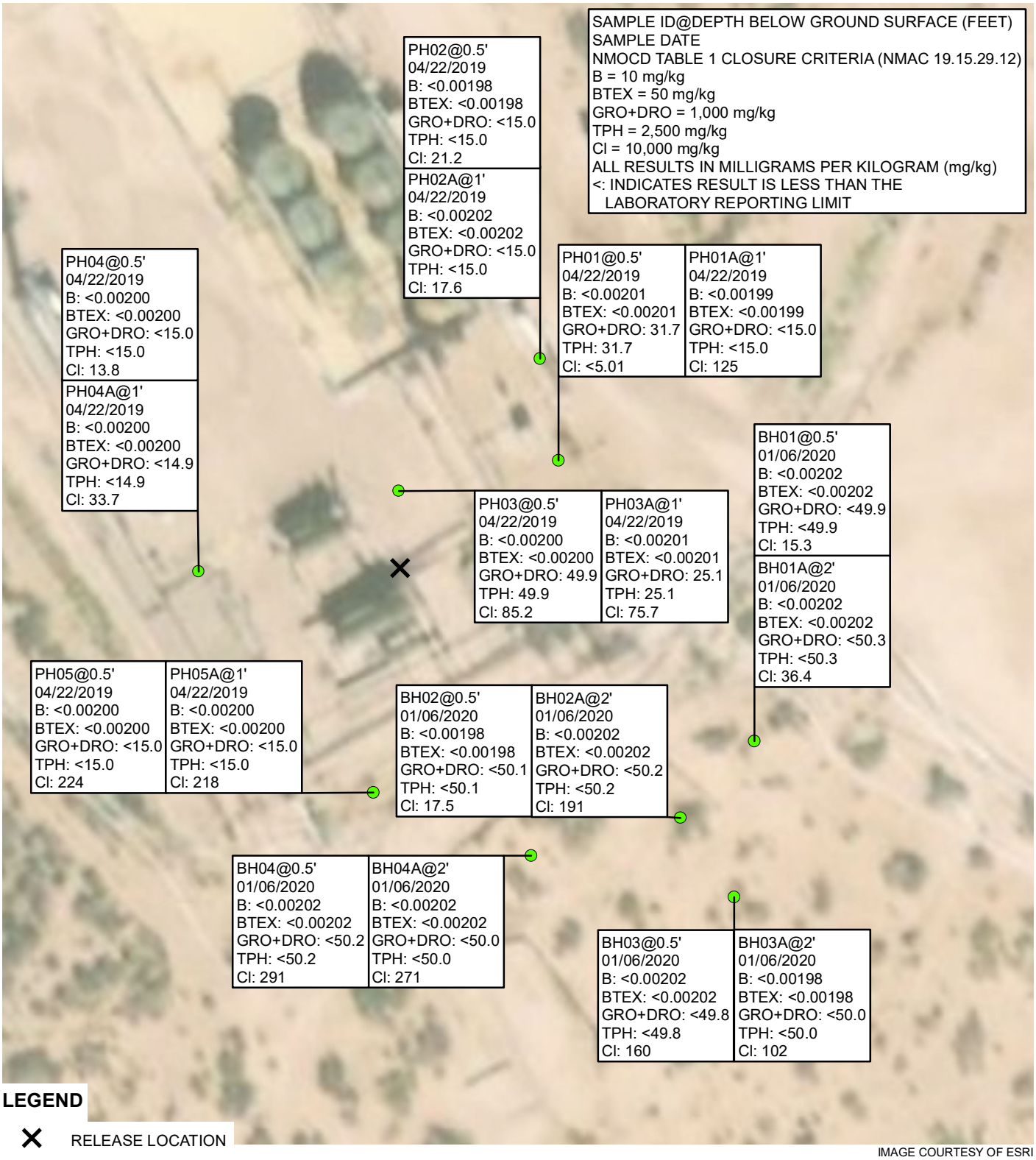

LEGEND

✕ RELEASE LOCATION

● DELINEATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA

IMAGE COURTESY OF ESRI

0 60 120

Feet

N

B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
GRO: GASOLINE RANGE ORGANICS
DRO: DIESEL RANGE ORGANICS
TPH: TOTAL PETROLEUM HYDROCARBONS
Cl: CHLORIDE
NMAC: NEW MEXICO ADMINISTRATIVE CODE
NMOCD: NEW MEXICO OIL CONSERVATION DIVISION
NOTE: REMEDIATION PERMIT NUMBER 2RP-3176

FIGURE 4
DELINEATION SOIL SAMPLE LOCATIONS
CORRAL CANYON FEDERAL
CENTRAL TANK BATTERY
UNIT P SEC 5 T25S R29E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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TABLES

TABLE 1
SOIL ANALYTICAL RESULTS

CORRAL CANYON FEDERAL CENTRAL TANK BATTERY
REMEDIATION PERMIT NUMBER (2RP-4643)
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	**1,000**	**2,500**	**10,000**
PH01	0.5	04/08/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<14.9	31.7	<14.9	31.7	31.7	<5.01
PH01A	1	04/08/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	125
PH02	0.5	04/08/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	21.2
PH02A	1	04/08/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	17.6
PH03	0.5	04/08/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	49.9	<15.0	49.9	49.9	85.2
PH03A	1	04/08/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	25.1	<15.0	25.1	25.1	75.7
PH04	0.5	04/08/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	13.8
PH04A	1	04/08/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	33.7
PH05	0.5	04/08/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	224
PH05A	1	04/08/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	218
BH01	0.5	01/06/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.9	<49.9	<49.9	<49.9	<49.9	15.3
BH01A	2	01/06/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.3	<50.3	<50.3	<50.3	<50.3	36.4
BH02	0.5	01/06/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.1	<50.1	<50.1	<50.1	<50.1	17.5
BH02A	2	01/06/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.2	<50.2	<50.2	<50.2	<50.2	191
BH03	0.5	01/06/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.8	<49.8	<49.8	<49.8	<49.8	160
BH03A	2	01/06/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.0	<50.0	<50.0	<50.0	<50.0	102
BH04	0.5	01/06/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.2	<50.2	<50.2	<50.2	<50.2	291
BH04A	2	01/06/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.0	<50.0	<50.0	<50.0	<50.0	271
FS01	1 - 2	11/25/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.9	426	122	426	548	137
FS02	1	04/05/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	6.93
FS03	1	04/05/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	5.44
FS04	1	04/05/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	54	<15.0	54.3	54.3	<4.97
FS05	1	04/05/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	45.4	<15.0	45.4	45.4	17.6
FS06	1	04/05/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	10.7

TABLE 1
SOIL ANALYTICAL RESULTS

CORRAL CANYON FEDERAL CENTRAL TANK BATTERY
REMEDIATION PERMIT NUMBER (2RP-4643)
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	**1,000**	**2,500**	**10,000**
FS07	1	04/05/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<14.9	<14.9	<14.9	<14.9	<14.9	6.59
FS08	1	04/05/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	9.74
FS09	1	04/05/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	22.2	<15.0	22.2	22.2	19.8
SW01	1 - 2	11/25/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.9	140	<49.9	140	140	244

Notes:

bgs - below ground surface

BTEX - benzene, toluene, ethylbenzene, and total xylenes

DRO - diesel range organics

GRO - gasoline range organics

mg/kg - milligrams per kilogram

MRO - motor oil range organics

NMAC - New Mexico Administrative Code

NMOCD - New Mexico Oil Conservation Division

NE - not established

TPH - total petroleum hydrocarbons

< - 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-4643)

NM OIL CONSERVATION
ARTESIA DISTRICT
MAR 02 2018
RECEIVED

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

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

Form C-141
Revised April 3, 2017

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

nAB1800434910

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: XTO Energy #5380	Contact: Amy C. Ruth
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No: 575-689-3380
Facility Name: Corral Canyon Federal Central Tank Battery (API: Coral Canyon Federal #4H)	Facility Type: Exploration and Production

Surface Owner: Federal	Mineral Owner: Federal	API No: 30-015-42923

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
P	5	25S	29E	48	South	217	East	Eddy

Latitude 32.24049° Longitude -103.998706° NAD83

NATURE OF RELEASE

Type of Release: Crude Oil and Produced Water	Volume of Release: 18 BO, 13 BPW	Volume Recovered: 12 BO, 8 BPW
Source of Release: Victaulic clamp	Date and Hour of Occurrence: 2/16/2018 9:45 pm	Date and Hour of Discovery: 2/16/2018 9:45 pm
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher/Crystal Weaver (NMOCD), Shelly Tucker/Jim Amos (BLM)	
By Whom? Amy Ruth	Date and Hour: 2/17/2018 5:48 pm	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*
N/A

Describe Cause of Problem and Remedial Action Taken.*
A Victaulic coupling failed on an inlet riser from a facility separator. Associated wells shut in due to a low pressure alarm on the vessel. Facility is shut in until repairs can be made.

Describe Area Affected and Cleanup Action Taken.*
The release affected approximately 14,400 square feet of facility well pad, and misted about 7,000 square feet of pasture to the south. Free standing fluids were recovered. An environmental contractor was retained to assist with the remediation and soil samples have been collected.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature:
Printed Name: Amy C. Ruth
Title: Environmental Coordinator
E-mail Address: Amy_Ruth@xtoenergy.com
Date: 3/2/2018 Phone: 575-689-3380

OIL CONSERVATION DIVISION

Signed By: Mike Bratcher
Approved by Environmental Specialist:

Approval Date: 3/5/18 Expiration Date: N/A

Conditions of Approval: See attached

Attached ☐ 2RP-4643

* Attach Additional Sheets If Necessary

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	
District RP	
Facility ID	2RP-4643
Application ID	

Release Notification

Responsible Party

Responsible Party: XTO Energy, Inc	OGRID: 5380
Contact Name: Kyle Littrell	Contact Telephone: (432)-221-7331
Contact email: Kyle_Littrell@xtoenergy.com	Incident #: 2RP-4643
Contact mailing address: 522 W. Mermod, Suite 704 Carlsbad, NM 88220	

Location of Release Source

Latitude 32.1524049 Longitude -103.998706
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Corral Canyon Federal Central Tank Battery	Site Type: Production Facility
Date Release Discovered: 2/16/2018	API# *(if applicable):* 30-015-42923

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

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

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls): 18	Volume Recovered (bbls): 12
☒ Produced Water	Volume Released (bbls): 13	Volume Recovered (bbls): 8
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release
A victaulic coupling failed on an inlet riser from a separator.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	2RP-4643
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? Greater than 25 bbls was released.

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
Immediate notice was given by Amy Ruth to Mike Bratcher/Crystal Weaver (NMOCD) and Shelly Tucker/Jim Amos (BLM) on February 17, 2018 at 5:48 PM.

Initial Response

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

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

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

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

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 1-24-2020

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

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	2RP-4643
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	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.

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	2RP-4643
Application ID	

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 1-24-2020

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

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	2RP-4643
Application ID	

Closure

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

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

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☒ Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: _____ Date: 1-24-2020

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

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

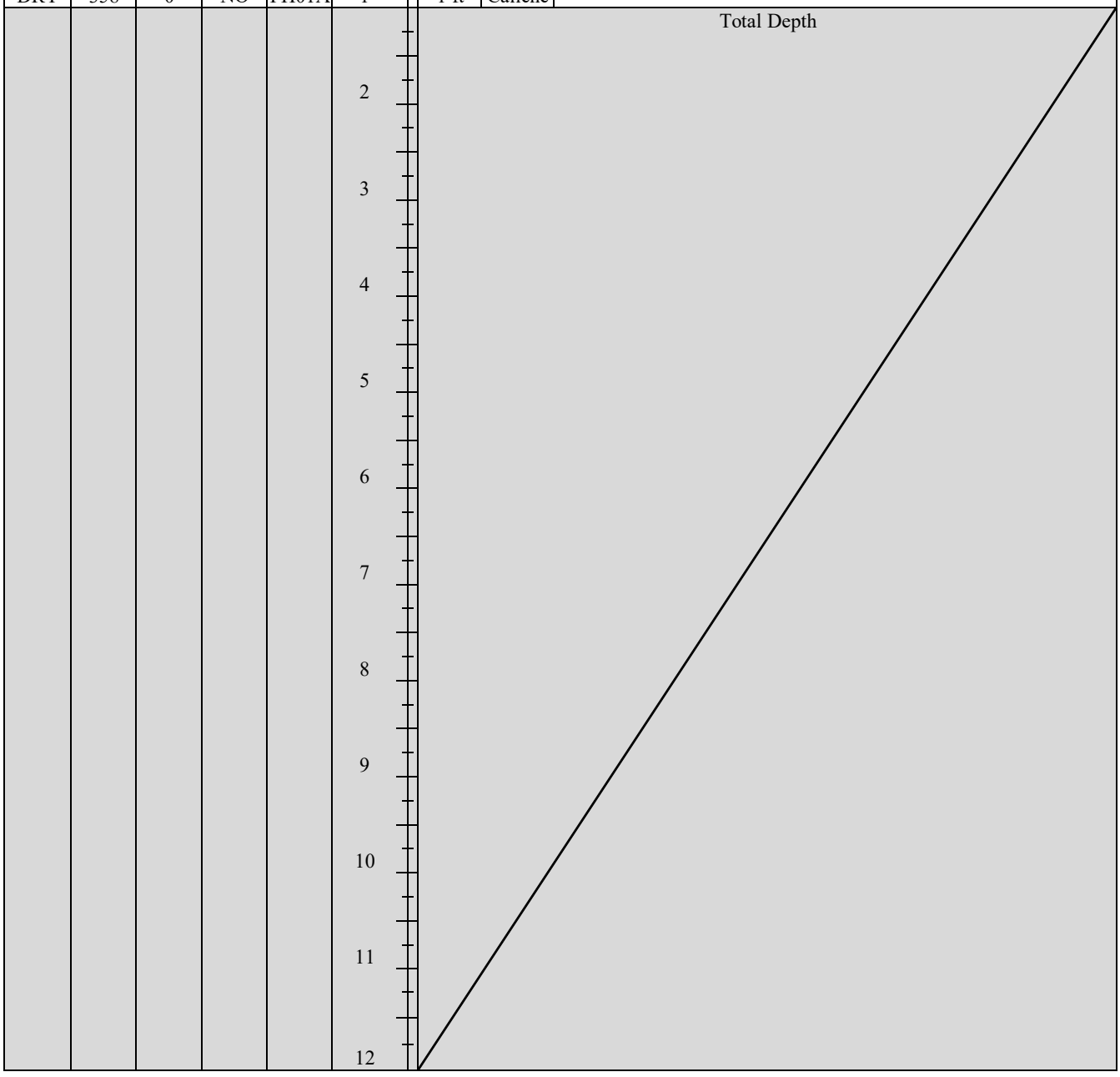
ATTACHMENT 2: LITHOLOGIC / SOIL SAMPLE LOGS

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

		Identifier: PH01	Date: 4/8/19
		Project Name: Corral Canyon Central Tank Battery	RP Number: 2RP-4643
LITHOLOGIC / SOIL SAMPLING LOG		Logged By: Anna Byers	Method: Hand Shovel
Lat/Long: Refer to Collector	Field Screening: PID and HACH Chloride St	Hole Diameter: 1 ft	Total Depth: 1 ft

Comments: Chloride concentration calculated without 40% correction factor

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
DRY	499	0	NO	PH01	0	0.5 ft	Caliche	pad surface caliche; compact, no odor, sand (f.)-gravel
DRY	358	0	NO	PH01A	1	1 ft	Caliche	

