

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	NAB1921751473
District RP	2RP-5552
Facility ID	
Application ID	pAB1921751211

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 # (assigned by OCD) NAB1921751473
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.152506° Longitude -104.010074°
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Corral Canyon Federal Com #014H	Site Type Production Well Facility
Date Release Discovered 7/9/2019	API# (if applicable) 30-015-43474

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

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☒ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)
Unknown (illegal dump)	15.55 barrels	0 barrels

Cause of Release

Reclamation contractor arrived at location to discover and report an illegal dumping of fluids that had occurred on the well pad at an unknown time. Additional third party resources have been retained to assist with remediation.

State of New Mexico
Oil Conservation Division

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Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release? N/A
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? N/A	

Initial Response

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

☒ The source of the release has been stopped. ☒ The impacted area has been secured to protect human health and the environment. ☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. ☐ All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why: No free fluids remained to be recovered.	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: <u>Kyle Littrell</u> Signature:  email: <u>Kyle_Littrell@xtoenergy.com</u>	Title: <u>SH&E Supervisor</u> Date: <u>7/17/2019</u> Telephone: <u>432-221-7331</u>
<u>OCD Only</u> Received by: <u>Amalia Bustamante</u> Date: <u>8/5/2019</u>	

Incident ID	
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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?	50 - 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: <i>Each of the following items must be included in the report.</i> ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells. ☒ Field data ☒ Data table of soil contaminant concentration data ☒ Depth to water determination ☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release ☒ Boring or excavation logs ☒ Photographs including date and GIS information ☒ Topographic/Aerial maps ☒ Laboratory data including chain of custody

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.

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature:  Date: 10/07/2019

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

OCD Only

Received by: _____ Date: _____

Incident ID	
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Closure

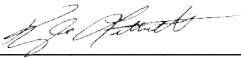
The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled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

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

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

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature:  Date: 10/07/2019

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

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

October 7, 2019

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

**RE: Closure Request
Corral Canyon Federal Com #014H
Remediation Permit Number 2RP-5552
Eddy County, New Mexico**

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following report detailing site assessment, soil sampling, and excavation activities at the Corral Canyon Federal Com #014H (Site) in Unit N, 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 following an illegal dumping event at the Site. Based on the excavation activities and results of the soil sampling events, XTO is submitting this Closure Report and requesting no further action for Remediation Permit (RP) Number 2RP-5552.

RELEASE BACKGROUND

On July 9, 2019, an illegal dumping of an unknown fluid was discovered at the Site. Approximately 15.55 barrels (bbls) of fluid was discovered along the western boundary of the caliche well pad. No fluid was recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 (Form C-141) on July 17, 2019, and was assigned RP Number 2RP-5552 (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 50 and 100 feet below ground surface (bgs) based on the nearest water well data. The nearest permitted water well with depth to water data is New Mexico Office of the State Engineer (NM OSE) Well #C01880, located approximately 4,803 feet northwest of the Site. The water well has a depth to groundwater of approximately 40 feet bgs and a total depth of 85 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 between 3,596 feet and 4,056 feet west 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. Ground surface elevation at the monitoring well location is approximately 2,943 feet above mean sea level (AMSL), which is approximately 8 feet higher in elevation than the Site. Therefore, depth to groundwater at the Site is determined to be between 51 feet and 100 feet bgs. The closest continuously flowing water or significant watercourse to the Site is a first order tributary to the Pecos River, located approximately 1,736 feet east of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not located in an unstable geological area, such as karst formations.

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

CLOSURE CRITERIA

Based on the results of the initial Site Characterization, specifically the depth to water at the closest permitted water well (NM OSE #C01880) of approximately 40 feet bgs, initial remedial actions were driven by the following NMOCD Table 1 Closure Criteria (Closure Criteria):

- Benzene: 10 milligrams per kilogram (mg/kg);
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg;
- Total petroleum hydrocarbons (TPH): 100 mg/kg; and
- Chloride: 600 mg/kg.

Following the installation of six monitoring wells (MW01 through MW06) at a nearby location, which were used to determine a more applicable depth to groundwater in this area, LTE revised the Site Characterization and the following revised Closure Criteria were applied to the Site:





- Benzene: 10 mg/kg;
- BTEX: 50 m/kg;
- TPH-gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg;
- TPH: 2,500 mg/kg; and
- Chloride: 10,000 mg/kg.

SITE ASSESSMENT, EXCAVATION, AND DELINEATION SOIL SAMPLING ACTIVITIES

On July 17, 2019, LTE personnel inspected the Site to evaluate the release extent. Surficial staining was observed in the release area along the western boundary of the caliche well pad.

Assessment activities included field screening soil for volatile aromatic hydrocarbons and chloride utilizing a calibrated photoionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. All discrete 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.

LTE personnel collected four preliminary soil samples (SS01 through SS04) within the release extent at a depth of approximately 0.5 feet bgs to assess the presence or absence of soil impacts. The release extent and preliminary soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Laboratory analytical results for the preliminary soil samples are presented on Figure 2 and summarized in Table 1.

Based on visible surface staining and field screening results in the release area, delineation and excavation of impacted soil appeared warranted. Photographic documentation was conducted during the Site visits. Photographs are included in Attachment 2.

On July 19, 2019, LTE personnel returned to the Site to oversee soil assessment activities. Potholes were advanced via track-hoe at three locations within the release extent. Potholes PH01 and PH03 were advanced to a depth of approximately 6 feet bgs and pothole PH02 was advanced to a depth of approximately 11 feet bgs. Three delineation soil samples were collected from potholes PH01 and PH03 at depths ranging from approximately 2 feet to 6 feet bgs. A total of six delineation soil samples were collected from PH02 at depths ranging from approximately 2 feet to 11 feet bgs. Field screening results and observations for each pothole were logged on lithologic/soil sampling logs, which are included in Attachment 3. The delineation soil samples



were collected, handled, and analyzed as described above at Xenco in Midland, Texas. The potholes and delineation soil sample locations are depicted on Figure 3.

From July 18 through July 26, 2019, LTE personnel was at the Site to oversee excavation of soil as indicated by visual observations, potholing, and field screening results. To direct excavation activities, LTE screened soil for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach® chloride QuanTab® test strips, respectively. Following removal of impacted soil to a depth of approximately 0.5 feet bgs, LTE collected 20 5-point composite floor soil samples (FS01 through FS20) every 200 square feet from floor of the excavation. Based on the shallow depth of the excavation, soil samples FS01 through FS20 were representative of the sidewalls and floor of the excavation. 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. The excavation soil samples were collected, handled, and analyzed as described above. The excavation extent and soil sample locations are depicted on Figure 4.

The excavation extent measured approximately 6,300 square feet in area. A total of approximately 115 cubic yards of soil were removed from the excavation. The impacted soil was transported and properly disposed of at the R360 landfill facility located in Hobbs, New Mexico.

On July 24, 2019, four background soil samples (BG01 through BG04) were collected at depths ranging from approximately 3 feet to 9 feet bgs along the southern and eastern boundaries of the well pad in areas not affected by the release, in order to assess background chloride concentrations at the Site. The background samples were used to compare chloride concentrations in samples collected from within the release to determine if chloride concentrations were indicative of the release, or if they were comparable to background conditions. The background soil sample locations are depicted on Figure 2.

ANALYTICAL RESULTS

Laboratory analytical results for preliminary soil samples SS01 through SS04 indicated benzene, BTEX, GRO and DRO, TPH, and chloride concentrations were compliant with the revised Closure Criteria. Based on visible surface staining and field screening results within the release area, delineation and excavation activities were completed.

Laboratory analytical results for the delineation soil samples collected within the release area from potholes PH01 through PH03 indicated benzene, BTEX, GRO and DRO, TPH, and chloride concentrations were compliant with the revised Closure Criteria. Following excavation of visually impacted soil, confirmation soil samples FS01 through FS20 were collected from the final excavation extent. Laboratory analytical results for excavation soil samples FS01 through FS20 indicated benzene, BTEX, GRO and DRO, TPH, and chloride concentrations were compliant with the revised Closure Criteria.