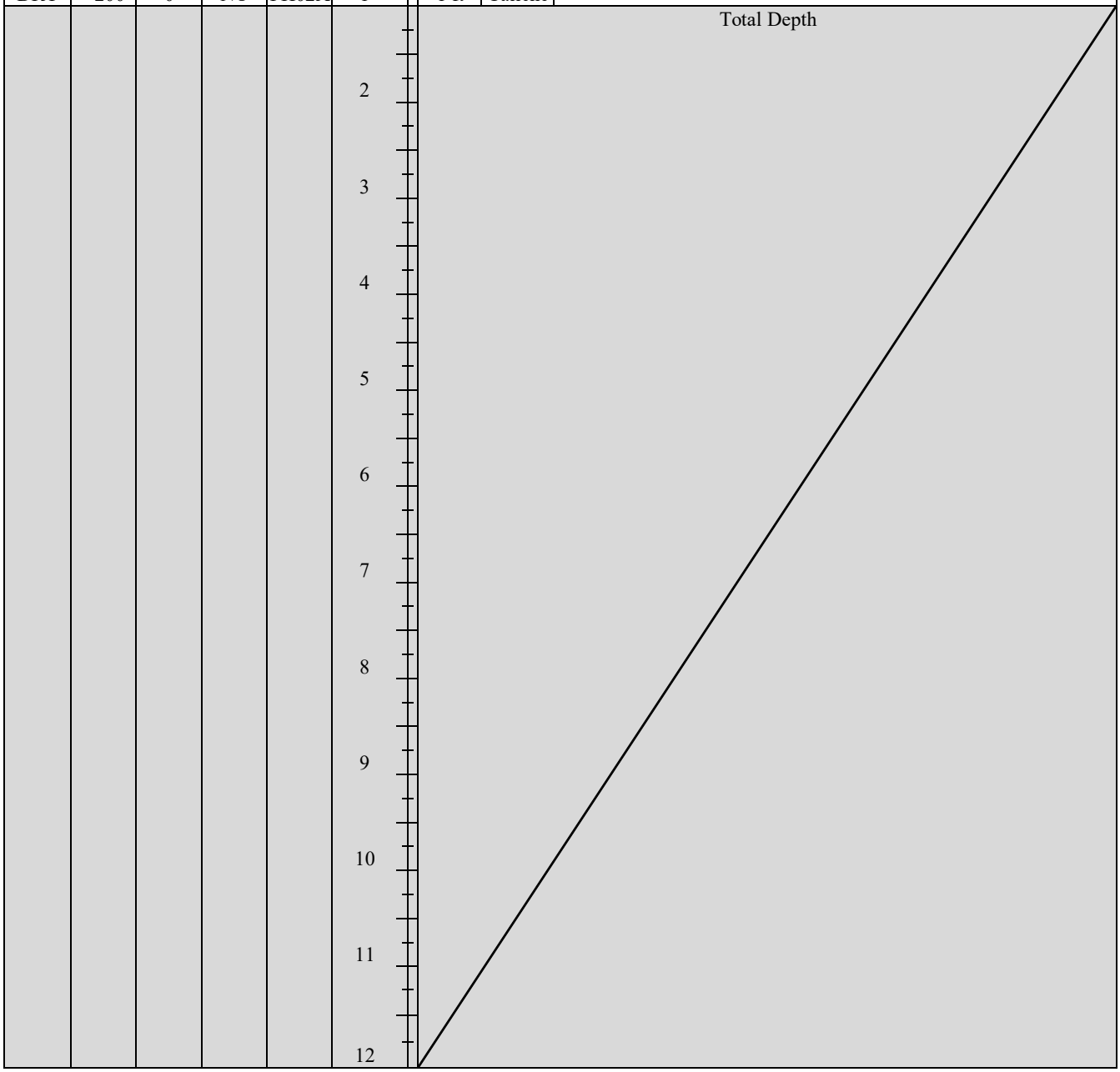


LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

		Identifier: PH02	Date: 4/8/19
		Project Name: Corral Canyon Central Tank Battery	RP Number: 2RP-4643
LITHOLOGIC / SOIL SAMPLING LOG		Logged By: Anna Byers	Method: Hand Shovel
Lat/Long: Refer to Collector	Field Screening: PID and HACH Chloride St	Hole Diameter: 1 ft	Total Depth: 1 ft

Comments: Chloride concentrations calculated without 40% correction factor

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
DRY	<200	0	NO	PH02	0	0.5 ft	Caliche	pad surface caliche; compact, no odor, sand (f.)-gravel
DRY	<200	0	NO	PH02A	1	1 ft	Caliche	

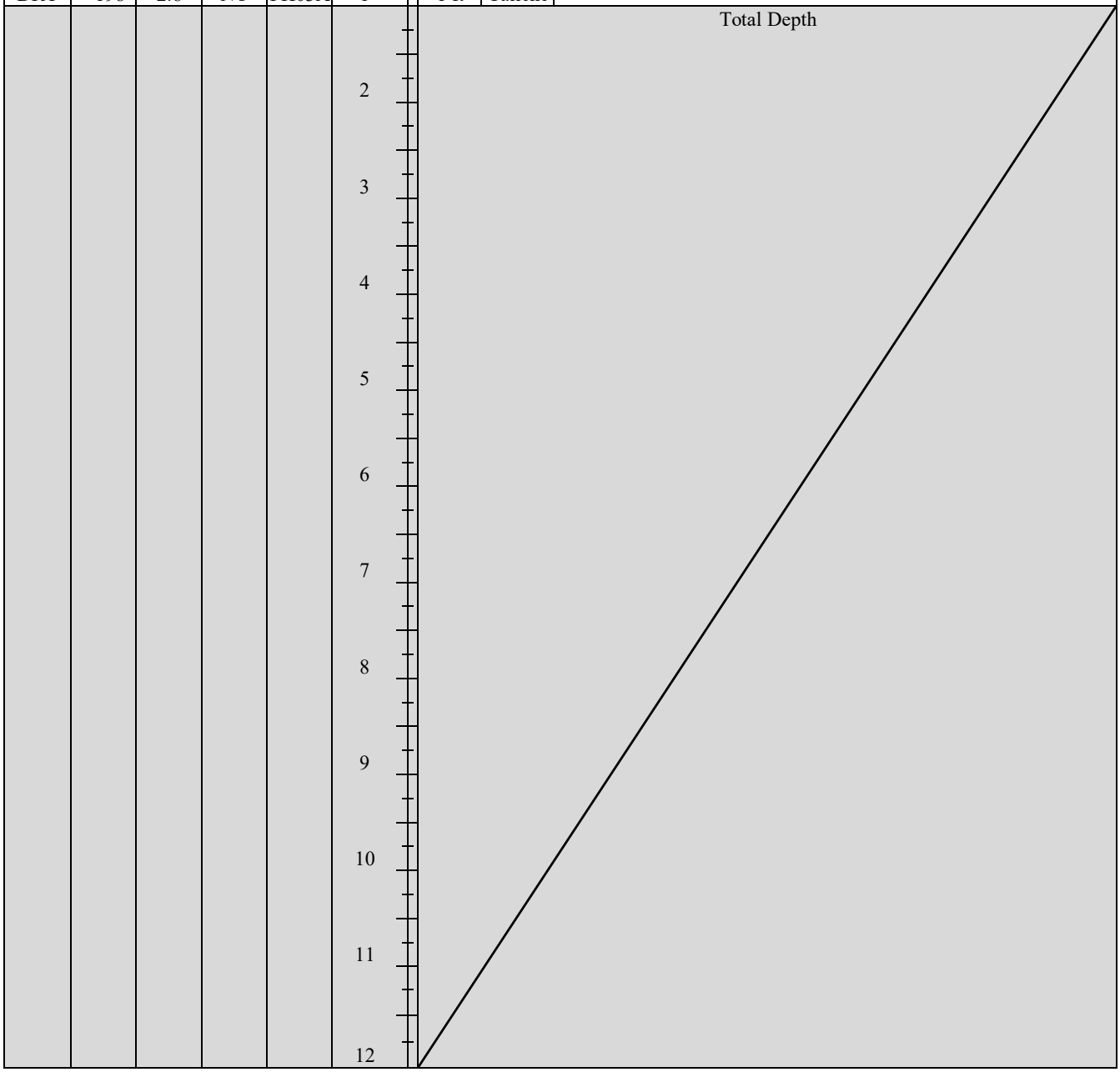


LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

		Identifier: PH03	Date: 4/8/19
		Project Name: Corral Canyon Central Tank Battery	RP Number: 2RP-4643
LITHOLOGIC / SOIL SAMPLING LOG		Logged By: Anna Byers	Method: Hand Shovel
Lat/Long: Refer to Collector	Field Screening: PID and HACH Chloride St	Hole Diameter: 1 ft	Total Depth: 1 ft

Comments: Calculated chloride concentrations do not include 40% correction factor

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
DRY	<198	10.3	NO	PH03	0	0.5 ft	Caliche	pad surface caliche; compact, no odor, sand (f.)-gravel
DRY	<198	2.8	NO	PH03A	1	1 ft	Caliche	

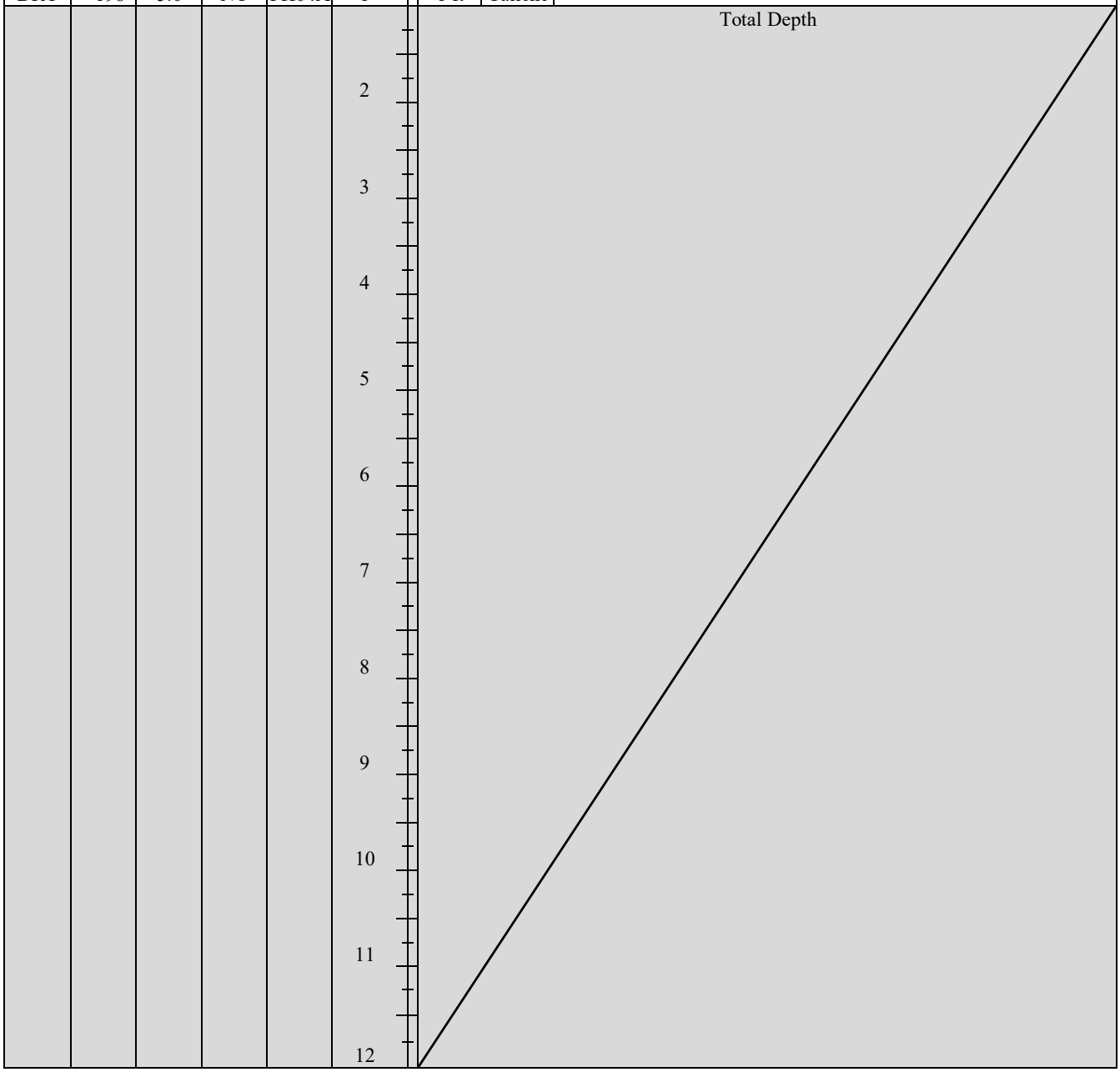


LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

		Identifier: PH04	Date: 4/8/19
		Project Name: Corral Canyon Central Tank Battery	RP Number: 2RP-4643
LITHOLOGIC / SOIL SAMPLING LOG		Logged By: Anna Byers	Method: Hand Shovel
Lat/Long: Refer to Collector	Field Screening: PID and HACH Chloride St	Hole Diameter: 1 ft	Total Depth: 1 ft

Comments: Calculated Chloride concenctrations do not include the 40% correction factor

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
DRY	<198	6.7	NO	PH04	0	0.5 ft	Caliche	pad surface caliche; compact, no odor, sand (f.)-gravel
DRY	<198	5.0	NO	PH04A	1	1 ft	Caliche	

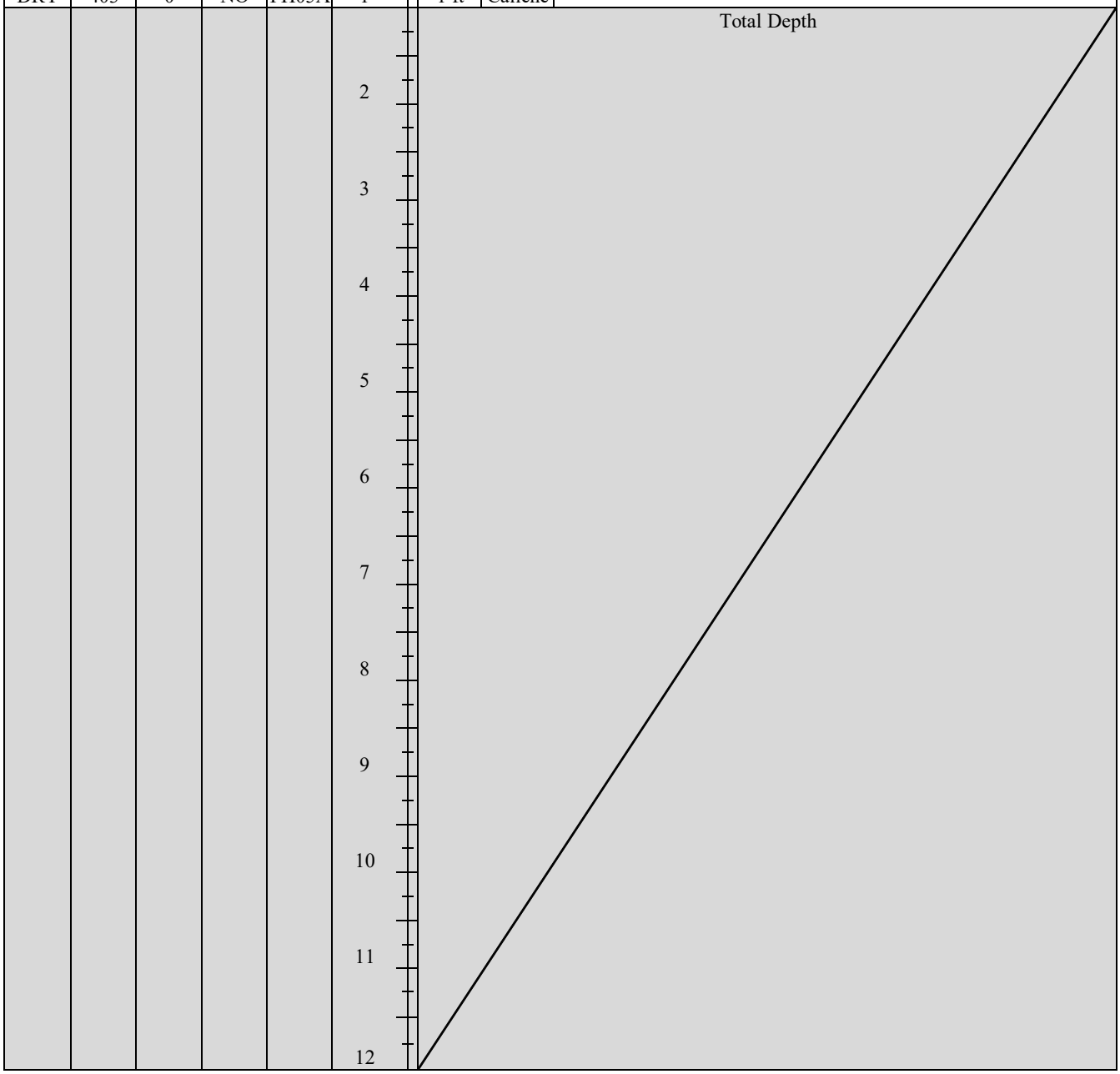


LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

		Identifier: PH05	Date: 4/8/19
		Project Name: Corral Canyon Central Tank Battery	RP Number: 2RP-4643
LITHOLOGIC / SOIL SAMPLING LOG		Logged By: Anna Byers	Method: Hand Shovel
Lat/Long: Refer to Collector	Field Screening: PID and HACH Chloride St	Hole Diameter: 1 ft	Total Depth: 1 ft

Comments: Calculated Chloride concentrations do not include the 40% correction factor

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
DRY	454	0	NO	PH05	0	0.5 ft	Caliche	Pad surface caliche: compact, no odor, sand (f.)-gravel
DRY	403	0	NO	PH05A	1	1 ft	Caliche	



LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220

Identifier:	Date:
BH01	1.6.2020
Project Name:	**RP Number:**
Corral Canyon CTB	2RP-4643
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: SL / Method: Hand Auger
Lat/Long:	Field Screening: PID ~~Chloride~~ / Hole Diameter: 2.25" / Total Depth: 2'

Comments: TD @ 2

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	<179	0.0	N	BH01	0	0.5	SW-SC	0-2 sandy, clay, brown, no odor, no stain, poorly graded, m-f, low cohesiveness, low plasticity
D	<179	0.0	N	BH01A	2	2		TD @ 2'
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220

Identifier:	Date:
BH02	1.6.2020
Project Name:	**RP Number:**
Corral Canyon LTB	2RP-4643

LITHOLOGIC / SOIL SAMPLING LOG

Logged By:	Method:
SL	Hand Auger
Lat/Long:	**Field Screening:** (PID) Chloride
	Hole Diameter: 2.25"
	Total Depth: 2'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	479	0.0	N	BH02	0	0.5	SC	0-2 clayey sand, Brown, no odor, no stain, m-f, poorly graded, low cohesiveness, medium plasticity
D	479	0.0	N	BH02A	1			
					2	2		TD @ 2'
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220

Identifier:	Date:
BH03	1.6.2020
Project Name:	**RP Number:**
Corral Canyon CTB	2RP-4643

LITHOLOGIC / SOIL SAMPLING LOG

Logged By:	Method:
SL	Hand Auger
Lat/Long:	**Field Screening:** (PID) (Chloride)
Hole Diameter:	**Total Depth:**
2.25"	2'

Comments: TD @ 2'

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	297	0.0	N	BH03	0	0.5	SW-SC	0-2 sandy clay, Brown, no odor, no stain, m-f, poorly graded, low cohesiveness, low plasticity
D	<179	0.0	N	BH03A	1	2		
					2			TD @ 2'
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220

Identifier:	Date:
BH04	1.6.2020
Project Name:	**RP Number:**
Corral Canyon CTB	2RP-4643

LITHOLOGIC / SOIL SAMPLING LOG

Logged By:	Method:
SL	Hand Auger

Lat/Long:	Field Screening:	Hole Diameter:	Total Depth:
	PID Chloride	2.25"	2'

Comments: TD @ 2'

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	297	0.0	N	BH04	0	0.5	SC	0-2 Clayey sand, Brown, no odor, no stain, m-f, poorly graded, low cohesiveness, low plasticity
D	492	0.0	N	BH04A	1			
					2	2		TD @ 2'
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

ATTACHMENT 3: PHOTOGRAPHIC LOG

PHOTOGRAPHIC LOG

Photograph 1: View of process equipment area.

Photograph 2: View of excavation area.

PHOTOGRAPHIC LOG

Photograph 3: View of excavation area.

Photograph 4: View of excavation area.

PHOTOGRAPHIC LOG

Photograph 5: View of excavation area.

PHOTOGRAPHIC LOG

Photograph 5: North facing view of overspray area south of the pad, during assessment activities.

ATTACHMENT 4: LABORATORY ANALYTICAL REPORTS

Analytical Report 620421

for

LT Environmental, Inc.

Project Manager: Adrian Baker

Corral Canyon Federal CTB

11-APR-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-28), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)
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-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)
Xenco-Lakeland: Florida (E84098)

11-APR-19

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

Reference: XENCO Report No(s): **620421**
Corral Canyon Federal CTB
Project Address: ---

Adrian Baker:

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) 620421. 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. 620421 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,

Kalei Stout
Carlsbad Laboratory Director

Sample Cross Reference 620421

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal CTB

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS02	S	04-05-19 10:45	1 ft	620421-001
FS03	S	04-05-19 10:50	1 ft	620421-002
FS04	S	04-05-19 12:40	1 ft	620421-003
FS05	S	04-05-19 12:35	1 ft	620421-004
FS06	S	04-05-19 12:30	1 ft	620421-005
FS07	S	04-05-19 12:25	1 ft	620421-006
FS08	S	04-05-19 12:20	1 ft	620421-007
FS09	S	04-05-19 12:15	1 ft	620421-008

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Corral Canyon Federal CTB

Project ID: ---
Work Order Number(s): *620421*

Report Date: *11-APR-19*
Date Received: *04/09/2019*

Sample receipt non conformances and comments:

04/11/19: Revised report to correct project name.

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3085184 BTEX by EPA 8021B
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.
Samples affected are: 620421-007,620421-001.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Lab Sample ID 620421-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD).
o-Xylene recovered below QC limits in the Matrix Spike. Benzene, Ethylbenzene, Toluene, m,p-Xylenes 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: 620421-001, -002, -003, -004, -005, -006, -007, -008.
The Laboratory Control Sample for Toluene, Benzene, m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.

Certificate of Analysis Summary 620421

LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon Federal CTB

Project Id: ---
Contact: Adrian Baker
Project Location: ---

Date Received in Lab: Tue Apr-09-19 07:40 am
Report Date: 11-APR-19
Project Manager: Kalei Stout

Analysis Requested		620421-001		620421-002		620421-003		620421-004		620421-005		620421-006	
	Field Id:	FS02		FS03		FS04		FS05		FS06		FS07	
	Depth:	1- ft		1- ft		1- ft		1- ft		1- ft		1- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Apr-05-19 10:45		Apr-05-19 10:50		Apr-05-19 12:40		Apr-05-19 12:35		Apr-05-19 12:30		Apr-05-19 12:25	
BTEX by EPA 8021B SUB: T104704400-18-16	***Extracted:***	Apr-09-19 13:30		Apr-09-19 13:30		Apr-09-19 13:30		Apr-09-19 13:30		Apr-09-19 13:30		Apr-09-19 13:30	
	Analyzed:	Apr-10-19 01:10		Apr-10-19 01:29		Apr-10-19 01:48		Apr-10-19 02:07		Apr-10-19 02:26		Apr-10-19 02:45	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201
Toluene		<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201
Ethylbenzene		<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201
m,p-Xylenes		<0.00401	0.00401	<0.00402	0.00402	<0.00398	0.00398	<0.00398	0.00398	<0.00401	0.00401	<0.00402	0.00402
o-Xylene		<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201
Total Xylenes		<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201
Total BTEX		<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201
Inorganic Anions by EPA 300 SUB: T104704400-18-16	***Extracted:***	Apr-09-19 16:50		Apr-09-19 16:50		Apr-09-19 16:50		Apr-09-19 16:50		Apr-09-19 16:50		Apr-09-19 16:50	
	Analyzed:	Apr-10-19 12:57		Apr-10-19 13:17		Apr-10-19 13:38		Apr-10-19 13:31		Apr-10-19 13:45		Apr-10-19 14:05	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		6.93	4.99	5.44	5.01	<4.97	4.97	17.6	5.03	10.7	5.00	6.59	4.96
TPH by SW8015 Mod SUB: T104704400-18-16	***Extracted:***	Apr-09-19 17:00		Apr-09-19 17:00		Apr-09-19 17:00		Apr-09-19 17:00		Apr-09-19 17:00		Apr-09-19 17:00	
	Analyzed:	Apr-09-19 21:09		Apr-09-19 22:05		Apr-09-19 22:23		Apr-09-19 22:42		Apr-10-19 23:01		Apr-10-19 23:19	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	54.3	15.0	45.4	15.0	<15.0	15.0	<14.9	14.9
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9
Total TPH		<15.0	15.0	<15.0	15.0	54.3	15.0	45.4	15.0	<15.0	15.0	<14.9	14.9
Total GRO-DRO		<15.0	15.0	<15.0	15.0	54.3	15.0	45.4	15.0	<15.0	15.0	<14.9	14.9

Version: 1.%

Kalei Stout
Carlsbad Laboratory Director

Certificate of Analysis Summary 620421

LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon Federal CTB

Project Id: ---
Contact: Adrian Baker
Project Location: ---

Date Received in Lab: Tue Apr-09-19 07:40 am
Report Date: 11-APR-19
Project Manager: Kalei Stout

Analysis Requested									
	Lab Id:	620421-007		620421-008					
	Field Id:	FS08		FS09					
	Depth:	1- ft		1- ft					
	Matrix:	SOIL		SOIL					
	Sampled:	Apr-05-19 12:20		Apr-05-19 12:15					
BTEX by EPA 8021B SUB: T104704400-18-16	***Extracted:***	Apr-09-19 13:30		Apr-09-19 13:30					
	Analyzed:	Apr-10-19 03:04		Apr-10-19 09:43					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00202	0.00202	<0.00198	0.00198				
Toluene		<0.00202	0.00202	<0.00198	0.00198				
Ethylbenzene		<0.00202	0.00202	<0.00198	0.00198				
m,p-Xylenes		<0.00403	0.00403	<0.00396	0.00396				
o-Xylene		<0.00202	0.00202	<0.00198	0.00198				
Total Xylenes		<0.00202	0.00202	<0.00198	0.00198				
Total BTEX		<0.00202	0.00202	<0.00198	0.00198				
Inorganic Anions by EPA 300 SUB: T104704400-18-16	***Extracted:***	Apr-10-19 15:15		Apr-10-19 15:15					
	Analyzed:	Apr-10-19 16:15		Apr-10-19 16:22					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		9.74	4.95	19.8	4.98				
TPH by SW8015 Mod SUB: T104704400-18-16	***Extracted:***	Apr-09-19 17:00		Apr-09-19 17:00					
	Analyzed:	Apr-10-19 23:38		Apr-10-19 23:57					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0				
Diesel Range Organics (DRO)		<15.0	15.0	22.2	15.0				
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0				
Total TPH		<15.0	15.0	22.2	15.0				
Total GRO-DRO		<15.0	15.0	22.2	15.0				

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

Version: 1.%

Kalei Stout
Carlsbad Laboratory Director

Certificate of Analytical Results 620421

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal CTB

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	04.09.19 07.40
Lab Sample Id:	620421-001	Date Collected:	04.05.19 10.45	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.09.19 16.50	Basis:	Wet Weight
Seq Number:	3085164			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**6.93**	4.99	mg/kg	04.10.19 12.57		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.09.19 17.00	Basis:	Wet Weight
Seq Number:	3085150			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.09.19 21.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.09.19 21.09	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.09.19 21.09	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.09.19 21.09	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.09.19 21.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	04.09.19 21.09	
o-Terphenyl	84-15-1	97	%	70-135	04.09.19 21.09	

Certificate of Analytical Results 620421

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal CTB

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	04.09.19 07.40
Lab Sample Id:	620421-001	Date Collected:	04.05.19 10.45	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.09.19 13.30	Basis:	Wet Weight
Seq Number:	3085184			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.10.19 01.10	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.10.19 01.10	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.10.19 01.10	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	04.10.19 01.10	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.10.19 01.10	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.10.19 01.10	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.10.19 01.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	133	%	70-130	04.10.19 01.10	**
1,4-Difluorobenzene	540-36-3	100	%	70-130	04.10.19 01.10	

Certificate of Analytical Results 620421

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal CTB

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	04.09.19 07.40
Lab Sample Id:	620421-002	Date Collected:	04.05.19 10.50	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.09.19 16.50	Basis:	Wet Weight
Seq Number:	3085164			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**5.44**	5.01	mg/kg	04.10.19 13.17		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.09.19 17.00	Basis:	Wet Weight
Seq Number:	3085150			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.09.19 22.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.09.19 22.05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.09.19 22.05	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.09.19 22.05	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.09.19 22.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	04.09.19 22.05	
o-Terphenyl	84-15-1	93	%	70-135	04.09.19 22.05	

Certificate of Analytical Results 620421

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal CTB

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	04.09.19 07.40
Lab Sample Id:	620421-002	Date Collected:	04.05.19 10.50	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.09.19 13.30	Basis:	Wet Weight
Seq Number:	3085184			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.10.19 01.29	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.10.19 01.29	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.10.19 01.29	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.10.19 01.29	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.10.19 01.29	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.10.19 01.29	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.10.19 01.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	119	%	70-130	04.10.19 01.29	
1,4-Difluorobenzene	540-36-3	105	%	70-130	04.10.19 01.29	

Certificate of Analytical Results 620421

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal CTB

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	04.09.19 07.40
Lab Sample Id:	620421-003	Date Collected:	04.05.19 12.40	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.09.19 16.50	Basis:	Wet Weight
Seq Number:	3085164			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.97	4.97	mg/kg	04.10.19 13.38	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.09.19 17.00	Basis:	Wet Weight
Seq Number:	3085150			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.09.19 22.23	U	1
Diesel Range Organics (DRO)	C10C28DRO	**54.3**	15.0	mg/kg	04.09.19 22.23		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.09.19 22.23	U	1
Total TPH	PHC635	**54.3**	15.0	mg/kg	04.09.19 22.23		1
Total GRO-DRO	PHC628	**54.3**	15.0	mg/kg	04.09.19 22.23		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	04.09.19 22.23	
o-Terphenyl	84-15-1	94	%	70-135	04.09.19 22.23	

Certificate of Analytical Results 620421

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal CTB

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	04.09.19 07.40
Lab Sample Id:	620421-003	Date Collected:	04.05.19 12.40	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.09.19 13.30	Basis:	Wet Weight
Seq Number:	3085184			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.10.19 01.48	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.10.19 01.48	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.10.19 01.48	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.10.19 01.48	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.10.19 01.48	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.10.19 01.48	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.10.19 01.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	115	%	70-130	04.10.19 01.48	
1,4-Difluorobenzene	540-36-3	106	%	70-130	04.10.19 01.48	

Certificate of Analytical Results 620421

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal CTB

Sample Id:	**FS05**	Matrix:	Soil	Date Received:	04.09.19 07.40
Lab Sample Id:	620421-004	Date Collected:	04.05.19 12.35	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.09.19 16.50	Basis:	Wet Weight
Seq Number:	3085164			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**17.6**	5.03	mg/kg	04.10.19 13.31		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.09.19 17.00	Basis:	Wet Weight
Seq Number:	3085150			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.09.19 22.42	U	1
Diesel Range Organics (DRO)	C10C28DRO	**45.4**	15.0	mg/kg	04.09.19 22.42		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.09.19 22.42	U	1
Total TPH	PHC635	**45.4**	15.0	mg/kg	04.09.19 22.42		1
Total GRO-DRO	PHC628	**45.4**	15.0	mg/kg	04.09.19 22.42		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	04.09.19 22.42	
o-Terphenyl	84-15-1	98	%	70-135	04.09.19 22.42	

Certificate of Analytical Results 620421

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal CTB

Sample Id:	**FS05**	Matrix:	Soil	Date Received:	04.09.19 07.40
Lab Sample Id:	620421-004	Date Collected:	04.05.19 12.35	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.09.19 13.30	Basis:	Wet Weight
Seq Number:	3085184			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.10.19 02.07	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.10.19 02.07	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.10.19 02.07	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.10.19 02.07	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.10.19 02.07	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.10.19 02.07	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.10.19 02.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	117	%	70-130	04.10.19 02.07	
1,4-Difluorobenzene	540-36-3	106	%	70-130	04.10.19 02.07	