Laboratory analytical results for background samples BG01 through BG04, collected at depths ranging from approximately 3 feet bgs to 9 feet bgs, indicated background chloride concentrations in this area are highly variable with a maximum background chloride concentration of 7,740 mg/kg. Chloride concentrations in the delineation and excavation soil samples were similarly variable and below the maximum background chloride concentration.

Based on the laboratory analytical results, no further remediation activities appear warranted at this time. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Attachment 4.

CLOSURE REQUEST

Impacted soil related to an illegal dumping was excavated from the release area. Laboratory analytical results for the excavation soil samples collected from the final excavation extent indicated benzene, BTEX, GRO and DRO, TPH, and chloride concentrations were compliant with the revised Closure Criteria. Delineation soil sampling was completed within the release area to confirm the vertical extent of the release. Laboratory analytical results for the delineation soil samples collected from potholes PH01 through PH03 indicated benzene, BTEX, GRO and DRO, TPH, and chloride concentrations were compliant with the revised Closure Criteria, and chloride concentrations in the vicinity of the release and at depth are highly variable and similar to background chloride concentrations in the vicinity of the Site. Based on the excavation and delineation soil sample analytical results, no further remediation activities appear warranted.

Excavation of impacted soil related to an illegal dumping has mitigated impacts at this Site. XTO requests no further action for RP Number 2RP-5552. Upon approval of this closure request, XTO will backfill the excavation with material purchased locally and recontour the Site to match pre-existing site conditions. An updated Form C-141 is included as 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.

Carol Ann Whaley
Staff Geologist

Ashley L. Ager, P.G.
Senior Geologist





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

Attachments:

Figure 1 Site Location Map
Figure 2 Preliminary Soil Sample Locations
Figure 3 Delineation Soil Sample Locations
Figure 4 Excavation Soil Sample Locations
Table 1 Soil Analytical Results
Attachment 1 Initial/Final NMOCD Form C-141 (2RP-5552)
Attachment 2 Photographic Log
Attachment 3 Lithologic / Soil Sample Logs
Attachment 4 Laboratory Analytical Reports

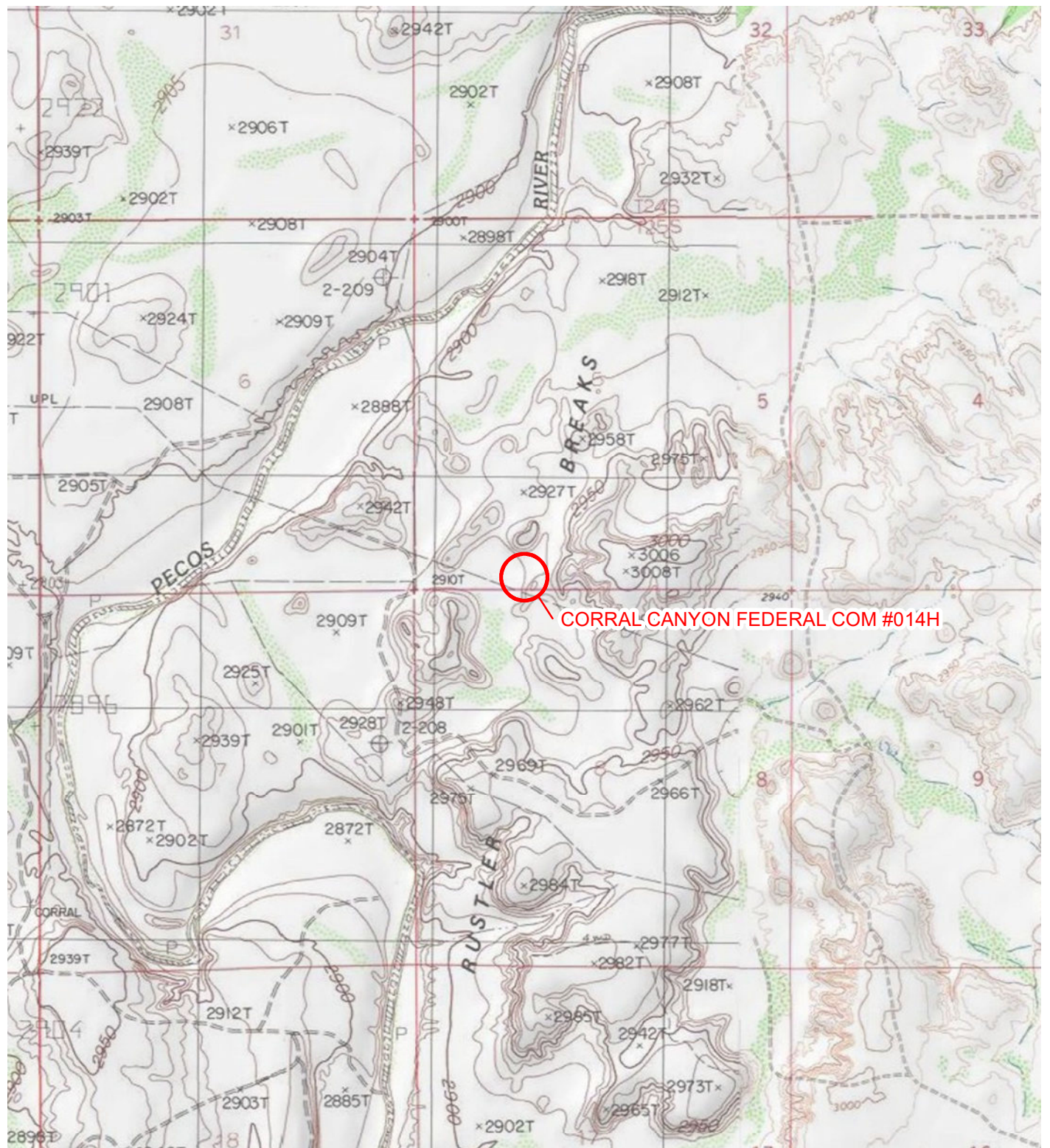
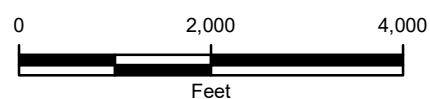


IMAGE COURTESY OF ESRI/USGS

LEGEND

 SITE LOCATION



NOTE: REMEDIATION PERMIT
NUMBER 2RP-5552

FIGURE 1
SITE LOCATION MAP
CORRAL CANYON FEDERAL COM #014H
UNIT N SEC 5 T25S R29E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.



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

SS03@0.5'
 07/17/2019
 B: <0.00202
 BTEX: <0.00202
 GRO+DRO: <15.0
 TPH: <15.0
 Cl: 73.0

SS04@0.5'
 07/17/2019
 B: <0.00200
 BTEX: <0.00200
 GRO+DRO: <15.0
 TPH: <15.0
 Cl: 84.9

BG01@9'
 07/24/2019
 B: <0.00198
 BTEX: <0.00198
 GRO+DRO: <49.8
 TPH: <49.8
 Cl: 2,950

SS01@0.5'
 07/17/2019
 B: <0.00198
 BTEX: <0.00198
 GRO+DRO: <15.0
 TPH: <15.0
 Cl: 58.6

SS02@0.5'
 07/17/2019
 B: <0.00202
 BTEX: <0.00202
 GRO+DRO: <15.0
 TPH: <15.0
 Cl: 323

BG02@9'
 07/24/2019
 B: <0.00199
 BTEX: <0.00199
 GRO+DRO: <49.8
 TPH: <49.8
 Cl: 7,740

BG03@5'
 07/24/2019
 B: <0.00198
 BTEX: <0.00198
 GRO+DRO: <49.9
 TPH: <49.9
 Cl: 631

BG04@3'
 07/24/2019
 B: <0.00199
 BTEX: <0.00199
 GRO+DRO: <50.0
 TPH: <50.0
 Cl: 126

LEGEND



RELEASE LOCATION



PRELIMINARY SOIL SAMPLE IN COMPLIANCE
 WITH APPLICABLE CLOSURE CRITERIA



BACKGROUND SOIL SAMPLE



RELEASE EXTENT

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-5552

IMAGE COURTESY OF ESRI

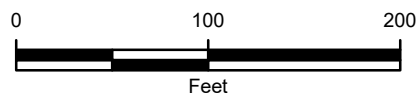


FIGURE 2
 PRELIMINARY SOIL SAMPLE LOCATIONS
 CORRAL CANYON FEDERAL COM #014H
 UNIT N SEC 5 T25S R29E
 EDDY COUNTY, NEW MEXICO
 XTO ENERGY, INC.