Certificate of Analytical Results 620421

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal CTB

Sample Id:	**FS06**	Matrix:	Soil	Date Received:	04.09.19 07.40
Lab Sample Id:	620421-005	Date Collected:	04.05.19 12.30	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.09.19 16.50	Basis:	Wet Weight
Seq Number:	3085164			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**10.7**	5.00	mg/kg	04.10.19 13.45		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.09.19 17.00	Basis:	Wet Weight
Seq Number:	3085150			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.10.19 23.01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.10.19 23.01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.10.19 23.01	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.10.19 23.01	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.10.19 23.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	04.10.19 23.01	
o-Terphenyl	84-15-1	96	%	70-135	04.10.19 23.01	

Certificate of Analytical Results 620421

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal CTB

Sample Id:	**FS06**	Matrix:	Soil	Date Received:	04.09.19 07.40
Lab Sample Id:	620421-005	Date Collected:	04.05.19 12.30	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.09.19 13.30	Basis:	Wet Weight
Seq Number:	3085184			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.10.19 02.26	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.10.19 02.26	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.10.19 02.26	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	04.10.19 02.26	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.10.19 02.26	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.10.19 02.26	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.10.19 02.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	118	%	70-130	04.10.19 02.26	
1,4-Difluorobenzene	540-36-3	105	%	70-130	04.10.19 02.26	

Certificate of Analytical Results 620421

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal CTB

Sample Id:	**FS07**	Matrix:	Soil	Date Received:	04.09.19 07.40
Lab Sample Id:	620421-006	Date Collected:	04.05.19 12.25	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.09.19 16.50	Basis:	Wet Weight
Seq Number:	3085164			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**6.59**	4.96	mg/kg	04.10.19 14.05		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.09.19 17.00	Basis:	Wet Weight
Seq Number:	3085150			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	04.10.19 23.19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	04.10.19 23.19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	04.10.19 23.19	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	04.10.19 23.19	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	04.10.19 23.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	04.10.19 23.19	
o-Terphenyl	84-15-1	97	%	70-135	04.10.19 23.19	

Certificate of Analytical Results 620421

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal CTB

Sample Id:	**FS07**	Matrix:	Soil	Date Received:	04.09.19 07.40
Lab Sample Id:	620421-006	Date Collected:	04.05.19 12.25	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.09.19 13.30	Basis:	Wet Weight
Seq Number:	3085184			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.10.19 02.45	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.10.19 02.45	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.10.19 02.45	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.10.19 02.45	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.10.19 02.45	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.10.19 02.45	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.10.19 02.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	04.10.19 02.45	
4-Bromofluorobenzene	460-00-4	129	%	70-130	04.10.19 02.45	

Certificate of Analytical Results 620421

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal CTB

Sample Id:	**FS08**	Matrix:	Soil	Date Received:	04.09.19 07.40
Lab Sample Id:	620421-007	Date Collected:	04.05.19 12.20	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.10.19 15.15	Basis:	Wet Weight
Seq Number:	3085309			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9.74**	4.95	mg/kg	04.10.19 16.15		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.09.19 17.00	Basis:	Wet Weight
Seq Number:	3085150			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.10.19 23.38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.10.19 23.38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.10.19 23.38	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.10.19 23.38	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.10.19 23.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	04.10.19 23.38	
o-Terphenyl	84-15-1	96	%	70-135	04.10.19 23.38	

Certificate of Analytical Results 620421

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal CTB

Sample Id:	**FS08**	Matrix:	Soil	Date Received:	04.09.19 07.40
Lab Sample Id:	620421-007	Date Collected:	04.05.19 12.20	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.09.19 13.30	Basis:	Wet Weight
Seq Number:	3085184			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	04.10.19 03.04	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	04.10.19 03.04	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	04.10.19 03.04	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	04.10.19 03.04	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	04.10.19 03.04	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	04.10.19 03.04	U	1
Total BTEX		<0.00202	0.00202	mg/kg	04.10.19 03.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	112	%	70-130	04.10.19 03.04	
4-Bromofluorobenzene	460-00-4	142	%	70-130	04.10.19 03.04	**

Certificate of Analytical Results 620421

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal CTB

Sample Id:	**FS09**	Matrix:	Soil	Date Received:	04.09.19 07.40
Lab Sample Id:	620421-008	Date Collected:	04.05.19 12.15	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.10.19 15.15	Basis:	Wet Weight
Seq Number:	3085309			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**19.8**	4.98	mg/kg	04.10.19 16.22		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.09.19 17.00	Basis:	Wet Weight
Seq Number:	3085150			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.10.19 23.57	U	1
Diesel Range Organics (DRO)	C10C28DRO	**22.2**	15.0	mg/kg	04.10.19 23.57		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.10.19 23.57	U	1
Total TPH	PHC635	**22.2**	15.0	mg/kg	04.10.19 23.57		1
Total GRO-DRO	PHC628	**22.2**	15.0	mg/kg	04.10.19 23.57		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	04.10.19 23.57	
o-Terphenyl	84-15-1	96	%	70-135	04.10.19 23.57	

Certificate of Analytical Results 620421

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal CTB

Sample Id:	**FS09**	Matrix:	Soil	Date Received:	04.09.19 07.40
Lab Sample Id:	620421-008	Date Collected:	04.05.19 12.15	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.09.19 13.30	Basis:	Wet Weight
Seq Number:	3085184			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	04.10.19 09.43	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	04.10.19 09.43	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	04.10.19 09.43	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	04.10.19 09.43	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	04.10.19 09.43	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	04.10.19 09.43	U	1
Total BTEX		<0.00198	0.00198	mg/kg	04.10.19 09.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	04.10.19 09.43	
4-Bromofluorobenzene	460-00-4	104	%	70-130	04.10.19 09.43	

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 620421

LT Environmental, Inc.

Corral Canyon Federal CTB

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3085164 Matrix: Solid Date Prep: 04.09.19
MB Sample Id: 7675407-1-BLK LCS Sample Id: 7675407-1-BKS LCSD Sample Id: 7675407-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	261	104	246	98	90-110	6	20	mg/kg	04.10.19 11:29	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3085309 Matrix: Solid Date Prep: 04.10.19
MB Sample Id: 7675469-1-BLK LCS Sample Id: 7675469-1-BKS LCSD Sample Id: 7675469-1-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	259	104	242	97	90-110	7	20	mg/kg	04.10.19 15:41	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3085164 Matrix: Soil Date Prep: 04.09.19
Parent Sample Id: 619862-003 MS Sample Id: 619862-003 S MSD Sample Id: 619862-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	68.1	249	518	181	511	178	90-110	1	20	mg/kg	04.10.19 14:46	X

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3085164 Matrix: Soil Date Prep: 04.09.19
Parent Sample Id: 620421-001 MS Sample Id: 620421-001 S MSD Sample Id: 620421-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	6.93	250	257	100	240	95	90-110	7	20	mg/kg	04.10.19 13:04	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3085309 Matrix: Soil Date Prep: 04.10.19
Parent Sample Id: 620612-003 MS Sample Id: 620612-003 S MSD Sample Id: 620612-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	3.53	252	239	93	219	86	90-110	9	20	mg/kg	04.10.19 16:01	X

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 620421

LT Environmental, Inc.

Corral Canyon Federal CTB

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3085150 — Matrix: Solid — Date Prep: 04.09.19
MB Sample Id: 7675424-1-BLK — LCS Sample Id: 7675424-1-BKS — LCSD Sample Id: 7675424-1-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)	<8.00	1000	1170	117	1100	110	70-135	6	20	mg/kg	04.09.19 20:31	
Diesel Range Organics (DRO)	<8.13	1000	1180	118	1090	109	70-135	8	20	mg/kg	04.09.19 20:31	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	105		133		117		70-135	%	04.09.19 20:31
o-Terphenyl	107		125		109		70-135	%	04.09.19 20:31

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3085150 — Matrix: Soil — Date Prep: 04.09.19
Parent Sample Id: 620421-001 — MS Sample Id: 620421-001 S — MSD Sample Id: 620421-001 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)	<8.00	1000	1020	102	1040	104	70-135	2	20	mg/kg	04.09.19 21:28	
Diesel Range Organics (DRO)	<8.13	1000	1000	100	1020	102	70-135	2	20	mg/kg	04.09.19 21:28	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	108		113		70-135	%	04.09.19 21:28
o-Terphenyl	97		98		70-135	%	04.09.19 21:28

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3085184 — Matrix: Solid — Date Prep: 04.09.19
MB Sample Id: 7675459-1-BLK — LCS Sample Id: 7675459-1-BKS — LCSD Sample Id: 7675459-1-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	0.0765	77	0.0731	74	70-130	5	35	mg/kg	04.09.19 23:18	
Toluene	<0.00200	0.100	0.0782	78	0.0751	76	70-130	4	35	mg/kg	04.09.19 23:18	
Ethylbenzene	<0.00200	0.100	0.0787	79	0.0755	76	70-130	4	35	mg/kg	04.09.19 23:18	
m,p-Xylenes	<0.00400	0.200	0.157	79	0.151	76	70-130	4	35	mg/kg	04.09.19 23:18	
o-Xylene	<0.00200	0.100	0.0817	82	0.0793	80	70-130	3	35	mg/kg	04.09.19 23:18	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		99		99		70-130	%	04.09.19 23:18
4-Bromofluorobenzene	107		102		102		70-130	%	04.09.19 23:18

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

QC Summary 620421

LT Environmental, Inc.

Corral Canyon Federal CTB

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B

Seq Number: 3085184 Matrix: Soil Date Prep: 04.09.19

Parent Sample Id: 620421-001 MS Sample Id: 620421-001 S MSD Sample Id: 620421-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0648	64	0.0491	49	70-130	28	35	mg/kg	04.09.19 23:56	X
Toluene	<0.00202	0.101	0.0620	61	0.0588	59	70-130	5	35	mg/kg	04.09.19 23:56	X
Ethylbenzene	<0.00202	0.101	0.0568	56	0.0559	56	70-130	2	35	mg/kg	04.09.19 23:56	X
m,p-Xylenes	0.00112	0.202	0.120	59	0.123	62	70-130	2	35	mg/kg	04.09.19 23:56	X
o-Xylene	<0.00202	0.101	0.0680	67	0.0703	71	70-130	3	35	mg/kg	04.09.19 23:56	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		92		70-130	%	04.09.19 23:56
4-Bromofluorobenzene	106		120		70-130	%	04.09.19 23:56

MS/MSD Percent Recovery [D] = 100*(C-A) / B LCS = Laboratory Control Sample MS = Matrix Spike

Relative Percent Difference RPD = 200* | (C-E) / (C+E) | A = Parent Result B = Spike Added

LCS/LCSD Recovery [D] = 100 * (C) / [B] C = MS/LCS Result D = MSD/LCSD % Rec

Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample) E = MSD/LCSD Result

Chain of Custody

Work Order No: 620421

XENCO LABORATORIES

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

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Project Manager:	Adrian Baker	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E. Greene Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.704.5178	Email:	abyers@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:	Corral Canyon Federal CTB	Turn Around	
Project Number:		Routine ☐	
P.O. Number:	2RP-4643	Rush: same day	
Sampler's Name:	Anna Byers	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	4.2	Thermometer ID		
Received Intact:	(Yes) No	T-NM-007		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes (No) N/A	Total Containers:	8	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
FS02	S	4/5/19	1045	1'	1			
FS03	S		1050		1			
FS04	S		1240		1			
FS05	S		1235		1			
FS06	S		1230		1			
FS07	S		1225		1			
FS08	S		1220		1			
FS09	S		1215		1			

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Anna Byers		4/8/19 0820	2	FEDEX	4/8/19 13:00
			4	BW	4/9/19 0740
			6		

Revised Date 051418 Rev. 2018.1

Inter-Office Shipment

IOS Number **126187**

Date/Time: 04/09/19 07:58
Lab# From: **Carlsbad**
Lab# To: **Midland**

Created by: Brianna Teel
Delivery Priority:
Air Bill No.:

Please send report to: Kalei Stout
Address: 1089 N Canal Street
E-Mail: kalei.stout@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
620421-001	S	FS02	04/05/19 10:45	E300	Inorganic Anions by EPA 300	04/10/19	05/03/19	KLS	CL	
620421-001	S	FS02	04/05/19 10:45	SW8021B	BTEX by EPA 8021B	04/10/19	04/19/19	KLS	BR4FBZ BZ BZME EBZ X	
620421-001	S	FS02	04/05/19 10:45	SW8015MOD_NM	TPH by SW8015 Mod	04/10/19	04/19/19	KLS	GRO-DRO PHCC10C28 PI	
620421-002	S	FS03	04/05/19 10:50	E300	Inorganic Anions by EPA 300	04/10/19	05/03/19	KLS	CL	
620421-002	S	FS03	04/05/19 10:50	SW8015MOD_NM	TPH by SW8015 Mod	04/10/19	04/19/19	KLS	GRO-DRO PHCC10C28 PI	
620421-002	S	FS03	04/05/19 10:50	SW8021B	BTEX by EPA 8021B	04/10/19	04/19/19	KLS	BR4FBZ BZ BZME EBZ X	
620421-003	S	FS04	04/05/19 12:40	SW8015MOD_NM	TPH by SW8015 Mod	04/10/19	04/19/19	KLS	GRO-DRO PHCC10C28 PI	
620421-003	S	FS04	04/05/19 12:40	E300	Inorganic Anions by EPA 300	04/10/19	05/03/19	KLS	CL	
620421-003	S	FS04	04/05/19 12:40	SW8021B	BTEX by EPA 8021B	04/10/19	04/19/19	KLS	BR4FBZ BZ BZME EBZ X	
620421-004	S	FS05	04/05/19 12:35	SW8015MOD_NM	TPH by SW8015 Mod	04/10/19	04/19/19	KLS	GRO-DRO PHCC10C28 PI	
620421-004	S	FS05	04/05/19 12:35	E300	Inorganic Anions by EPA 300	04/10/19	05/03/19	KLS	CL	
620421-004	S	FS05	04/05/19 12:35	SW8021B	BTEX by EPA 8021B	04/10/19	04/19/19	KLS	BR4FBZ BZ BZME EBZ X	
620421-005	S	FS06	04/05/19 12:30	SW8015MOD_NM	TPH by SW8015 Mod	04/10/19	04/19/19	KLS	GRO-DRO PHCC10C28 PI	
620421-005	S	FS06	04/05/19 12:30	E300	Inorganic Anions by EPA 300	04/10/19	05/03/19	KLS	CL	
620421-005	S	FS06	04/05/19 12:30	SW8021B	BTEX by EPA 8021B	04/10/19	04/19/19	KLS	BR4FBZ BZ BZME EBZ X	
620421-006	S	FS07	04/05/19 12:25	E300	Inorganic Anions by EPA 300	04/10/19	05/03/19	KLS	CL	
620421-006	S	FS07	04/05/19 12:25	SW8015MOD_NM	TPH by SW8015 Mod	04/10/19	04/19/19	KLS	GRO-DRO PHCC10C28 PI	
620421-006	S	FS07	04/05/19 12:25	SW8021B	BTEX by EPA 8021B	04/10/19	04/19/19	KLS	BR4FBZ BZ BZME EBZ X	
620421-007	S	FS08	04/05/19 12:20	SW8021B	BTEX by EPA 8021B	04/10/19	04/19/19	KLS	BR4FBZ BZ BZME EBZ X	
620421-007	S	FS08	04/05/19 12:20	SW8015MOD_NM	TPH by SW8015 Mod	04/10/19	04/19/19	KLS	GRO-DRO PHCC10C28 PI	
620421-007	S	FS08	04/05/19 12:20	E300	Inorganic Anions by EPA 300	04/10/19	05/03/19	KLS	CL	
620421-008	S	FS09	04/05/19 12:15	SW8015MOD_NM	TPH by SW8015 Mod	04/10/19	04/19/19	KLS	GRO-DRO PHCC10C28 PI	
620421-008	S	FS09	04/05/19 12:15	SW8021B	BTEX by EPA 8021B	04/10/19	04/19/19	KLS	BR4FBZ BZ BZME EBZ X	
620421-008	S	FS09	04/05/19 12:15	E300	Inorganic Anions by EPA 300	04/10/19	05/03/19	KLS	CL	

Inter-Office Shipment

IOS Number **126187**

Date/Time: 04/09/19 07:58
Lab# From: **Carlsbad**
Lab# To: **Midland**

Created by: Brianna Teel
Delivery Priority:
Air Bill No.:

Please send report to: Kalei Stout
Address: 1089 N Canal Street
E-Mail: kalei.stout@xenco.com

Inter Office Shipment or Sample Comments:

Relinquished By: Brianna Teel
Brianna Teel

Date Relinquished: 04/09/2019

Received By:

Date Received:

Cooler Temperature:

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 04/09/2019 07:40:00 AM

Work Order #: 620421

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

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	4.2	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**	
#5 Custody Seals intact on sample bottles?	**N/A**	
#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**	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: Brianna Teel Date: 04/09/2019

Brianna Teel

Checklist reviewed by: Kalei Stout Date: 04/09/2019

Kalei Stout

Analytical Report 620613

for

LT Environmental, Inc.

Project Manager: Adrian Baker

Corral Canyon Federal CTB

012918053

12-APR-19

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-28), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)
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-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)
Xenco-Lakeland: Florida (E84098)

12-APR-19

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

Reference: XENCO Report No(s): **620613**
Corral Canyon Federal CTB
Project Address: Delaware Basin

Adrian Baker:

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) 620613. 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. 620613 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,

Kalei Stout
Midland Laboratory Director

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 620613

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal CTB

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH01	S	04-08-19 15:10	0.5 ft	620613-001
PH01A	S	04-08-19 15:20	1.0 ft	620613-002
PH02	S	04-08-19 15:30	0.5 ft	620613-003
PH02A	S	04-08-19 15:50	1.0 ft	620613-004
PH03	S	04-08-19 11:30	0.5 ft	620613-005
PH03A	S	04-08-19 11:45	1.0 ft	620613-006
PH04	S	04-08-19 12:10	0.5 ft	620613-007
PH04A	S	04-08-19 12:20	1.0 ft	620613-008
PH05	S	04-08-19 13:00	0.5 ft	620613-009
PH05A	S	04-08-19 13:30	1.0 ft	620613-010

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Corral Canyon Federal CTB

Project ID: *012918053*
Work Order Number(s): *620613*

Report Date: *12-APR-19*
Date Received: *04/10/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3085235 BTEX by EPA 8021B

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

Certificate of Analysis Summary 620613

LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon Federal CTB

Project Id: 012918053
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Wed Apr-10-19 11:54 am
Report Date: 12-APR-19
Project Manager: Kalei Stout

Analysis Requested													
	Lab Id:	620613-001		620613-002		620613-003		620613-004		620613-005		620613-006	
	Field Id:	PH01		PH01A		PH02		PH02A		PH03		PH03A	
	Depth:	0.5- ft		1.0- ft		0.5- ft		1.0- ft		0.5- ft		1.0- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Apr-08-19 15:10		Apr-08-19 15:20		Apr-08-19 15:30		Apr-08-19 15:50		Apr-08-19 11:30		Apr-08-19 11:45	
BTEX by EPA 8021B	***Extracted:***	Apr-10-19 12:00		Apr-10-19 12:00		Apr-10-19 12:00		Apr-10-19 12:00		Apr-10-19 12:00		Apr-10-19 12:00	
	Analyzed:	Apr-10-19 15:46		Apr-10-19 18:46		Apr-10-19 19:06		Apr-10-19 20:20		Apr-10-19 20:39		Apr-10-19 20:58	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00201	0.00201	<0.00199	0.00199	<0.00198	0.00198	<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201
Toluene		<0.00201	0.00201	<0.00199	0.00199	<0.00198	0.00198	<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201
Ethylbenzene		<0.00201	0.00201	<0.00199	0.00199	<0.00198	0.00198	<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201
m,p-Xylenes		<0.00402	0.00402	<0.00398	0.00398	<0.00396	0.00396	<0.00403	0.00403	<0.00401	0.00401	<0.00402	0.00402
o-Xylene		<0.00201	0.00201	<0.00199	0.00199	<0.00198	0.00198	<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201
Total Xylenes		<0.00201	0.00201	<0.00199	0.00199	<0.00198	0.00198	<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201
Total BTEX		<0.00201	0.00201	<0.00199	0.00199	<0.00198	0.00198	<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201
Chloride by EPA 300	***Extracted:***	Apr-10-19 15:15		Apr-10-19 15:15		Apr-10-19 15:15		Apr-10-19 15:15		Apr-10-19 15:15		Apr-10-19 15:15	
	Analyzed:	Apr-11-19 11:05		Apr-11-19 11:12		Apr-11-19 11:18		Apr-11-19 11:25		Apr-11-19 11:32		Apr-11-19 11:39	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		<5.01	5.01	125	4.99	21.2	4.95	17.6	4.95	85.2	4.95	75.7	4.95
TPH by SW8015 Mod	***Extracted:***	Apr-10-19 15:00		Apr-10-19 15:00		Apr-10-19 15:00		Apr-10-19 15:00		Apr-10-19 15:00		Apr-10-19 15:00	
	Analyzed:	Apr-11-19 01:17		Apr-11-19 01:36		Apr-11-19 01:56		Apr-11-19 02:15		Apr-11-19 02:34		Apr-11-19 02:53	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		31.7	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	49.9	15.0	25.1	15.0
Motor Oil Range Hydrocarbons (MRO)		<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		31.7	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	49.9	15.0	25.1	15.0
Total GRO-DRO		31.7	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	49.9	15.0	25.1	15.0

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

Kalei Stout
Midland Laboratory Director

Certificate of Analysis Summary 620613

LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon Federal CTB

Project Id: 012918053
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Wed Apr-10-19 11:54 am
Report Date: 12-APR-19
Project Manager: Kalei Stout

Analysis Requested															
	Lab Id:	620613-007		620613-008		620613-009		620613-010							
	Field Id:	PH04		PH04A		PH05		PH05A							
	Depth:	0.5- ft		1.0- ft		0.5- ft		1.0- ft							
	Matrix:	SOIL		SOIL		SOIL		SOIL							
	Sampled:	Apr-08-19 12:10		Apr-08-19 12:20		Apr-08-19 13:00		Apr-08-19 13:30							
BTEX by EPA 8021B	***Extracted:***	Apr-10-19 12:00		Apr-10-19 12:00		Apr-10-19 12:00		Apr-10-19 12:00							
	Analyzed:	Apr-10-19 21:17		Apr-10-19 21:36		Apr-10-19 21:55		Apr-10-19 22:14							
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL						
Benzene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200						
Toluene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200						
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200						
m,p-Xylenes		<0.00399	0.00399	<0.00401	0.00401	<0.00400	0.00400	<0.00400	0.00400						
o-Xylene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200						
Total Xylenes		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200						
Total BTEX		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200						
Chloride by EPA 300	***Extracted:***	Apr-10-19 15:15		Apr-10-19 15:15		Apr-10-19 15:15		Apr-10-19 15:15							
	Analyzed:	Apr-11-19 11:46		Apr-11-19 11:52		Apr-11-19 12:26		Apr-11-19 12:33							
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL						
Chloride		13.8	4.95	33.7	5.00	224	5.04	218	5.01						
TPH by SW8015 Mod	***Extracted:***	Apr-10-19 15:00		Apr-10-19 15:00		Apr-10-19 15:00		Apr-10-19 15:00							
	Analyzed:	Apr-11-19 06:52		Apr-11-19 03:32		Apr-11-19 03:51		Apr-11-19 04:11							
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL						
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0						
Diesel Range Organics (DRO)		<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0						
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0						
Total TPH		<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0						
Total GRO-DRO		<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0						

Kalei Stout
Midland Laboratory Director

Certificate of Analytical Results 620613

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal CTB

Sample Id:	**PH01**	Matrix:	Soil	Date Received:	04.10.19 11.54
Lab Sample Id:	620613-001	Date Collected:	04.08.19 15.10	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.10.19 15.15	Basis:	Wet Weight
Seq Number:	3085309				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.01	5.01	mg/kg	04.11.19 11.05	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.10.19 15.00	Basis:	Wet Weight
Seq Number:	3085312				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	04.11.19 01.17	U	1
Diesel Range Organics (DRO)	C10C28DRO	**31.7**	14.9	mg/kg	04.11.19 01.17		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	04.11.19 01.17	U	1
Total TPH	PHC635	**31.7**	14.9	mg/kg	04.11.19 01.17		1
Total GRO-DRO	PHC628	**31.7**	14.9	mg/kg	04.11.19 01.17		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	04.11.19 01.17	
o-Terphenyl	84-15-1	100	%	70-135	04.11.19 01.17	

Certificate of Analytical Results 620613

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal CTB

Sample Id:	**PH01**	Matrix:	Soil	Date Received:	04.10.19 11.54
Lab Sample Id:	620613-001	Date Collected:	04.08.19 15.10	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.10.19 12.00	Basis:	Wet Weight
Seq Number:	3085235				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.10.19 15.46	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.10.19 15.46	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.10.19 15.46	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.10.19 15.46	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.10.19 15.46	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.10.19 15.46	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.10.19 15.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	97	%	70-130	04.10.19 15.46	
1,4-Difluorobenzene	540-36-3	98	%	70-130	04.10.19 15.46	

Certificate of Analytical Results 620613

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal CTB

Sample Id:	**PH01A**	Matrix:	Soil	Date Received:	04.10.19 11.54
Lab Sample Id:	620613-002	Date Collected:	04.08.19 15.20	Sample Depth:	1.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.10.19 15.15	Basis:	Wet Weight
Seq Number:	3085309				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**125**	4.99	mg/kg	04.11.19 11.12		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.10.19 15.00	Basis:	Wet Weight
Seq Number:	3085312				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.11.19 01.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.11.19 01.36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.11.19 01.36	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.11.19 01.36	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.11.19 01.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	04.11.19 01.36	
o-Terphenyl	84-15-1	99	%	70-135	04.11.19 01.36	

Certificate of Analytical Results 620613

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal CTB

Sample Id:	**PH01A**	Matrix:	Soil	Date Received:	04.10.19 11.54
Lab Sample Id:	620613-002	Date Collected:	04.08.19 15.20	Sample Depth:	1.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.10.19 12.00	Basis:	Wet Weight
Seq Number:	3085235				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.10.19 18.46	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.10.19 18.46	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.10.19 18.46	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.10.19 18.46	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.10.19 18.46	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.10.19 18.46	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.10.19 18.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	04.10.19 18.46	
4-Bromofluorobenzene	460-00-4	107	%	70-130	04.10.19 18.46	

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LT Environmental, Inc., Arvada, CO

Corral Canyon Federal CTB

Sample Id:	**PH02**	Matrix:	Soil	Date Received:	04.10.19 11.54
Lab Sample Id:	620613-003	Date Collected:	04.08.19 15.30	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.10.19 15.15	Basis:	Wet Weight
Seq Number:	3085309				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**21.2**	4.95	mg/kg	04.11.19 11.18		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.10.19 15.00	Basis:	Wet Weight
Seq Number:	3085312				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.11.19 01.56	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.11.19 01.56	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.11.19 01.56	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.11.19 01.56	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.11.19 01.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	04.11.19 01.56	
o-Terphenyl	84-15-1	99	%	70-135	04.11.19 01.56	

Certificate of Analytical Results 620613

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal CTB

Sample Id:	**PH02**	Matrix:	Soil	Date Received:	04.10.19 11.54
Lab Sample Id:	620613-003	Date Collected:	04.08.19 15.30	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.10.19 12.00	Basis:	Wet Weight
Seq Number:	3085235				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	04.10.19 19.06	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	04.10.19 19.06	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	04.10.19 19.06	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	04.10.19 19.06	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	04.10.19 19.06	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	04.10.19 19.06	U	1
Total BTEX		<0.00198	0.00198	mg/kg	04.10.19 19.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	70-130	04.10.19 19.06	
1,4-Difluorobenzene	540-36-3	100	%	70-130	04.10.19 19.06	

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Corral Canyon Federal CTB

Sample Id:	**PH02A**	Matrix:	Soil	Date Received:	04.10.19 11.54
Lab Sample Id:	620613-004	Date Collected:	04.08.19 15.50	Sample Depth:	1.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.10.19 15.15	Basis:	Wet Weight
Seq Number:	3085309				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**17.6**	4.95	mg/kg	04.11.19 11.25		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.10.19 15.00	Basis:	Wet Weight
Seq Number:	3085312				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.11.19 02.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.11.19 02.15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.11.19 02.15	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.11.19 02.15	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.11.19 02.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	04.11.19 02.15	
o-Terphenyl	84-15-1	95	%	70-135	04.11.19 02.15	

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LT Environmental, Inc., Arvada, CO

Corral Canyon Federal CTB

Sample Id:	**PH02A**	Matrix:	Soil	Date Received:	04.10.19 11.54
Lab Sample Id:	620613-004	Date Collected:	04.08.19 15.50	Sample Depth:	1.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.10.19 12.00	Basis:	Wet Weight
Seq Number:	3085235				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	04.10.19 20.20	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	04.10.19 20.20	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	04.10.19 20.20	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	04.10.19 20.20	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	04.10.19 20.20	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	04.10.19 20.20	U	1
Total BTEX		<0.00202	0.00202	mg/kg	04.10.19 20.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	96	%	70-130	04.10.19 20.20	
1,4-Difluorobenzene	540-36-3	98	%	70-130	04.10.19 20.20	

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LT Environmental, Inc., Arvada, CO

Corral Canyon Federal CTB

Sample Id:	**PH03**	Matrix:	Soil	Date Received:	04.10.19 11.54
Lab Sample Id:	620613-005	Date Collected:	04.08.19 11.30	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.10.19 15.15	Basis:	Wet Weight
Seq Number:	3085309				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**85.2**	4.95	mg/kg	04.11.19 11.32		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.10.19 15.00	Basis:	Wet Weight
Seq Number:	3085312				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.11.19 02.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	**49.9**	15.0	mg/kg	04.11.19 02.34		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.11.19 02.34	U	1
Total TPH	PHC635	**49.9**	15.0	mg/kg	04.11.19 02.34		1
Total GRO-DRO	PHC628	**49.9**	15.0	mg/kg	04.11.19 02.34		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	04.11.19 02.34	
o-Terphenyl	84-15-1	101	%	70-135	04.11.19 02.34	

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Sample Id:	**PH03**	Matrix:	Soil	Date Received:	04.10.19 11.54
Lab Sample Id:	620613-005	Date Collected:	04.08.19 11.30	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.10.19 12.00	Basis:	Wet Weight
Seq Number:	3085235				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.10.19 20.39	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.10.19 20.39	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.10.19 20.39	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	04.10.19 20.39	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.10.19 20.39	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.10.19 20.39	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.10.19 20.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	96	%	70-130	04.10.19 20.39	
1,4-Difluorobenzene	540-36-3	98	%	70-130	04.10.19 20.39	

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Corral Canyon Federal CTB

Sample Id:	**PH03A**	Matrix:	Soil	Date Received:	04.10.19 11.54
Lab Sample Id:	620613-006	Date Collected:	04.08.19 11.45	Sample Depth:	1.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.10.19 15.15	Basis:	Wet Weight
Seq Number:	3085309				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**75.7**	4.95	mg/kg	04.11.19 11.39		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.10.19 15.00	Basis:	Wet Weight
Seq Number:	3085312				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.11.19 02.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	**25.1**	15.0	mg/kg	04.11.19 02.53		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.11.19 02.53	U	1
Total TPH	PHC635	**25.1**	15.0	mg/kg	04.11.19 02.53		1
Total GRO-DRO	PHC628	**25.1**	15.0	mg/kg	04.11.19 02.53		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	04.11.19 02.53	
o-Terphenyl	84-15-1	102	%	70-135	04.11.19 02.53	