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

PH03@2'
 07/19/2019
 B: <0.00201
 BTEX: <0.00201
 GRO+DRO: 42.9
 TPH: 42.9
 Cl: 1,030

PH03A@4'
 07/19/2019
 B: <0.00200
 BTEX: <0.00200
 GRO+DRO: 28.4
 TPH: 28.4
 Cl: 752

PH03B@6'
 07/19/2019
 B: <0.00201
 BTEX: <0.00201
 GRO+DRO: 22.2
 TPH: 22.2
 Cl: 53.3

PH02@2'
 07/19/2019
 B: <0.00200
 BTEX: <0.00200
 GRO+DRO: <15.0
 TPH: <15.0
 Cl: 688

PH02A@4'
 07/19/2019
 B: <0.00200
 BTEX: <0.00200
 GRO+DRO: <15.0
 TPH: <15.0
 Cl: 999

PH02B@6'
 07/19/2019
 B: <0.00201
 BTEX: <0.00201
 GRO+DRO: <15.0
 TPH: <15.0
 Cl: 751

PH02C@8'
 07/19/2019
 B: <0.00200
 BTEX: 0.00324
 GRO+DRO: <15.0
 TPH: <15.0
 Cl: 710

PH02D@10'
 07/19/2019
 B: <0.00201
 BTEX: <0.00201
 GRO+DRO: 38.7
 TPH: 38.7
 Cl: 1,200

PH02E@11'
 07/19/2019
 B: <0.00199
 BTEX: <0.00199
 GRO+DRO: 32.5
 TPH: 32.5
 Cl: 1,320

PH01@2'
 07/19/2019
 B: <0.00201
 BTEX: <0.00201
 GRO+DRO: <15.0
 TPH: <15.0
 Cl: 751

PH01A@4'
 07/19/2019
 B: <0.00200
 BTEX: <0.00200
 GRO+DRO: <14.9
 TPH: <14.9
 Cl: 1,390

PH01B@6'
 07/19/2019
 B: <0.00200
 BTEX: <0.00200
 GRO+DRO: <15.0
 TPH: <15.0
 Cl: 520

LEGEND



RELEASE LOCATION



DELINEATION SOIL SAMPLE IN COMPLIANCE
 WITH APPLICABLE CLOSURE CRITERIA



RELEASE EXTENT

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-5552

IMAGE COURTESY OF ESRI

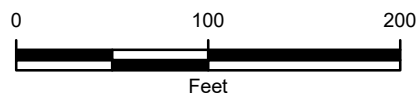


FIGURE 3
 DELINEATION SOIL SAMPLE LOCATIONS
 CORRAL CANYON FEDERAL COM #014H
 UNIT N SEC 5 T25S R29E
 EDDY COUNTY, NEW MEXICO
 XTO ENERGY, INC.





IMAGE COURTESY OF ESRI

LEGEND



RELEASE LOCATION



EXCAVATION SOIL SAMPLE IN COMPLIANCE
WITH APPLICABLE CLOSURE CRITERIA



EXCAVATION EXTENT

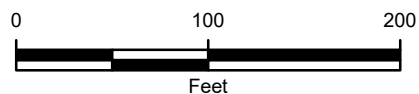


FIGURE 4
EXCAVATION SOIL SAMPLE LOCATIONS
CORRAL CANYON FEDERAL COM #014H
UNIT N SEC 5 T25S R29E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.



SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)
NOTE: REMEDIATION PERMIT NUMBER 2RP-5552

**TABLE 1
SOIL ANALYTICAL RESULTS**

**CORRAL CANYON FEDERAL COM #014H
REMEDATION PERMIT NUMBER 2RP-5552
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.**

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
SS01	0.5	07/17/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	58.6
SS02	0.5	07/17/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	323
SS03	0.5	07/17/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	73.0
SS04	0.5	07/17/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	84.9
BG01	9	07/24/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.8	<49.8	<49.8	<49.8	<49.8	2,950
BG02	9	07/24/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.8	<49.8	<49.8	<49.8	<49.8	7,740
BG03	5	07/24/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	<49.9	631
BG04	3	07/24/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	126
PH01	2	07/19/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	751
PH01A	4	07/19/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	1,390
PH01B	6	07/19/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	520
PH02	2	07/19/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	688
PH02A	4	07/19/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	999
PH02B	6	07/19/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	751
PH02C	8	07/19/2019	<0.00200	0.00324	<0.00200	<0.00200	0.00324	<15.0	<15.0	<15.0	<15.0	<15.0	710
PH02D	10	07/19/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	38.7	<15.0	38.7	38.7	1,200
PH02E	11	07/19/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	32.5	<15.0	32.5	32.5	1,320
PH03	2	07/19/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<14.9	42.9	<14.9	42.9	42.9	1,030
PH03A	4	07/19/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	28.4	<15.0	28.4	28.4	752
PH03B	6	07/19/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	22.2	<15.0	22.2	22.2	53.3
FS01	0.5	07/18/2019	<0.00199	0.00649	<0.00199	<0.00199	0.00649	<15.0	<15.0	<15.0	<15.0	<15.0	<5.00
FS02	0.5	07/18/2019	<0.00201	0.00223	<0.00201	<0.00201	0.00223	<15.0	<15.0	<15.0	<15.0	<15.0	526
FS03	0.5	07/18/2019	<0.00198	0.00218	<0.00198	<0.00198	0.00218	<15.0	<15.0	<15.0	<15.0	<15.0	24.5
FS04	0.5	07/26/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	200
FS05	0.5	07/26/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	11.4



**TABLE 1
SOIL ANALYTICAL RESULTS**

**CORRAL CANYON FEDERAL COM #014H
REMEDATION PERMIT NUMBER 2RP-5552
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)
FS06	0.5	07/26/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	294
FS07	0.5	07/26/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	38.6	<15.0	38.6	38.6	2,770
FS08	0.5	07/26/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	582
FS09	0.5	07/26/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	108
FS10	0.5	07/26/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	1,190
FS11	0.5	07/26/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	812
FS12	0.5	07/26/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	468
FS13	0.5	07/26/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	519
FS14	0.5	07/26/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	1,100
FS15	0.5	07/26/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	148
FS16	0.5	07/26/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	557
FS17	0.5	07/26/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<14.9	<14.9	<14.9	<14.9	<14.9	217
FS18	0.5	07/26/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	68.2
FS19	0.5	07/26/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	921
FS20	0.5	07/26/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	598
NMOCDC Table 1 Closure Criteria			10	NE	NE	NE	50	NE	NE	NE	1,000	2,500	10,000

Notes:

bgs - below ground surface

BTEX - benzene, toluene, ethylbenzene, and total xylenes

DRO - diesel range organics

GRO - gasoline range organics

ORO - motor oil range organics

NMAC - New Mexico Administrative Code

NMOCDC - New Mexico Oil Conservation Division

mg/kg - milligrams per kilogram

< - indicates result is below laboratory reporting limits

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

NE - not established

TPH - total petroleum hydrocarbons





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	NAB1921751473
District RP	2RP-5552
Facility ID	
Application ID	pAB1921751211

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 # (assigned by OCD) NAB1921751473
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.152506° Longitude -104.010074°
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Corral Canyon Federal Com #014H	Site Type Production Well Facility
Date Release Discovered 7/9/2019	API# (if applicable) 30-015-43474

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

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☒ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)
Unknown (illegal dump)	15.55 barrels	0 barrels

Cause of Release

Reclamation contractor arrived at location to discover and report an illegal dumping of fluids that had occurred on the well pad at an unknown time. Additional third party resources have been retained to assist with remediation.