Certificate of Analytical Results 620613

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal CTB

Sample Id:	**PH03A**	Matrix:	Soil	Date Received:	04.10.19 11.54
Lab Sample Id:	620613-006	Date Collected:	04.08.19 11.45	Sample Depth:	1.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.10.19 12.00	Basis:	Wet Weight
Seq Number:	3085235				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.10.19 20.58	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.10.19 20.58	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.10.19 20.58	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.10.19 20.58	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.10.19 20.58	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.10.19 20.58	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.10.19 20.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	70-130	04.10.19 20.58	
1,4-Difluorobenzene	540-36-3	98	%	70-130	04.10.19 20.58	

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LT Environmental, Inc., Arvada, CO

Corral Canyon Federal CTB

Sample Id: **PH04** Matrix: Soil Date Received:04.10.19 11.54

Lab Sample Id: 620613-007 Date Collected: 04.08.19 12.10 Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 04.10.19 15.15 Basis: Wet Weight

Seq Number: 3085309

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**13.8**	4.95	mg/kg	04.11.19 11.46		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 04.10.19 15.00 Basis: Wet Weight

Seq Number: 3085312

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.11.19 06.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.11.19 06.52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.11.19 06.52	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.11.19 06.52	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.11.19 06.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	04.11.19 06.52	
o-Terphenyl	84-15-1	98	%	70-135	04.11.19 06.52	

Certificate of Analytical Results 620613

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal CTB

Sample Id:	**PH04**	Matrix:	Soil	Date Received:	04.10.19 11.54
Lab Sample Id:	620613-007	Date Collected:	04.08.19 12.10	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.10.19 12.00	Basis:	Wet Weight
Seq Number:	3085235				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.10.19 21.17	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.10.19 21.17	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.10.19 21.17	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	04.10.19 21.17	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.10.19 21.17	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.10.19 21.17	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.10.19 21.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	04.10.19 21.17	
4-Bromofluorobenzene	460-00-4	100	%	70-130	04.10.19 21.17	

Certificate of Analytical Results 620613

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Corral Canyon Federal CTB

Sample Id:	**PH04A**	Matrix:	Soil	Date Received:	04.10.19 11.54
Lab Sample Id:	620613-008	Date Collected:	04.08.19 12.20	Sample Depth:	1.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.10.19 15.15	Basis:	Wet Weight
Seq Number:	3085309				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**33.7**	5.00	mg/kg	04.11.19 11.52		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.10.19 15.00	Basis:	Wet Weight
Seq Number:	3085312				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	04.11.19 03.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	04.11.19 03.32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	04.11.19 03.32	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	04.11.19 03.32	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	04.11.19 03.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	04.11.19 03.32	
o-Terphenyl	84-15-1	99	%	70-135	04.11.19 03.32	

Certificate of Analytical Results 620613

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal CTB

Sample Id:	**PH04A**	Matrix:	Soil	Date Received:	04.10.19 11.54
Lab Sample Id:	620613-008	Date Collected:	04.08.19 12.20	Sample Depth:	1.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.10.19 12.00	Basis:	Wet Weight
Seq Number:	3085235				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.10.19 21.36	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.10.19 21.36	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.10.19 21.36	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	04.10.19 21.36	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.10.19 21.36	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.10.19 21.36	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.10.19 21.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	70-130	04.10.19 21.36	
1,4-Difluorobenzene	540-36-3	101	%	70-130	04.10.19 21.36	

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Corral Canyon Federal CTB

Sample Id:	**PH05**	Matrix:	Soil	Date Received:	04.10.19 11.54
Lab Sample Id:	620613-009	Date Collected:	04.08.19 13.00	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.10.19 15.15	Basis:	Wet Weight
Seq Number:	3085309				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**224**	5.04	mg/kg	04.11.19 12.26		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.10.19 15.00	Basis:	Wet Weight
Seq Number:	3085312				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.11.19 03.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.11.19 03.51	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.11.19 03.51	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.11.19 03.51	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.11.19 03.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	04.11.19 03.51	
o-Terphenyl	84-15-1	100	%	70-135	04.11.19 03.51	

Certificate of Analytical Results 620613

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal CTB

Sample Id:	**PH05**	Matrix:	Soil	Date Received:	04.10.19 11.54
Lab Sample Id:	620613-009	Date Collected:	04.08.19 13.00	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.10.19 12.00	Basis:	Wet Weight
Seq Number:	3085235				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.10.19 21.55	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.10.19 21.55	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.10.19 21.55	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	04.10.19 21.55	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.10.19 21.55	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.10.19 21.55	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.10.19 21.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	04.10.19 21.55	
4-Bromofluorobenzene	460-00-4	100	%	70-130	04.10.19 21.55	

Certificate of Analytical Results 620613

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal CTB

Sample Id:	**PH05A**	Matrix:	Soil	Date Received:	04.10.19 11.54
Lab Sample Id:	620613-010	Date Collected:	04.08.19 13.30	Sample Depth:	1.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.10.19 15.15	Basis:	Wet Weight
Seq Number:	3085309				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**218**	5.01	mg/kg	04.11.19 12.33		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.10.19 15.00	Basis:	Wet Weight
Seq Number:	3085312				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.11.19 04.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.11.19 04.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.11.19 04.11	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.11.19 04.11	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.11.19 04.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	04.11.19 04.11	
o-Terphenyl	84-15-1	98	%	70-135	04.11.19 04.11	

Certificate of Analytical Results 620613

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal CTB

Sample Id:	**PH05A**	Matrix:	Soil	Date Received:	04.10.19 11.54
Lab Sample Id:	620613-010	Date Collected:	04.08.19 13.30	Sample Depth:	1.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.10.19 12.00	Basis:	Wet Weight
Seq Number:	3085235				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.10.19 22.14	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.10.19 22.14	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.10.19 22.14	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	04.10.19 22.14	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.10.19 22.14	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.10.19 22.14	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.10.19 22.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	04.10.19 22.14	
4-Bromofluorobenzene	460-00-4	99	%	70-130	04.10.19 22.14	

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 **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 620613

LT Environmental, Inc.

Corral Canyon Federal CTB

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3085309 Matrix: Solid Date Prep: 04.10.19
MB Sample Id: 7675469-1-BLK LCS Sample Id: 7675469-1-BKS LCSD Sample Id: 7675469-1-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	259	104	242	97	90-110	7	20	mg/kg	04.10.19 15:41	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3085309 Matrix: Soil Date Prep: 04.10.19
Parent Sample Id: 620612-003 MS Sample Id: 620612-003 S MSD Sample Id: 620612-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	3.53	252	239	93	219	86	90-110	9	20	mg/kg	04.10.19 16:01	X

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3085309 Matrix: Soil Date Prep: 04.10.19
Parent Sample Id: 620613-008 MS Sample Id: 620613-008 S MSD Sample Id: 620613-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	33.7	250	282	99	279	98	90-110	1	20	mg/kg	04.11.19 11:59	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3085312 Matrix: Solid Date Prep: 04.10.19
MB Sample Id: 7675489-1-BLK LCS Sample Id: 7675489-1-BKS LCSD Sample Id: 7675489-1-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)	<8.00	1000	1060	106	1030	103	70-135	3	20	mg/kg	04.10.19 20:14	
Diesel Range Organics (DRO)	<8.13	1000	1160	116	1140	114	70-135	2	20	mg/kg	04.10.19 20:14	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	109		128		128		70-135	%	04.10.19 20:14
o-Terphenyl	111		120		126		70-135	%	04.10.19 20:14

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

QC Summary 620613

LT Environmental, Inc.

Corral Canyon Federal CTB

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3085312 — Matrix: Soil — Date Prep: 04.10.19
Parent Sample Id: 620612-001 — MS Sample Id: 620612-001 S — MSD Sample Id: 620612-001 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)	<8.00	1000	958	96	955	96	70-135	0	20	mg/kg	04.10.19 21:10	
Diesel Range Organics (DRO)	<8.13	1000	1050	105	1040	104	70-135	1	20	mg/kg	04.10.19 21:10	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	120		124		70-135	%	04.10.19 21:10
o-Terphenyl	109		113		70-135	%	04.10.19 21:10

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3085235 — Matrix: Solid — Date Prep: 04.10.19
MB Sample Id: 7675486-1-BLK — LCS Sample Id: 7675486-1-BKS — LCSD Sample Id: 7675486-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000383	0.0996	0.0984	99	0.106	107	70-130	7	35	mg/kg	04.10.19 13:46	
Toluene	<0.000454	0.0996	0.100	100	0.107	108	70-130	7	35	mg/kg	04.10.19 13:46	
Ethylbenzene	<0.000563	0.0996	0.0940	94	0.100	101	70-130	6	35	mg/kg	04.10.19 13:46	
m,p-Xylenes	<0.00101	0.199	0.187	94	0.200	101	70-130	7	35	mg/kg	04.10.19 13:46	
o-Xylene	<0.000343	0.0996	0.0935	94	0.101	102	70-130	8	35	mg/kg	04.10.19 13:46	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		98		100		70-130	%	04.10.19 13:46
4-Bromofluorobenzene	88		95		99		70-130	%	04.10.19 13:46

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3085235 — Matrix: Soil — Date Prep: 04.10.19
Parent Sample Id: 620613-001 — MS Sample Id: 620613-001 S — MSD Sample Id: 620613-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000386	0.100	0.0932	93	0.0782	79	70-130	18	35	mg/kg	04.10.19 14:26	
Toluene	<0.000457	0.100	0.0926	93	0.0787	79	70-130	16	35	mg/kg	04.10.19 14:26	
Ethylbenzene	<0.000566	0.100	0.0849	85	0.0718	72	70-130	17	35	mg/kg	04.10.19 14:26	
m,p-Xylenes	<0.00102	0.200	0.169	85	0.144	72	70-130	16	35	mg/kg	04.10.19 14:26	
o-Xylene	<0.000345	0.100	0.0849	85	0.0728	73	70-130	15	35	mg/kg	04.10.19 14:26	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		97		70-130	%	04.10.19 14:26
4-Bromofluorobenzene	99		98		70-130	%	04.10.19 14:26

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

Chain of Custody

Work Order No: 1e20613

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

Page 1 of 1

Project Manager:	Adrian Baker	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E. Greene Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad NM 88220
Phone:	432.704.5178 Email:		abyers@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:	Corral Canyon Federal CTB	Turn Around	
Project Number:	012918053	Routine ☐	
P.O. Number:	2RP-4643	Rush: same day	
Sampler's Name:	Anna Byers	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	0-3/0.2	Thermometer ID	1e
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.1
Sample Custody Seals:	Yes No N/A	Total Containers:	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
PH01	S	4/8/19	1510	0.5'	1			
PH01A	S		1520	1.0'	1			
PH02	S		1530	0.5'	1			
PH02A	S		1550	1.0'	1			
PH03	S		1130	0.5'	1			
PH03A	S		1145	1.0'	1			
PH04	S		1210	0.5'	1			
PH04A	S		1220	1.0'	1			
PH05	S		1300	0.5'	1			
PH05A	S		1330	1.0'	1			

Work Order Notes

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

Sample Comments

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Anna Byers		04/09/19	2		04-09-19 1644
3				4		4/10/19 1430
5				6		1154

Revised Date 051418 Rev. 2018.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 04/10/2019 11:54:00 AM

Work Order #: 620613

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

Temperature Measuring device used : R8

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?	**N/A**	
#5 Custody Seals intact on sample bottles?	**N/A**	
#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**	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: Brianna Teel Date: 04/10/2019

Brianna Teel

Checklist reviewed by: Kalei Stout Date: 04/10/2019

Kalei Stout

Analytical Report 644677

for

LT Environmental, Inc.

Project Manager: Dan Moir

Corral Canyon CTB

012918055

05-DEC-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 (2019-058), North Carolina (681), Arkansas (19-037-0)

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

05-DEC-19

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

Reference: XENCO Report No(s): **644677**
Corral Canyon CTB
Project Address: Eddy County

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) 644677. 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. 644677 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Sample Cross Reference 644677

LT Environmental, Inc., Arvada, CO

Corral Canyon CTB

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	11-25-19 14:45	1 - 2 ft	644677-001
SW01	S	11-25-19 15:00	1 - 2 ft	644677-002

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Corral Canyon CTB

Project ID: *012918055*
Work Order Number(s): *644677*

Report Date: *05-DEC-19*
Date Received: *11/27/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3109278 BTEX by EPA 8021B

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

Certificate of Analysis Summary 644677

LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon CTB

Project Id: 012918055
Contact: Dan Moir
Project Location: Eddy County

Date Received in Lab: Wed Nov-27-19 09:50 am
Report Date: 05-DEC-19
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	644677-001		644677-002					
	Field Id:	FS01		SW01					
	Depth:	1-2 ft		1-2 ft					
	Matrix:	SOIL		SOIL					
	Sampled:	Nov-25-19 14:45		Nov-25-19 15:00					
BTEX by EPA 8021B SUB: T104704400-19-19	***Extracted:***	Dec-03-19 11:15		Dec-03-19 11:15					
	Analyzed:	Dec-03-19 19:22		Dec-03-19 19:42					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00199	0.00199	<0.00202	0.00202				
Toluene		<0.00199	0.00199	<0.00202	0.00202				
Ethylbenzene		<0.00199	0.00199	<0.00202	0.00202				
m,p-Xylenes		<0.00398	0.00398	<0.00404	0.00404				
o-Xylene		<0.00199	0.00199	<0.00202	0.00202				
Total Xylenes		<0.00199	0.00199	<0.00202	0.00202				
Total BTEX		<0.00199	0.00199	<0.00202	0.00202				
Chloride by EPA 300 SUB: T104704400-19-19	***Extracted:***	Dec-03-19 13:15		Dec-03-19 13:15					
	Analyzed:	Dec-03-19 23:14		Dec-03-19 23:19					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		137	4.98	244	4.96				
TPH by SW8015 Mod SUB: T104704400-19-19	***Extracted:***	Dec-03-19 13:00		Dec-03-19 13:00					
	Analyzed:	Dec-03-19 23:13		Dec-03-19 23:34					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<49.9	49.9	<49.9	49.9				
Diesel Range Organics (DRO)		426	49.9	140	49.9				
Motor Oil Range Hydrocarbons (MRO)		122	49.9	<49.9	49.9				
Total GRO-DRO		426	49.9	140	49.9				
Total TPH		548	49.9	140	49.9				

Jessica Kramer
Project Assistant

Certificate of Analytical Results 644677

LT Environmental, Inc., Arvada, CO

Corral Canyon CTB

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	11.27.19 09.50
Lab Sample Id:	644677-001	Date Collected:	11.25.19 14.45	Sample Depth:	1 - 2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.03.19 13.15	Basis:	Wet Weight
Seq Number:	3109305			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**137**	4.98	mg/kg	12.03.19 23.14		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	12.03.19 13.00	Basis:	Wet Weight
Seq Number:	3109295			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	12.03.19 23.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	**426**	49.9	mg/kg	12.03.19 23.13		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**122**	49.9	mg/kg	12.03.19 23.13		1
Total GRO-DRO	PHC628	**426**	49.9	mg/kg	12.03.19 23.13		1
Total TPH	PHC635	**548**	49.9	mg/kg	12.03.19 23.13		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	12.03.19 23.13	
o-Terphenyl	84-15-1	100	%	70-135	12.03.19 23.13	

Certificate of Analytical Results 644677

LT Environmental, Inc., Arvada, CO

Corral Canyon CTB

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	11.27.19 09.50
Lab Sample Id:	644677-001	Date Collected:	11.25.19 14.45	Sample Depth:	1 - 2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	12.03.19 11.15	Basis:	Wet Weight
Seq Number:	3109278			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.03.19 19.22	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.03.19 19.22	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	12.03.19 19.22	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	12.03.19 19.22	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	12.03.19 19.22	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	12.03.19 19.22	U	1
Total BTEX		<0.00199	0.00199	mg/kg	12.03.19 19.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	12.03.19 19.22	
4-Bromofluorobenzene	460-00-4	99	%	70-130	12.03.19 19.22	

Certificate of Analytical Results 644677

LT Environmental, Inc., Arvada, CO

Corral Canyon CTB

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	11.27.19 09.50
Lab Sample Id:	644677-002	Date Collected:	11.25.19 15.00	Sample Depth:	1 - 2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.03.19 13.15	Basis:	Wet Weight
Seq Number:	3109305			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**244**	4.96	mg/kg	12.03.19 23.19		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	12.03.19 13.00	Basis:	Wet Weight
Seq Number:	3109295			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	12.03.19 23.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	**140**	49.9	mg/kg	12.03.19 23.34		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.03.19 23.34	U	1
Total GRO-DRO	PHC628	**140**	49.9	mg/kg	12.03.19 23.34		1
Total TPH	PHC635	**140**	49.9	mg/kg	12.03.19 23.34		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	12.03.19 23.34	
o-Terphenyl	84-15-1	94	%	70-135	12.03.19 23.34	

Certificate of Analytical Results 644677

LT Environmental, Inc., Arvada, CO

Corral Canyon CTB

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	11.27.19 09.50
Lab Sample Id:	644677-002	Date Collected:	11.25.19 15.00	Sample Depth:	1 - 2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	12.03.19 11.15	Basis:	Wet Weight
Seq Number:	3109278			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	12.03.19 19.42	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	12.03.19 19.42	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	12.03.19 19.42	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	12.03.19 19.42	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	12.03.19 19.42	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	12.03.19 19.42	U	1
Total BTEX		<0.00202	0.00202	mg/kg	12.03.19 19.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	12.03.19 19.42	
1,4-Difluorobenzene	540-36-3	104	%	70-130	12.03.19 19.42	

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 **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 644677

LT Environmental, Inc.