State of New Mexico
Oil Conservation Division

Incident ID	NAB1921751473
District RP	2RP-5552
Facility ID	
Application ID	pAB1921751211

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release? N/A
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? N/A	

Initial Response

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

☒ The source of the release has been stopped. ☒ The impacted area has been secured to protect human health and the environment. ☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. ☐ All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why: No free fluids remained to be recovered.	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: <u>Kyle Littrell</u> Signature:  email: <u>Kyle_Littrell@xtoenergy.com</u>	Title: <u>SH&E Supervisor</u> Date: <u>7/17/2019</u> Telephone: <u>432-221-7331</u>
<u>OCD Only</u> Received by: <u>Amalia Bustamante</u> Date: <u>8/5/2019</u>	

Incident ID	
District RP	2RP-5552
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	50 - 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.

Incident ID	
District RP	2RP-5552
Facility ID	
Application ID	

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature:  Date: 10/07/2019

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	2RP-5552
Facility ID	
Application ID	

Closure

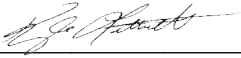
The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled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

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

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

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature:  Date: 10/07/2019

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

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____





View of release area facing northeast.

Project: 012919153	XTO Energy, Inc. Corral Canyon Federal Com #014H	
July 17, 2019	Photographic Log	



View of final excavation extent facing east.

Project: 012919153	XTO Energy, Inc. Corral Canyon Federal Com #014H	 <i>Advancing Opportunity</i>
July 26, 2019	Photographic Log	





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

Compliance · Engineering · Remediation

Identifier: PH01

Date: 7/19/19

Project Name:
Corral Canyon 14H

RP Number:

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: BB

Method: Trackhoe

Lat/Long:

Field Screening: CHLORIDES, PID.

Hole Diameter: NA

Total Depth: 6'

Comment All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0		CLAYE, fill	CLAYE, dry, tan, poorly consolidated, f. xln, fill.
					1			
D	150 @ 3.8 x4 = (600)	0.1	N	PH01	2	2'	CLAYE, fill	SNA (Same as Above)
					3			
D	224 @ 4.9 x4 = (816)	0.3	N	PH01A	4	4'	CLAYE, f. x	SNA
					5			
P	78 @ 2.6 x4 = (312)	0.1	N	PH01B	6	6'	SP, fill	SAND w/ caliche gravel, dry, light brown, poorly graded, f., no odor, fill
					7			EOP @ 6'
					8			
					9			
					10			
					11			
					12			



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

Compliance · Engineering · Remediation

Identifier:

P1402

Date:

7/19/19

Project Name:

Corral Canyon 14H

RP Number:

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: BB

Method: *Free hoe*

Lat/Long:

Field Screening: CHLORIDES, PID.

Hole Diameter:

NA

Total Depth:

11'

Comment: All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0		CLICHE, fill	CALICHE, dry, tan, poorly consolidated, f. x la, fill.
					1			
D	100 @ 3.0 x4 = 400	0.5	N	P1402	2	2'	CLICHE, fill	SAA (Same as Above)
					3			
D	268 @ 4.6 x4 = 632	0.7	N	P1402A	4	4'	CLICHE, fill	SAA
					5			
D	111 @ 3.2 x4 = 444	0.7	N	P1402B	6	6'	SP	SAND, dry, brown, poorly graded, f.-m., some vegetation/roots, no odor.
					7			
D	111 @ 3.2 x4 = 444	0.5	N	P1402C	8	8'	SP	SAA
					9			
D	193 @ 4.4 x4 = 772	0.9	N	P1402D	10	10'	SP	SAA
D	241 @ 5.0 x4 = 964	1.0	N	P1402E	11	11'	SP	SAA
					12			

↑ FOP @ 11'



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

Compliance · Engineering · Remediation

Identifier:

PH03

Date:

7/19/19

Project Name:

Corral Canyon 14H

RP Number:

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: BB

Method: Trench

Lat/Long:

Field Screening: CHLORIDES, PID.

Hole Diameter:

N/A

Total Depth:

6'

Comment All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0		CLCH, fill.	CLCH, dry, tan, poorly consolidated, no odor, fill.
					1			
D	250 @ 4.6 x4 = 632	1.5	N	PH03	2	2'	CLCH, fill	SAA (Same As Above)
					3			
					4	4'	SP	SAND, dry, brown, poorly graded, no odor.
D	130 @ 3.6 x4 = 544	1.0	N	PH03A	5			
					6	6'	SP	SAA
D	229 @ 0.6 x4 = 116	1.2	N	PH03B	7			
					8			
					9			
					10			
					11			
					12			

END @ 6'



Analytical Report 631382

**for
LT Environmental, Inc.**

**Project Manager: Dan Moir
Corral Canyon 14H**

29-JUL-19

Collected By: Client



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

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

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

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



29-JUL-19

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **631382**

Corral Canyon 14H

Project Address: Delaware Basin

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) 631382. 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. 631382 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

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

Jessica Kramer

Project Assistant

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

Certified and approved by numerous States and Agencies.

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

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



Sample Cross Reference 631382

LT Environmental, Inc., Arvada, CO

Corral Canyon 14H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	07-17-19 14:25	0.5 ft	631382-001
SS02	S	07-17-19 14:30	0.5 ft	631382-002
SS03	S	07-17-19 14:35	0.5 ft	631382-003
SS04	S	07-17-19 14:40	0.5 ft	631382-004



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *Corral Canyon 14H*

Project ID:
Work Order Number(s): 631382

Report Date: 29-JUL-19
Date Received: 07/18/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3096391 BTEX by EPA 8021B

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

Samples affected are: 631330-002 SD.

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



Certificate of Analysis Summary 631382

LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon 14H

Project Id:

Contact: Dan Moir

Project Location: Delaware Basin

Date Received in Lab: Thu Jul-18-19 10:46 am

Report Date: 29-JUL-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	631382-001	631382-002	631382-003	631382-004		
	Field Id:	SS01	SS02	SS03	SS04		
	Depth:	0.5- ft	0.5- ft	0.5- ft	0.5- ft		
	Matrix:	SOIL	SOIL	SOIL	SOIL		
	Sampled:	Jul-17-19 14:25	Jul-17-19 14:30	Jul-17-19 14:35	Jul-17-19 14:40		
BTEX by EPA 8021B SUB: T104704400-18-16	Extracted:	Jul-22-19 13:40	Jul-22-19 13:40	Jul-22-19 13:40	Jul-22-19 13:40		
	Analyzed:	Jul-24-19 05:09	Jul-24-19 05:29	Jul-23-19 08:37	Jul-24-19 05:49		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
	Benzene	<0.00198 0.00198	<0.00202 0.00202	<0.00202 0.00202	<0.00200 0.00200		
	Toluene	<0.00198 0.00198	<0.00202 0.00202	<0.00202 0.00202	<0.00200 0.00200		
Ethylbenzene		<0.00198 0.00198	<0.00202 0.00202	<0.00202 0.00202	<0.00200 0.00200		
m,p-Xylenes		<0.00397 0.00397	<0.00404 0.00404	<0.00403 0.00403	<0.00401 0.00401		
o-Xylene		<0.00198 0.00198	<0.00202 0.00202	<0.00202 0.00202	<0.00200 0.00200		
Total Xylenes		<0.00198 0.00198	<0.00202 0.00202	<0.00202 0.00202	<0.00200 0.00200		
Total BTEX		<0.00198 0.00198	<0.00202 0.00202	<0.00202 0.00202	<0.00200 0.00200		
Chloride by EPA 300 SUB: T104704400-18-16	Extracted:	Jul-19-19 16:15	Jul-19-19 16:15	Jul-19-19 16:15	Jul-22-19 11:00		
	Analyzed:	Jul-20-19 05:22	Jul-20-19 05:29	Jul-20-19 05:35	Jul-22-19 15:12		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
	Chloride	58.6 4.98	323 5.00	73.0 5.00	84.9 5.04		
TPH by SW8015 Mod SUB: T104704400-18-16	Extracted:	Jul-26-19 08:00	Jul-26-19 08:00	Jul-26-19 08:00	Jul-26-19 08:00		
	Analyzed:	Jul-26-19 16:55	Jul-26-19 17:19	Jul-26-19 18:08	Jul-26-19 18:32		
	Units/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		
	Diesel Range Organics (DRO)	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0		
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0		
Total TPH		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0		
Total GRO-DRO		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0		

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

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

Version: 1.9%

Jessica Kramer
Project Assistant



Certificate of Analytical Results 631382

LT Environmental, Inc., Arvada, CO

Corral Canyon 14H

Sample Id: **SS01**
Lab Sample Id: 631382-001

Matrix: Soil
Date Collected: 07.17.19 14.25

Date Received: 07.18.19 10.46
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096030

Date Prep: 07.19.19 16.15

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	58.6	4.98	mg/kg	07.20.19 05.22		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3096711

Date Prep: 07.26.19 08.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

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	07.26.19 16.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.26.19 16.55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.26.19 16.55	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.26.19 16.55	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	07.26.19 16.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	07.26.19 16.55	
o-Terphenyl	84-15-1	92	%	70-135	07.26.19 16.55	



Certificate of Analytical Results 631382

LT Environmental, Inc., Arvada, CO

Corral Canyon 14H

Sample Id: **SS01**
Lab Sample Id: 631382-001

Matrix: Soil
Date Collected: 07.17.19 14.25

Date Received: 07.18.19 10.46
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096391

Prep Method: SW5030B

% Moisture:

Date Prep: 07.22.19 13.40

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	07.24.19 05.09	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.24.19 05.09	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.24.19 05.09	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	07.24.19 05.09	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.24.19 05.09	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	07.24.19 05.09	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.24.19 05.09	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	108	%	70-130	07.24.19 05.09		
1,4-Difluorobenzene	540-36-3	100	%	70-130	07.24.19 05.09		



Certificate of Analytical Results 631382

LT Environmental, Inc., Arvada, CO

Corral Canyon 14H

Sample Id: SS02
Lab Sample Id: 631382-002

Matrix: Soil
Date Collected: 07.17.19 14.30

Date Received: 07.18.19 10.46
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096030

Date Prep: 07.19.19 16.15

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	323	5.00	mg/kg	07.20.19 05.29		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3096711

Date Prep: 07.26.19 08.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

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	07.26.19 17.19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.26.19 17.19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.26.19 17.19	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.26.19 17.19	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	07.26.19 17.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	83	%	70-135	07.26.19 17.19	
o-Terphenyl	84-15-1	71	%	70-135	07.26.19 17.19	



Certificate of Analytical Results 631382

LT Environmental, Inc., Arvada, CO

Corral Canyon 14H

Sample Id: SS02
Lab Sample Id: 631382-002

Matrix: Soil
Date Collected: 07.17.19 14.30

Date Received: 07.18.19 10.46
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096391

Prep Method: SW5030B

% Moisture:

Date Prep: 07.22.19 13.40

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.24.19 05.29	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.24.19 05.29	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.24.19 05.29	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	07.24.19 05.29	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.24.19 05.29	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.24.19 05.29	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.24.19 05.29	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	105	%	70-130	07.24.19 05.29		
1,4-Difluorobenzene	540-36-3	102	%	70-130	07.24.19 05.29		



Certificate of Analytical Results 631382

LT Environmental, Inc., Arvada, CO

Corral Canyon 14H

Sample Id: SS03
Lab Sample Id: 631382-003

Matrix: Soil
Date Collected: 07.17.19 14.35

Date Received: 07.18.19 10.46
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096030

Date Prep: 07.19.19 16.15

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	73.0	5.00	mg/kg	07.20.19 05.35		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3096711

Date Prep: 07.26.19 08.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

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	07.26.19 18.08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.26.19 18.08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.26.19 18.08	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.26.19 18.08	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	07.26.19 18.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	07.26.19 18.08	
o-Terphenyl	84-15-1	78	%	70-135	07.26.19 18.08	



Certificate of Analytical Results 631382

LT Environmental, Inc., Arvada, CO

Corral Canyon 14H

Sample Id: SS03
Lab Sample Id: 631382-003

Matrix: Soil
Date Collected: 07.17.19 14.35

Date Received: 07.18.19 10.46
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096391

Prep Method: SW5030B

% Moisture:

Date Prep: 07.22.19 13.40

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.23.19 08.37	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.23.19 08.37	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.23.19 08.37	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	07.23.19 08.37	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.23.19 08.37	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.23.19 08.37	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.23.19 08.37	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	07.23.19 08.37		
4-Bromofluorobenzene	460-00-4	109	%	70-130	07.23.19 08.37		



Certificate of Analytical Results 631382

LT Environmental, Inc., Arvada, CO

Corral Canyon 14H

Sample Id: **SS04**
Lab Sample Id: 631382-004

Matrix: Soil
Date Collected: 07.17.19 14.40

Date Received: 07.18.19 10.46
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096162

Date Prep: 07.22.19 11.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	84.9	5.04	mg/kg	07.22.19 15.12		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3096711

Date Prep: 07.26.19 08.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

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	07.26.19 18.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.26.19 18.32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.26.19 18.32	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.26.19 18.32	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	07.26.19 18.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	07.26.19 18.32	
o-Terphenyl	84-15-1	87	%	70-135	07.26.19 18.32	



Certificate of Analytical Results 631382

LT Environmental, Inc., Arvada, CO

Corral Canyon 14H

Sample Id: **SS04**
Lab Sample Id: 631382-004

Matrix: Soil
Date Collected: 07.17.19 14.40

Date Received: 07.18.19 10.46
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096391

Prep Method: SW5030B

% Moisture:

Date Prep: 07.22.19 13.40

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.24.19 05.49	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.24.19 05.49	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.24.19 05.49	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.24.19 05.49	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.24.19 05.49	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.24.19 05.49	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.24.19 05.49	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	105	%	70-130	07.24.19 05.49		
4-Bromofluorobenzene	460-00-4	95	%	70-130	07.24.19 05.49		

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 631382

LT Environmental, Inc. Corral Canyon 14H

Analytical Method: Chloride by EPA 300

Seq Number: 3096030

MB Sample Id: 7682399-1-BLK

Matrix: Solid

LCS Sample Id: 7682399-1-BKS

Prep Method: E300P

Date Prep: 07.19.19

LCSD Sample Id: 7682399-1-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	251	100	253	101	90-110	1	20	mg/kg	07.20.19 02:32	

Analytical Method: Chloride by EPA 300

Seq Number: 3096162

MB Sample Id: 7682485-1-BLK

Matrix: Solid

LCS Sample Id: 7682485-1-BKS

Prep Method: E300P

Date Prep: 07.22.19

LCSD Sample Id: 7682485-1-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	236	94	237	95	90-110	0	20	mg/kg	07.22.19 12:01	

Analytical Method: Chloride by EPA 300

Seq Number: 3096030

Parent Sample Id: 631327-028

Matrix: Soil

MS Sample Id: 631327-028 S

Prep Method: E300P

Date Prep: 07.19.19

MSD Sample Id: 631327-028 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	4.99	250	263	103	264	104	90-110	0	20	mg/kg	07.20.19 04:19	

Analytical Method: Chloride by EPA 300

Seq Number: 3096030

Parent Sample Id: 631573-002

Matrix: Soil

MS Sample Id: 631573-002 S

Prep Method: E300P

Date Prep: 07.19.19

MSD Sample Id: 631573-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	18.8	248	274	103	276	104	90-110	1	20	mg/kg	07.20.19 02:51	

Analytical Method: Chloride by EPA 300

Seq Number: 3096162

Parent Sample Id: 631480-001

Matrix: Soil

MS Sample Id: 631480-001 S

Prep Method: E300P

Date Prep: 07.22.19

MSD Sample Id: 631480-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	34.2	252	277	96	276	96	90-110	0	20	mg/kg	07.22.19 12:28	

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 631382

LT Environmental, Inc. Corral Canyon 14H

Analytical Method: Chloride by EPA 300

Seq Number: 3096162

Parent Sample Id: 631480-011

Matrix: Soil

MS Sample Id: 631480-011 S

Prep Method: E300P

Date Prep: 07.22.19

MSD Sample Id: 631480-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2.68	251	247	97	247	97	90-110	0	20	mg/kg	07.22.19 13:56	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3096711