Corral Canyon CTB

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3109305 — Matrix: Solid — Date Prep: 12.03.19
MB Sample Id: 7691542-1-BLK — LCS Sample Id: 7691542-1-BKS — LCSD Sample Id: 7691542-1-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	242	97	247	99	90-110	2	20	mg/kg	12.03.19 21:11	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3109305 — Matrix: Soil — Date Prep: 12.03.19
Parent Sample Id: 644675-001 — MS Sample Id: 644675-001 S — MSD Sample Id: 644675-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	325	252	576	100	556	92	90-110	4	20	mg/kg	12.03.19 22:42	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3109305 — Matrix: Soil — Date Prep: 12.03.19
Parent Sample Id: 644784-016 — MS Sample Id: 644784-016 S — MSD Sample Id: 644784-016 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	776	201	976	100	975	99	90-110	0	20	mg/kg	12.03.19 21:27	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3109295 — Matrix: Solid — Date Prep: 12.03.19
MB Sample Id: 7691532-1-BLK — LCS Sample Id: 7691532-1-BKS — LCSD Sample Id: 7691532-1-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	1020	102	997	100	70-135	2	20	mg/kg	12.03.19 17:37	
Diesel Range Organics (DRO)	<15.0	1000	978	98	954	95	70-135	2	20	mg/kg	12.03.19 17:37	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	106		106		103		70-135	%	12.03.19 17:37
o-Terphenyl	108		101		100		70-135	%	12.03.19 17:37

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3109295 — Matrix: Solid — Date Prep: 12.03.19
MB Sample Id: 7691532-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	12.03.19 17:16	

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

QC Summary 644677

LT Environmental, Inc.

Corral Canyon CTB

Analytical Method: TPH by SW8015 Mod | Prep Method: SW8015P
Seq Number: 3109295 | Matrix: Soil | Date Prep: 12.03.19
Parent Sample Id: 644674-001 | MS Sample Id: 644674-001 S | MSD Sample Id: 644674-001 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	997	1010	101	930	93	70-135	8	20	mg/kg	12.03.19 18:39	
Diesel Range Organics (DRO)	16.0	997	1020	101	914	90	70-135	11	20	mg/kg	12.03.19 18:39	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	108		97		70-135	%	12.03.19 18:39
o-Terphenyl	104		94		70-135	%	12.03.19 18:39

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3109278 | Matrix: Solid | Date Prep: 12.03.19
MB Sample Id: 7691519-1-BLK | LCS Sample Id: 7691519-1-BKS | LCSD Sample Id: 7691519-1-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	0.107	107	0.101	101	70-130	6	35	mg/kg	12.03.19 10:48	
Toluene	<0.00200	0.100	0.100	100	0.0967	97	70-130	3	35	mg/kg	12.03.19 10:48	
Ethylbenzene	<0.00200	0.100	0.103	103	0.0999	100	70-130	3	35	mg/kg	12.03.19 10:48	
m,p-Xylenes	<0.00400	0.200	0.210	105	0.204	102	70-130	3	35	mg/kg	12.03.19 10:48	
o-Xylene	<0.00200	0.100	0.105	105	0.103	103	70-130	2	35	mg/kg	12.03.19 10:48	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		109		108		70-130	%	12.03.19 10:48
4-Bromofluorobenzene	97		105		107		70-130	%	12.03.19 10:48

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3109278 | Matrix: Soil | Date Prep: 12.03.19
Parent Sample Id: 644674-001 | MS Sample Id: 644674-001 S | MSD Sample Id: 644674-001 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	0.0986	98	0.0942	93	70-130	5	35	mg/kg	12.03.19 13:23	
Toluene	<0.00201	0.101	0.0987	98	0.0919	91	70-130	7	35	mg/kg	12.03.19 13:23	
Ethylbenzene	<0.00201	0.101	0.105	104	0.0964	95	70-130	9	35	mg/kg	12.03.19 13:23	
m,p-Xylenes	<0.00402	0.201	0.214	106	0.197	98	70-130	8	35	mg/kg	12.03.19 13:23	
o-Xylene	<0.00201	0.101	0.106	105	0.0969	96	70-130	9	35	mg/kg	12.03.19 13:23	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		107		70-130	%	12.03.19 13:23
4-Bromofluorobenzene	112		108		70-130	%	12.03.19 13:23

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: 644677

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

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, Tx 79705	City, State ZIP:	
Phone:	(432) 236-3849	Email:	enaka@ltenv.com, dmoir@ltenv.com

Work Order Comments

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

Project Name:	Corral Canyon CTB	Turn Around	
Project Number:	01241805S	Routine	X
P.O. Number:	Eddy County	Rush:	
Sampler's Name:	Elizabeth Naka	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Temperature (°C):	0.6	Thermometer ID	
Received Intact:	Yes No	T-NM-007	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Total Containers:	2

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
FS01	S	11/25/19	1445	1'-2'	1	X	X	X
SW01	S	11/25/19	1500	1'-2'	1	X	X	X

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

composite ↓

Elizabeth Naka

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time		Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Elizabeth Naka		11/27/19 9:20	2			11/27/19 9:50
3				4			
5				6			

Inter-Office Shipment

IOS Number **53279**

Date/Time: 12/02/19 11:33
Lab# From: **Carlsbad**
Lab# To: **Midland**

Created by: Elizabeth Mcclellan
Delivery Priority:
Air Bill No.: 777125912748

Please send report to: Jessica Kramer
Address: 1089 N Canal Street
E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
644677-001	S	FS01	11/25/19 14:45	SW8015MOD_NM	TPH by SW8015 Mod	12/05/19	12/09/19	JKR	GRO-DRO PHCC10C28 PI	
644677-001	S	FS01	11/25/19 14:45	SW8021B	BTEX by EPA 8021B	12/05/19	12/09/19	JKR	BZ BZME EBZ XYLENES	
644677-001	S	FS01	11/25/19 14:45	E300_CL	Chloride by EPA 300	12/05/19	05/23/20	JKR	CL	
644677-002	S	SW01	11/25/19 15:00	SW8021B	BTEX by EPA 8021B	12/05/19	12/09/19	JKR	BZ BZME EBZ XYLENES	
644677-002	S	SW01	11/25/19 15:00	E300_CL	Chloride by EPA 300	12/05/19	05/23/20	JKR	CL	
644677-002	S	SW01	11/25/19 15:00	SW8015MOD_NM	TPH by SW8015 Mod	12/05/19	12/09/19	JKR	GRO-DRO PHCC10C28 PI	

Inter Office Shipment or Sample Comments:

Relinquished By: Elizabeth McClellan

Date Relinquished: 12/02/2019

Received By: Brianna Teel

Date Received: 12/03/2019 11:12

Cooler Temperature: 0.6

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 53279

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : R8

Sent By: Elizabeth McClellan **Date Sent:** 12/02/2019 11:33 AM

Received By: Brianna Teel **Date Received:** 12/03/2019 11:12 AM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	.6	
#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: 12/03/2019

Brianna Teel

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 11/27/2019 09:50:00 AM

Work Order #: 644677

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)?	.6	
#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**	Subbed to 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: 12/02/2019

Checklist reviewed by: Jessica Kramer Date: 12/02/2019

Analytical Report 648058

for

LT Environmental, Inc.

Project Manager: Dan Moir

Corral Canyon Federal CTB

012918053

13-JAN-20

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

13-JAN-20

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

Reference: XENCO Report No(s): **648058**
Corral Canyon Federal 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) 648058. 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. 648058 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project 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 648058

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal CTB

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH01	S	01-06-20 13:40	0.5 ft	648058-001
BH01A	S	01-06-20 13:50	2 ft	648058-002
BH02	S	01-06-20 14:00	0.5 ft	648058-003
BH02A	S	01-06-20 14:15	2 ft	648058-004
BH03	S	01-06-20 14:30	0.5 ft	648058-005
BH03A	S	01-06-20 14:45	2 ft	648058-006
BH04	S	01-06-20 15:00	0.5 ft	648058-007
BH04A	S	01-06-20 15:10	2 ft	648058-008

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Corral Canyon Federal CTB

Project ID: *012918053*
Work Order Number(s): *648058*

Report Date: *13-JAN-20*
Date Received: *01/07/2020*

Sample receipt non conformances and comments:

Per clients email, corrected sample names as followed below. NEW VERSION GENERATED JK 01/13/20
PH06/PH06A change to BH01/BH01A
PH07/PH07A change to BH02/BH02A
PH08/PH08A change to BH03/BH03A
PH09/PH09A change to BH04/BH04A

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3112567 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 648058

LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon Federal CTB

Project Id: 012918053
Contact: Dan Moir
Project Location:

Date Received in Lab: Tue Jan-07-20 09:36 am
Report Date: 13-JAN-20
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	648058-001		648058-002		648058-003		648058-004		648058-005		648058-006	
	Field Id:	BH01		BH01A		BH02		BH02A		BH03		BH03A	
	Depth:	0.5- ft		2- ft		0.5- ft		2- ft		0.5- ft		2- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-06-20 13:40		Jan-06-20 13:50		Jan-06-20 14:00		Jan-06-20 14:15		Jan-06-20 14:30		Jan-06-20 14:45	
BTEX by EPA 8021B	***Extracted:***	Jan-07-20 10:30		Jan-07-20 10:30		Jan-07-20 10:30		Jan-07-20 10:30		Jan-07-20 10:30		Jan-07-20 10:30	
	Analyzed:	Jan-07-20 13:57		Jan-07-20 14:14		Jan-07-20 14:32		Jan-07-20 14:49		Jan-07-20 15:06		Jan-07-20 15:24	
	Units/RL:	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	<0.00198	0.00198	<0.00202	0.00202	<0.00202	0.00202	<0.00198	0.00198
Toluene		<0.00202	0.00202	<0.00202	0.00202	<0.00198	0.00198	<0.00202	0.00202	<0.00202	0.00202	<0.00198	0.00198
Ethylbenzene		<0.00202	0.00202	<0.00202	0.00202	<0.00198	0.00198	<0.00202	0.00202	<0.00202	0.00202	<0.00198	0.00198
m,p-Xylenes		<0.00404	0.00404	<0.00403	0.00403	<0.00397	0.00397	<0.00403	0.00403	<0.00403	0.00403	<0.00397	0.00397
o-Xylene		<0.00202	0.00202	<0.00202	0.00202	<0.00198	0.00198	<0.00202	0.00202	<0.00202	0.00202	<0.00198	0.00198
Total Xylenes		<0.00202	0.00202	<0.00202	0.00202	<0.00198	0.00198	<0.00202	0.00202	<0.00202	0.00202	<0.00198	0.00198
Total BTEX		<0.00202	0.00202	<0.00202	0.00202	<0.00198	0.00198	<0.00202	0.00202	<0.00202	0.00202	<0.00198	0.00198
Chloride by EPA 300	***Extracted:***	Jan-07-20 11:00		Jan-07-20 11:00		Jan-07-20 11:00		Jan-07-20 11:00		Jan-07-20 11:00		Jan-07-20 11:00	
	Analyzed:	Jan-07-20 12:06		Jan-07-20 12:22		Jan-07-20 12:28		Jan-07-20 12:33		Jan-07-20 12:45		Jan-07-20 13:14	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		15.3	9.98	36.4	9.96	17.5	9.98	191	9.94	160	9.98	102	9.86
TPH by SW8015 Mod	***Extracted:***	Jan-07-20 10:30		Jan-07-20 10:30		Jan-07-20 10:30		Jan-07-20 10:30		Jan-07-20 10:30		Jan-07-20 10:30	
	Analyzed:	Jan-07-20 11:17		Jan-07-20 11:17		Jan-07-20 11:37		Jan-07-20 13:11		Jan-07-20 13:11		Jan-07-20 13:31	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<49.9	49.9	<50.3	50.3	<50.1	50.1	<50.2	50.2	<49.8	49.8	<50.0	50.0
Diesel Range Organics (DRO)		<49.9	49.9	<50.3	50.3	<50.1	50.1	<50.2	50.2	<49.8	49.8	<50.0	50.0
Motor Oil Range Hydrocarbons (MRO)		<49.9	49.9	<50.3	50.3	<50.1	50.1	<50.2	50.2	<49.8	49.8	<50.0	50.0
Total GRO-DRO		<49.9	49.9	<50.3	50.3	<50.1	50.1	<50.2	50.2	<49.8	49.8	<50.0	50.0
Total TPH		<49.9	49.9	<50.3	50.3	<50.1	50.1	<50.2	50.2	<49.8	49.8	<50.0	50.0

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

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 648058

LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon Federal CTB

Project Id: 012918053
Contact: Dan Moir
Project Location:

Date Received in Lab: Tue Jan-07-20 09:36 am
Report Date: 13-JAN-20
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	648058-007		648058-008					
	Field Id:	BH04		BH04A					
	Depth:	0.5- ft		2- ft					
	Matrix:	SOIL		SOIL					
	Sampled:	Jan-06-20 15:00		Jan-06-20 15:10					
BTEX by EPA 8021B	***Extracted:***	Jan-07-20 10:30		Jan-07-20 10:30					
	Analyzed:	Jan-07-20 15:41		Jan-07-20 15:59					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00202	0.00202	<0.00202	0.00202				
Toluene		<0.00202	0.00202	<0.00202	0.00202				
Ethylbenzene		<0.00202	0.00202	<0.00202	0.00202				
m,p-Xylenes		<0.00403	0.00403	<0.00403	0.00403				
o-Xylene		<0.00202	0.00202	<0.00202	0.00202				
Total Xylenes		<0.00202	0.00202	<0.00202	0.00202				
Total BTEX		<0.00202	0.00202	<0.00202	0.00202				
Chloride by EPA 300	***Extracted:***	Jan-07-20 11:00		Jan-07-20 11:00					
	Analyzed:	Jan-07-20 13:20		Jan-07-20 13:25					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		291	10.1	271	10.1				
TPH by SW8015 Mod	***Extracted:***	Jan-07-20 10:30		Jan-07-20 10:30					
	Analyzed:	Jan-07-20 13:31		Jan-07-20 13:51					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<50.2	50.2	<50.0	50.0				
Diesel Range Organics (DRO)		<50.2	50.2	<50.0	50.0				
Motor Oil Range Hydrocarbons (MRO)		<50.2	50.2	<50.0	50.0				
Total GRO-DRO		<50.2	50.2	<50.0	50.0				
Total TPH		<50.2	50.2	<50.0	50.0				