MB Sample Id: 7682976-1-BLK

Matrix: Solid

LCS Sample Id: 7682976-1-BKS

Prep Method: TX1005P

Date Prep: 07.26.19

LCSD Sample Id: 7682976-1-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	907	91	846	85	70-135	7	20	mg/kg	07.26.19 12:06	
Diesel Range Organics (DRO)	<8.13	1000	1050	105	988	99	70-135	6	20	mg/kg	07.26.19 12:06	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	78		89		76		70-135	%	07.26.19 12:06
o-Terphenyl	82		103		90		70-135	%	07.26.19 12:06

Analytical Method: TPH by SW8015 Mod

Seq Number: 3096711

Parent Sample Id: 631327-020

Matrix: Soil

MS Sample Id: 631327-020 S

Prep Method: TX1005P

Date Prep: 07.26.19

MSD Sample Id: 631327-020 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)	10.1	997	906	90	930	92	70-135	3	20	mg/kg	07.26.19 13:18	
Diesel Range Organics (DRO)	<8.10	997	1030	103	1050	105	70-135	2	20	mg/kg	07.26.19 13:18	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	77		80		70-135	%	07.26.19 13:18
o-Terphenyl	82		82		70-135	%	07.26.19 13:18

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

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

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

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



QC Summary 631382

LT Environmental, Inc. Corral Canyon 14H

Analytical Method: BTEX by EPA 8021B

Seq Number: 3096391

MB Sample Id: 7682521-1-BLK

Matrix: Solid

LCS Sample Id: 7682521-1-BKS

Prep Method: SW5030B

Date Prep: 07.22.19

LCSD Sample Id: 7682521-1-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	0.106	106	0.103	103	70-130	3	35	mg/kg	07.23.19 08:05	
Toluene	<0.00200	0.100	0.103	103	0.102	102	70-130	1	35	mg/kg	07.23.19 08:05	
Ethylbenzene	<0.00200	0.100	0.113	113	0.113	113	70-130	0	35	mg/kg	07.23.19 08:05	
m,p-Xylenes	<0.00400	0.200	0.230	115	0.233	117	70-130	1	35	mg/kg	07.23.19 08:05	
o-Xylene	<0.00200	0.100	0.110	110	0.114	114	70-130	4	35	mg/kg	07.23.19 08:05	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	95		97		102		70-130	%	07.23.19 08:05
4-Bromofluorobenzene	100		103		119		70-130	%	07.23.19 08:05

Analytical Method: BTEX by EPA 8021B

Seq Number: 3096391

Parent Sample Id: 631330-002

Matrix: Soil

MS Sample Id: 631330-002 S

Prep Method: SW5030B

Date Prep: 07.22.19

MSD Sample Id: 631330-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00198	0.0990	0.0821	83	0.106	106	70-130	25	35	mg/kg	07.23.19 12:49	
Toluene	0.0291	0.0990	0.0651	36	0.100	71	70-130	42	35	mg/kg	07.23.19 12:49	XF
Ethylbenzene	<0.00198	0.0990	0.0740	75	0.105	105	70-130	35	35	mg/kg	07.23.19 12:49	
m,p-Xylenes	0.00949	0.198	0.160	76	0.222	107	70-130	32	35	mg/kg	07.23.19 12:49	
o-Xylene	0.0359	0.0990	0.0726	37	0.0998	64	70-130	32	35	mg/kg	07.23.19 12:49	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	95		95		70-130	%	07.23.19 12:49
4-Bromofluorobenzene	113		140	**	70-130	%	07.23.19 12:49

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

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: 631382

www.xenco.com

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

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

Project Name:	Cerral Canyon WH	Turn Around	
Project Number:	NOT ASSIGNED	Routine ☒	
P.O. Number:		Rush:	
Sampler's Name:	Benjamin Bell	Due Date:	

SAMPLE RECEIPT	Temp Blank: ☒ Yes ☐ No	Wet Ice: ☒ Yes ☐ No	Thermometer ID	Correction Factor:	Total Containers:
Temperature (°C):	7.8				
Received Intact:	Yes ☒ No ☐				
Cooler Custody Seals:	Yes ☒ No ☐				
Sample Custody Seals:	Yes ☒ No ☐				

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	ANALYSIS REQUEST	Work Order Notes
SS01	S	7/17/19	1425	0.5'	1	X	X	X		
SS02	S	7/17/19	1430	1	1	X	X	X		
SS03	S	7/17/19	1435	1	1	X	X	X		
SS04	S	7/17/19	1440	1	1	X	X	X		
SS05	S	7/17/19	1445	1	1	X	X	X		
SS06	S	7/17/19	1450	1	1	X	X	X		
SS07	S	7/17/19	1455	1	1	X	X	X		
SS08	S	7/17/19	1500	1	1	X	X	X		
SS09	S	7/17/19	1505	1	1	X	X	X		
SS10	S	7/17/19	1510	1	1	X	X	X		
SS11	S	7/17/19	1515	1	1	X	X	X		
SS12	S	7/17/19	1520	1	1	X	X	X		
SS13	S	7/17/19	1525	1	1	X	X	X		
SS14	S	7/17/19	1530	1	1	X	X	X		
SS15	S	7/17/19	1535	1	1	X	X	X		
SS16	S	7/17/19	1540	1	1	X	X	X		
SS17	S	7/17/19	1545	1	1	X	X	X		
SS18	S	7/17/19	1550	1	1	X	X	X		
SS19	S	7/17/19	1555	1	1	X	X	X		
SS20	S	7/17/19	1600	1	1	X	X	X		
SS21	S	7/17/19	1605	1	1	X	X	X		
SS22	S	7/17/19	1610	1	1	X	X	X		
SS23	S	7/17/19	1615	1	1	X	X	X		
SS24	S	7/17/19	1620	1	1	X	X	X		
SS25	S	7/17/19	1625	1	1	X	X	X		
SS26	S	7/17/19	1630	1	1	X	X	X		
SS27	S	7/17/19	1635	1	1	X	X	X		
SS28	S	7/17/19	1640	1	1	X	X	X		
SS29	S	7/17/19	1645	1	1	X	X	X		
SS30	S	7/17/19	1650	1	1	X	X	X		
SS31	S	7/17/19	1655	1	1	X	X	X		
SS32	S	7/17/19	1700	1	1	X	X	X		
SS33	S	7/17/19	1705	1	1	X	X	X		
SS34	S	7/17/19	1710	1	1	X	X	X		
SS35	S	7/17/19	1715	1	1	X	X	X		
SS36	S	7/17/19	1720	1	1	X	X	X		
SS37	S	7/17/19	1725	1	1	X	X	X		
SS38	S	7/17/19	1730	1	1	X	X	X		
SS39	S	7/17/19	1735	1	1	X	X	X		
SS40	S	7/17/19	1740	1	1	X	X	X		
SS41	S	7/17/19	1745	1	1	X	X	X		
SS42	S	7/17/19	1750	1	1	X	X	X		
SS43	S	7/17/19	1755	1	1	X	X	X		
SS44	S	7/17/19	1800	1	1	X	X	X		
SS45	S	7/17/19	1805	1	1	X	X	X		
SS46	S	7/17/19	1810	1	1	X	X	X		
SS47	S	7/17/19	1815	1	1	X	X	X		
SS48	S	7/17/19	1820	1	1	X	X	X		
SS49	S	7/17/19	1825	1	1	X	X	X		
SS50	S	7/17/19	1830	1	1	X	X	X		
SS51	S	7/17/19	1835	1	1	X	X	X		
SS52	S	7/17/19	1840	1	1	X	X	X		
SS53	S	7/17/19	1845	1	1	X	X	X		
SS54	S	7/17/19	1850	1	1	X	X	X		
SS55	S	7/17/19	1855	1	1	X	X	X		
SS56	S	7/17/19	1900	1	1	X	X	X		
SS57	S	7/17/19	1905	1	1	X	X	X		
SS58	S	7/17/19	1910	1	1	X	X	X		
SS59	S	7/17/19	1915	1	1	X	X	X		
SS60	S	7/17/19	1920	1	1	X	X	X		
SS61	S	7/17/19	1925	1	1	X	X	X		
SS62	S	7/17/19	1930	1	1	X	X	X		
SS63	S	7/17/19	1935	1	1	X	X	X		
SS64	S	7/17/19	1940	1	1	X	X	X		
SS65	S	7/17/19	1945	1	1	X	X	X		
SS66	S	7/17/19	1950	1	1	X	X	X		
SS67	S	7/17/19	1955	1	1	X	X	X		
SS68	S	7/17/19	2000	1	1	X	X	X		
SS69	S	7/17/19	2005	1	1	X	X	X		
SS70	S	7/17/19	2010	1	1	X	X	X		
SS71	S	7/17/19	2015	1	1	X	X	X		
SS72	S	7/17/19	2020	1	1	X	X	X		
SS73	S	7/17/19	2025	1	1	X	X	X		
SS74	S	7/17/19	2030	1	1	X	X	X		
SS75	S	7/17/19	2035	1	1	X	X	X		
SS76	S	7/17/19	2040	1	1	X	X	X		
SS77	S	7/17/19	2045	1	1	X	X	X		
SS78	S	7/17/19	2050	1	1	X	X	X		
SS79	S	7/17/19	2055	1	1	X	X	X		
SS80	S	7/17/19	2100	1	1	X	X	X		
SS81	S	7/17/19	2105	1	1	X	X	X		
SS82	S	7/17/19	2110	1	1	X	X	X		
SS83	S	7/17/19	2115	1	1	X	X	X		
SS84	S	7/17/19	2120	1	1	X	X	X		
SS85	S	7/17/19	2125	1	1	X	X	X		
SS86	S	7/17/19	2130	1	1	X	X	X		
SS87	S	7/17/19	2135	1	1	X	X	X		
SS88	S	7/17/19	2140	1	1	X	X	X		
SS89	S	7/17/19	2145	1	1	X	X	X		
SS90	S	7/17/19	2150	1	1	X	X	X		
SS91	S	7/17/19	2155	1	1	X	X	X		
SS92	S	7/17/19	2200	1	1	X	X	X		
SS93	S	7/17/19	2205	1	1	X	X	X		
SS94	S	7/17/19	2210	1	1	X	X	X		
SS95	S	7/17/19	2215	1	1	X	X	X		
SS96	S	7/17/19	2220	1	1	X	X	X		
SS97	S	7/17/19	2225	1	1	X	X	X		
SS98	S	7/17/19	2230	1	1	X	X	X		
SS99	S	7/17/19	2235	1	1	X	X	X		
SS100	S	7/17/19	2240	1	1	X	X	X		

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	2	3	4	5	6



Inter-Office Shipment

Page 1 of 1

IOS Number **43717**

Date/Time: 07/18/19 11:56

Created by: Elizabeth McClellan

Please send report to: Jessica Kramer

Lab# From: **Carlsbad**

Delivery Priority:

Address: 1089 N Canal Street

Lab# To: **Midland**

Air Bill No.: 7757 8077 6800

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
631382-001	S	SS01	07/17/19 14:25	SW8015MOD_NM	TPH by SW8015 Mod	07/24/19	07/31/19	JKR	GRO-DRO PHCC10C28 PF	
631382-001	S	SS01	07/17/19 14:25	SW8021B	BTEX by EPA 8021B	07/24/19	07/31/19	JKR	BR4FBZ BZ BZME EBZ X	
631382-001	S	SS01	07/17/19 14:25	E300_CL	Chloride by EPA 300	07/24/19	01/13/20	JKR	CL	
631382-002	S	SS02	07/17/19 14:30	SW8021B	BTEX by EPA 8021B	07/24/19	07/31/19	JKR	BR4FBZ BZ BZME EBZ X	
631382-002	S	SS02	07/17/19 14:30	SW8015MOD_NM	TPH by SW8015 Mod	07/24/19	07/31/19	JKR	GRO-DRO PHCC10C28 PF	
631382-002	S	SS02	07/17/19 14:30	E300_CL	Chloride by EPA 300	07/24/19	01/13/20	JKR	CL	
631382-003	S	SS03	07/17/19 14:35	SW8021B	BTEX by EPA 8021B	07/24/19	07/31/19	JKR	BR4FBZ BZ BZME EBZ X	
631382-003	S	SS03	07/17/19 14:35	SW8015MOD_NM	TPH by SW8015 Mod	07/24/19	07/31/19	JKR	GRO-DRO PHCC10C28 PF	
631382-003	S	SS03	07/17/19 14:35	E300_CL	Chloride by EPA 300	07/24/19	01/13/20	JKR	CL	
631382-004	S	SS04	07/17/19 14:40	SW8021B	BTEX by EPA 8021B	07/24/19	07/31/19	JKR	BR4FBZ BZ BZME EBZ X	
631382-004	S	SS04	07/17/19 14:40	E300_CL	Chloride by EPA 300	07/24/19	01/13/20	JKR	CL	
631382-004	S	SS04	07/17/19 14:40	SW8015MOD_NM	TPH by SW8015 Mod	07/24/19	07/31/19	JKR	GRO-DRO PHCC10C28 PF	

Inter Office Shipment or Sample Comments:

Relinquished By:

Elizabeth McClellan

Date Relinquished: 07/18/2019

Received By:

Katie Lowe

Date Received: 07/19/2019 11:45

Cooler Temperature: 4.2



XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 43717

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

Sent By: Elizabeth McClellan

Date Sent: 07/18/2019 11:56 AM

Received By: Katie Lowe

Date Received: 07/19/2019 11:45 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	4.2
#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:

Katie Lowe

Date: 07/19/2019



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

Date/ Time Received: 07/18/2019 10:46:00 AM

Work Order #: 631382

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	7.8
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	No
#5 Custody Seals intact on sample bottles?	No
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	Yes
#18 Water VOC samples have zero headspace?	N/A

Subbed to Xenco Midland.

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

Analyst:

PH Device/Lot#: T-NM-007

Checklist completed by:

Elizabeth McClellan

Date: 07/18/2019

Checklist reviewed by:

Jessica Kramer

Date: 07/22/2019

Analytical Report 632041

**for
LT Environmental, Inc.**

**Project Manager: Dan Moir
CORRAL CANYON (RP# NOT ASS)**

012919153

05-AUG-19

Collected By: Client



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

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

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

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



05-AUG-19

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

Reference: XENCO Report No(s): **632041**
CORRAL CANYON (RP# NOT ASS)
Project Address: Delaware Basin

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) 632041. 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. 632041 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

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

Jessica Kramer
Project Assistant

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

Certified and approved by numerous States and Agencies.

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

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



Sample Cross Reference 632041

LT Environmental, Inc., Arvada, CO

CORRAL CANYON (RP# NOT ASS)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BG01	S	07-24-19 08:45	9 ft	632041-001
BG02	S	07-24-19 08:50	9 ft	632041-002
BG03	S	07-24-19 09:00	5 ft	632041-003
BG04	S	07-24-19 09:45	3 ft	632041-004



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *CORRAL CANYON (RP# NOT ASS)*

Project ID: 012919153
Work Order Number(s): 632041

Report Date: 05-AUG-19
Date Received: 07/25/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3096698 Chloride by EPA 300

Analyst prepared the Matrix Spike and Matrix Spike Duplicate as 500ppm.