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analytical Results 648058

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal CTB

Sample Id: **BH01** Matrix: Soil Date Received:01.07.20 09.36

Lab Sample Id: 648058-001 Date Collected: 01.06.20 13.40 Sample Depth:0.5 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 01.07.20 11.00 Basis: Wet Weight

Seq Number: 3112569

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**15.3**	9.98	mg/kg	01.07.20 12.06		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 01.07.20 10.30 Basis: Wet Weight

Seq Number: 3112515

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	01.07.20 11.17	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	01.07.20 11.17	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.07.20 11.17	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	01.07.20 11.17	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	01.07.20 11.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	123	%	70-135	01.07.20 11.17	
o-Terphenyl	84-15-1	122	%	70-135	01.07.20 11.17	

Certificate of Analytical Results 648058

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal CTB

Sample Id:	**BH01**	Matrix:	Soil	Date Received:	01.07.20 09.36
Lab Sample Id:	648058-001	Date Collected:	01.06.20 13.40	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.07.20 10.30	Basis:	Wet Weight
Seq Number:	3112567				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.07.20 13.57	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.07.20 13.57	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.07.20 13.57	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	01.07.20 13.57	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.07.20 13.57	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	01.07.20 13.57	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.07.20 13.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	01.07.20 13.57	
1,4-Difluorobenzene	540-36-3	99	%	70-130	01.07.20 13.57	

Certificate of Analytical Results 648058

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal CTB

Sample Id: **BH01A** Matrix: Soil Date Received:01.07.20 09.36

Lab Sample Id: 648058-002 Date Collected: 01.06.20 13.50 Sample Depth:2 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 01.07.20 11.00 Basis: Wet Weight

Seq Number: 3112569

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**36.4**	9.96	mg/kg	01.07.20 12.22		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 01.07.20 10.30 Basis: Wet Weight

Seq Number: 3112515

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	01.07.20 11.17	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	01.07.20 11.17	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	01.07.20 11.17	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	01.07.20 11.17	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	01.07.20 11.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	01.07.20 11.17	
o-Terphenyl	84-15-1	115	%	70-135	01.07.20 11.17	

Certificate of Analytical Results 648058

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal CTB

Sample Id:	**BH01A**	Matrix:	Soil	Date Received:	01.07.20 09.36
Lab Sample Id:	648058-002	Date Collected:	01.06.20 13.50	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.07.20 10.30	Basis:	Wet Weight
Seq Number:	3112567				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.07.20 14.14	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.07.20 14.14	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.07.20 14.14	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	01.07.20 14.14	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.07.20 14.14	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	01.07.20 14.14	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.07.20 14.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	01.07.20 14.14	
4-Bromofluorobenzene	460-00-4	101	%	70-130	01.07.20 14.14	

Certificate of Analytical Results 648058

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal CTB

Sample Id: **BH02** Matrix: Soil Date Received:01.07.20 09.36

Lab Sample Id: 648058-003 Date Collected: 01.06.20 14.00 Sample Depth:0.5 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 01.07.20 11.00 Basis: Wet Weight

Seq Number: 3112569

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**17.5**	9.98	mg/kg	01.07.20 12.28		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 01.07.20 10.30 Basis: Wet Weight

Seq Number: 3112515

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	01.07.20 11.37	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	01.07.20 11.37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	01.07.20 11.37	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	01.07.20 11.37	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	01.07.20 11.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	01.07.20 11.37	
o-Terphenyl	84-15-1	115	%	70-135	01.07.20 11.37	

Certificate of Analytical Results 648058

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal CTB

Sample Id:	**BH02**	Matrix:	Soil	Date Received:	01.07.20 09.36
Lab Sample Id:	648058-003	Date Collected:	01.06.20 14.00	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.07.20 10.30	Basis:	Wet Weight
Seq Number:	3112567				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	01.07.20 14.32	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	01.07.20 14.32	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	01.07.20 14.32	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	01.07.20 14.32	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	01.07.20 14.32	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	01.07.20 14.32	U	1
Total BTEX		<0.00198	0.00198	mg/kg	01.07.20 14.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	01.07.20 14.32	
4-Bromofluorobenzene	460-00-4	101	%	70-130	01.07.20 14.32	

Certificate of Analytical Results 648058

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal CTB

Sample Id: **BH02A** Matrix: Soil Date Received:01.07.20 09.36

Lab Sample Id: 648058-004 Date Collected: 01.06.20 14.15 Sample Depth:2 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 01.07.20 11.00 Basis: Wet Weight

Seq Number: 3112569

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**191**	9.94	mg/kg	01.07.20 12.33		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 01.07.20 10.30 Basis: Wet Weight

Seq Number: 3112515

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	01.07.20 13.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	01.07.20 13.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	01.07.20 13.11	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	01.07.20 13.11	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	01.07.20 13.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	120	%	70-135	01.07.20 13.11	
o-Terphenyl	84-15-1	118	%	70-135	01.07.20 13.11	

Certificate of Analytical Results 648058

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal CTB

Sample Id:	**BH02A**	Matrix:	Soil	Date Received:	01.07.20 09.36
Lab Sample Id:	648058-004	Date Collected:	01.06.20 14.15	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.07.20 10.30	Basis:	Wet Weight
Seq Number:	3112567				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.07.20 14.49	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.07.20 14.49	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.07.20 14.49	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	01.07.20 14.49	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.07.20 14.49	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	01.07.20 14.49	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.07.20 14.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	01.07.20 14.49	
4-Bromofluorobenzene	460-00-4	109	%	70-130	01.07.20 14.49	

Certificate of Analytical Results 648058

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal CTB

Sample Id:	**BH03**	Matrix:	Soil	Date Received:	01.07.20 09.36
Lab Sample Id:	648058-005	Date Collected:	01.06.20 14.30	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.07.20 11.00	Basis:	Wet Weight
Seq Number:	3112569				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**160**	9.98	mg/kg	01.07.20 12.45		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.07.20 10.30	Basis:	Wet Weight
Seq Number:	3112515				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	01.07.20 13.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	01.07.20 13.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	01.07.20 13.11	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	01.07.20 13.11	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	01.07.20 13.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	01.07.20 13.11	
o-Terphenyl	84-15-1	114	%	70-135	01.07.20 13.11	

Certificate of Analytical Results 648058

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal CTB

Sample Id:	**BH03**	Matrix:	Soil	Date Received:	01.07.20 09.36
Lab Sample Id:	648058-005	Date Collected:	01.06.20 14.30	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.07.20 10.30	Basis:	Wet Weight
Seq Number:	3112567				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.07.20 15.06	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.07.20 15.06	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.07.20 15.06	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	01.07.20 15.06	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.07.20 15.06	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	01.07.20 15.06	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.07.20 15.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	70-130	01.07.20 15.06	
1,4-Difluorobenzene	540-36-3	101	%	70-130	01.07.20 15.06	

Certificate of Analytical Results 648058

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal CTB

Sample Id: **BH03A** Matrix: Soil Date Received:01.07.20 09.36

Lab Sample Id: 648058-006 Date Collected: 01.06.20 14.45 Sample Depth:2 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 01.07.20 11.00 Basis: Wet Weight

Seq Number: 3112569

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**102**	9.86	mg/kg	01.07.20 13.14		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 01.07.20 10.30 Basis: Wet Weight

Seq Number: 3112515

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	01.07.20 13.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	01.07.20 13.31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.07.20 13.31	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	01.07.20 13.31	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.07.20 13.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	118	%	70-135	01.07.20 13.31	
o-Terphenyl	84-15-1	120	%	70-135	01.07.20 13.31	

Certificate of Analytical Results 648058

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal CTB

Sample Id:	**BH03A**	Matrix:	Soil	Date Received:	01.07.20 09.36
Lab Sample Id:	648058-006	Date Collected:	01.06.20 14.45	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.07.20 10.30	Basis:	Wet Weight
Seq Number:	3112567				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	01.07.20 15.24	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	01.07.20 15.24	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	01.07.20 15.24	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	01.07.20 15.24	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	01.07.20 15.24	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	01.07.20 15.24	U	1
Total BTEX		<0.00198	0.00198	mg/kg	01.07.20 15.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	01.07.20 15.24	
4-Bromofluorobenzene	460-00-4	110	%	70-130	01.07.20 15.24	

Certificate of Analytical Results 648058

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal CTB

Sample Id: **BH04** Matrix: Soil Date Received:01.07.20 09.36

Lab Sample Id: 648058-007 Date Collected: 01.06.20 15.00 Sample Depth:0.5 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 01.07.20 11.00 Basis: Wet Weight

Seq Number: 3112569

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**291**	10.1	mg/kg	01.07.20 13.20		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 01.07.20 10.30 Basis: Wet Weight

Seq Number: 3112515

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	01.07.20 13.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	01.07.20 13.31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	01.07.20 13.31	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	01.07.20 13.31	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	01.07.20 13.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	01.07.20 13.31	
o-Terphenyl	84-15-1	115	%	70-135	01.07.20 13.31	

Certificate of Analytical Results 648058

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal CTB

Sample Id:	**BH04**	Matrix:	Soil	Date Received:	01.07.20 09.36
Lab Sample Id:	648058-007	Date Collected:	01.06.20 15.00	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.07.20 10.30	Basis:	Wet Weight
Seq Number:	3112567				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.07.20 15.41	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.07.20 15.41	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.07.20 15.41	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	01.07.20 15.41	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.07.20 15.41	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	01.07.20 15.41	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.07.20 15.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	01.07.20 15.41	
4-Bromofluorobenzene	460-00-4	108	%	70-130	01.07.20 15.41	

Certificate of Analytical Results 648058

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal CTB

Sample Id:	**BH04A**	Matrix:	Soil	Date Received:	01.07.20 09.36
Lab Sample Id:	648058-008	Date Collected:	01.06.20 15.10	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.07.20 11.00	Basis:	Wet Weight
Seq Number:	3112569				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**271**	10.1	mg/kg	01.07.20 13.25		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.07.20 10.30	Basis:	Wet Weight
Seq Number:	3112515				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	01.07.20 13.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	01.07.20 13.51	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.07.20 13.51	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	01.07.20 13.51	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.07.20 13.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	121	%	70-135	01.07.20 13.51	
o-Terphenyl	84-15-1	121	%	70-135	01.07.20 13.51	

Certificate of Analytical Results 648058

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal CTB

Sample Id:	**BH04A**	Matrix:	Soil	Date Received:	01.07.20 09.36
Lab Sample Id:	648058-008	Date Collected:	01.06.20 15.10	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.07.20 10.30	Basis:	Wet Weight
Seq Number:	3112567				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.07.20 15.59	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.07.20 15.59	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.07.20 15.59	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	01.07.20 15.59	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.07.20 15.59	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	01.07.20 15.59	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.07.20 15.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	108	%	70-130	01.07.20 15.59	
1,4-Difluorobenzene	540-36-3	102	%	70-130	01.07.20 15.59	

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 **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 648058

LT Environmental, Inc.

Corral Canyon Federal CTB

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3112569 — Matrix: Solid — Date Prep: 01.07.20
MB Sample Id: 7693856-1-BLK — LCS Sample Id: 7693856-1-BKS — LCSD Sample Id: 7693856-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	241	96	243	97	90-110	1	20	mg/kg	01.07.20 11:54	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3112569 — Matrix: Soil — Date Prep: 01.07.20
Parent Sample Id: 648058-001 — MS Sample Id: 648058-001 S — MSD Sample Id: 648058-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	15.3	199	204	95	205	95	90-110	0	20	mg/kg	01.07.20 12:11	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3112569 — Matrix: Soil — Date Prep: 01.07.20
Parent Sample Id: 648059-003 — MS Sample Id: 648059-003 S — MSD Sample Id: 648059-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	9.35	199	204	98	217	103	90-110	6	20	mg/kg	01.07.20 13:47	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3112515 — Matrix: Solid — Date Prep: 01.07.20
MB Sample Id: 7693809-1-BLK — LCS Sample Id: 7693809-1-BKS — LCSD Sample Id: 7693809-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1270	127	1310	131	70-135	3	35	mg/kg	01.07.20 09:19	
Diesel Range Organics (DRO)	<50.0	1000	1210	121	1240	124	70-135	2	35	mg/kg	01.07.20 09:19	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	118		134		130		70-135	%	01.07.20 09:19
o-Terphenyl	114		125		121		70-135	%	01.07.20 09:19

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3112515 — Matrix: Solid — Date Prep: 01.07.20
MB Sample Id: 7693809-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	01.07.20 08:59	

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

QC Summary 648058

LT Environmental, Inc.

Corral Canyon Federal CTB

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3112515 — Matrix: Soil — Date Prep: 01.07.20
Parent Sample Id: 647999-001 — MS Sample Id: 647999-001 S — MSD Sample Id: 647999-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.1	1000	1420	142	1210	122	70-135	16	35	mg/kg	01.07.20 12:31	X
Diesel Range Organics (DRO)	98.4	1000	1350	125	1130	104	70-135	18	35	mg/kg	01.07.20 12:31	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	121		123		70-135	%	01.07.20 12:31
o-Terphenyl	107		96		70-135	%	01.07.20 12:31

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3112567 — Matrix: Solid — Date Prep: 01.07.20
MB Sample Id: 7693839-1-BLK — LCS Sample Id: 7693839-1-BKS — LCSD Sample Id: 7693839-1-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	0.102	102	0.0950	95	70-130	7	35	mg/kg	01.07.20 12:13	
Toluene	<0.00200	0.100	0.103	103	0.0967	97	70-130	6	35	mg/kg	01.07.20 12:13	
Ethylbenzene	<0.00200	0.100	0.102	102	0.0953	95	71-129	7	35	mg/kg	01.07.20 12:13	
m,p-Xylenes	<0.00400	0.200	0.212	106	0.198	99	70-135	7	35	mg/kg	01.07.20 12:13	
o-Xylene	<0.00200	0.100	0.104	104	0.0965	97	71-133	7	35	mg/kg	01.07.20 12:13	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		99		98		70-130	%	01.07.20 12:13
4-Bromofluorobenzene	98		101		100		70-130	%	01.07.20 12:13

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3112567 — Matrix: Soil — Date Prep: 01.07.20
Parent Sample Id: 648058-001 — MS Sample Id: 648058-001 S — MSD Sample Id: 648058-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0985	98	0.103	102	70-130	4	35	mg/kg	01.07.20 12:48	
Toluene	<0.00202	0.101	0.0986	98	0.102	101	70-130	3	35	mg/kg	01.07.20 12:48	
Ethylbenzene	<0.00202	0.101	0.0964	95	0.0991	98	71-129	3	35	mg/kg	01.07.20 12:48	
m,p-Xylenes	<0.000761	0.202	0.199	99	0.204	101	70-135	2	35	mg/kg	01.07.20 12:48	
o-Xylene	<0.00202	0.101	0.0985	98	0.100	99	71-133	2	35	mg/kg	01.07.20 12:48	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		100		70-130	%	01.07.20 12:48
4-Bromofluorobenzene	102		100		70-130	%	01.07.20 12:48

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

Chain of Custody

XENCO LABORATORIES

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

Work Order No: 648098

www.xenco.com Page 1 of 1

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

Work Order Comments

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

Project Name:	Corral Canyon Federal CTB	Turn Around	
Project Number:	012918053	Routine	☐
P.O. Number:		Rush:	24H
Sampler's Name:	Spencer Lo	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	0.8	Thermometer ID	T-NM-002	
Received Intact:	(Yes) No			
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No N/A	Total Containers:	8	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
PH06	S	1.6.20	1340	0.5'	1	X	X	X
PH06A			1350	2'				
PH07			1400	0.5'				
PH07A			1415	2'				
PH08			1430	0.5'				
PH08A			1445	2'				
PH09			1500	0.5'				
PH09A	↓	↓	1510	2'	↓	↓	↓	↓

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

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

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Spencer Lo	Elvia Trejo	1/7/20 9:20 am	2 Elvia Trejo		1/7/20 0936
			4		
			6		

Revised Date 051418 Rev. 2018.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 01.07.2020 09.36.00 AM

Work Order #: 648058

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

*** 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: 01.07.2020

Checklist reviewed by: Jessica Kramer Date: 01.08.2020

Jessica Kramer