Batch: LBA-3096940 BTEX by EPA 8021B

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



Certificate of Analysis Summary 632041

LT Environmental, Inc., Arvada, CO

Project Name: CORRAL CANYON (RP# NOT ASS)

Project Id: 012919153

Contact: Dan Moir

Project Location: Delaware Basin

Date Received in Lab: Thu Jul-25-19 08:55 am

Report Date: 05-AUG-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	632041-001	632041-002	632041-003	632041-004		
	Field Id:	BG01	BG02	BG03	BG04		
	Depth:	9- ft	9- ft	5- ft	3- ft		
	Matrix:	SOIL	SOIL	SOIL	SOIL		
	Sampled:	Jul-24-19 08:45	Jul-24-19 08:50	Jul-24-19 09:00	Jul-24-19 09:45		
BTEX by EPA 8021B SUB: T104704400-18-16	Extracted:	Jul-26-19 14:30	Jul-26-19 14:30	Jul-26-19 14:30	Jul-26-19 14:30		
	Analyzed:	Jul-29-19 23:19	Jul-29-19 23:39	Jul-29-19 23:59	Jul-30-19 00:19		
	Units/RL:	mg/kg	mg/kg	mg/kg	mg/kg		
		RL	RL	RL	RL		
Benzene		<0.00198 0.00198	<0.00199 0.00199	<0.00198 0.00198	<0.00199 0.00199		
Toluene		<0.00198 0.00198	<0.00199 0.00199	<0.00198 0.00198	<0.00199 0.00199		
Ethylbenzene		<0.00198 0.00198	<0.00199 0.00199	<0.00198 0.00198	<0.00199 0.00199		
m,p-Xylenes		<0.00396 0.00396	<0.00398 0.00398	<0.00397 0.00397	<0.00398 0.00398		
o-Xylene		<0.00198 0.00198	<0.00199 0.00199	<0.00198 0.00198	<0.00199 0.00199		
Total Xylenes		<0.00198 0.00198	<0.00199 0.00199	<0.00198 0.00198	<0.00199 0.00199		
Total BTEX		<0.00198 0.00198	<0.00199 0.00199	<0.00198 0.00198	<0.00199 0.00199		
Chloride by EPA 300 SUB: T104704400-18-16	Extracted:	Jul-26-19 13:50	Jul-26-19 13:50	Jul-26-19 13:50	Jul-26-19 13:50		
	Analyzed:	Jul-26-19 23:26	Jul-26-19 23:32	Jul-26-19 23:37	Jul-26-19 23:42		
	Units/RL:	mg/kg	mg/kg	mg/kg	mg/kg		
		RL	RL	RL	RL		
Chloride		2950 25.1	7740 50.4	631 24.9	126 4.99		
TPH by SW8015 Mod SUB: T104704215-19-29	Extracted:	Jul-31-19 15:21	Jul-31-19 15:24	Jul-31-19 15:27	Jul-31-19 15:30		
	Analyzed:	Aug-01-19 01:03	Aug-01-19 01:22	Aug-01-19 01:41	Aug-01-19 02:19		
	Units/RL:	mg/kg	mg/kg	mg/kg	mg/kg		
		RL	RL	RL	RL		
Gasoline Range Hydrocarbons (GRO)		<49.8 49.8	<49.8 49.8	<49.9 49.9	<50.0 50.0		
Diesel Range Organics (DRO)		<49.8 49.8	<49.8 49.8	<49.9 49.9	<50.0 50.0		
Motor Oil Range Hydrocarbons (MRO)		<49.8 49.8	<49.8 49.8	<49.9 49.9	<50.0 50.0		
Total TPH		<49.8 49.8	<49.8 49.8	<49.9 49.9	<50.0 50.0		
Total GRO-DRO		<49.8 49.8	<49.8 49.8	<49.9 49.9	<50.0 50.0		

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

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

Jessica Kramer
Project Assistant



Certificate of Analytical Results 632041

LT Environmental, Inc., Arvada, CO

CORRAL CANYON (RP# NOT ASS)

Sample Id: **BG01**
Lab Sample Id: 632041-001

Matrix: Soil
Date Collected: 07.24.19 08.45

Date Received: 07.25.19 08.55
Sample Depth: 9 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096698

Date Prep: 07.26.19 13.50

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2950	25.1	mg/kg	07.26.19 23.26		5

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3097314

Date Prep: 07.31.19 15.21

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.01.19 01.03	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.01.19 01.03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.01.19 01.03	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.01.19 01.03	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	08.01.19 01.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	08.01.19 01.03	
o-Terphenyl	84-15-1	118	%	70-135	08.01.19 01.03	



Certificate of Analytical Results 632041

LT Environmental, Inc., Arvada, CO

CORRAL CANYON (RP# NOT ASS)

Sample Id: **BG01**
Lab Sample Id: 632041-001

Matrix: Soil
Date Collected: 07.24.19 08.45

Date Received: 07.25.19 08.55
Sample Depth: 9 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096940

Prep Method: SW5030B

% Moisture:

Date Prep: 07.26.19 14.30

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	07.29.19 23.19	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.29.19 23.19	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.29.19 23.19	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	07.29.19 23.19	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.29.19 23.19	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	07.29.19 23.19	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.29.19 23.19	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	114	%	70-130	07.29.19 23.19		
1,4-Difluorobenzene	540-36-3	108	%	70-130	07.29.19 23.19		



Certificate of Analytical Results 632041

LT Environmental, Inc., Arvada, CO

CORRAL CANYON (RP# NOT ASS)

Sample Id: **BG02**
Lab Sample Id: 632041-002

Matrix: Soil
Date Collected: 07.24.19 08.50

Date Received: 07.25.19 08.55
Sample Depth: 9 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096698

Date Prep: 07.26.19 13.50

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	7740	50.4	mg/kg	07.26.19 23.32		10

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3097314

Date Prep: 07.31.19 15.24

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.01.19 01.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.01.19 01.22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.01.19 01.22	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.01.19 01.22	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	08.01.19 01.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	08.01.19 01.22	
o-Terphenyl	84-15-1	116	%	70-135	08.01.19 01.22	



Certificate of Analytical Results 632041

LT Environmental, Inc., Arvada, CO

CORRAL CANYON (RP# NOT ASS)

Sample Id: **BG02**
Lab Sample Id: 632041-002

Matrix: Soil
Date Collected: 07.24.19 08.50

Date Received: 07.25.19 08.55
Sample Depth: 9 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096940

Prep Method: SW5030B

% Moisture:

Date Prep: 07.26.19 14.30

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.29.19 23.39	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.29.19 23.39	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.29.19 23.39	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.29.19 23.39	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.29.19 23.39	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.29.19 23.39	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.29.19 23.39	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	103	%	70-130	07.29.19 23.39		
1,4-Difluorobenzene	540-36-3	103	%	70-130	07.29.19 23.39		



Certificate of Analytical Results 632041

LT Environmental, Inc., Arvada, CO

CORRAL CANYON (RP# NOT ASS)

Sample Id: **BG03**
Lab Sample Id: 632041-003

Matrix: Soil
Date Collected: 07.24.19 09.00

Date Received: 07.25.19 08.55
Sample Depth: 5 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096698

Date Prep: 07.26.19 13.50

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	631	24.9	mg/kg	07.26.19 23.37		5

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3097314

Date Prep: 07.31.19 15.27

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.01.19 01.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.01.19 01.41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.01.19 01.41	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.01.19 01.41	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	08.01.19 01.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	08.01.19 01.41	
o-Terphenyl	84-15-1	112	%	70-135	08.01.19 01.41	



Certificate of Analytical Results 632041

LT Environmental, Inc., Arvada, CO

CORRAL CANYON (RP# NOT ASS)

Sample Id: **BG03**
Lab Sample Id: 632041-003

Matrix: Soil
Date Collected: 07.24.19 09.00

Date Received: 07.25.19 08.55
Sample Depth: 5 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096940

Prep Method: SW5030B

% Moisture:

Date Prep: 07.26.19 14.30

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	07.29.19 23.59	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.29.19 23.59	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.29.19 23.59	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	07.29.19 23.59	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.29.19 23.59	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	07.29.19 23.59	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.29.19 23.59	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	108	%	70-130	07.29.19 23.59		
1,4-Difluorobenzene	540-36-3	106	%	70-130	07.29.19 23.59		



Certificate of Analytical Results 632041

LT Environmental, Inc., Arvada, CO

CORRAL CANYON (RP# NOT ASS)

Sample Id: **BG04**
Lab Sample Id: 632041-004

Matrix: Soil
Date Collected: 07.24.19 09.45

Date Received: 07.25.19 08.55
Sample Depth: 3 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096698

Date Prep: 07.26.19 13.50

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	126	4.99	mg/kg	07.26.19 23.42		1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3097314

Date Prep: 07.31.19 15.30

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.01.19 02.19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.01.19 02.19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.01.19 02.19	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.01.19 02.19	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	08.01.19 02.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	08.01.19 02.19	
o-Terphenyl	84-15-1	119	%	70-135	08.01.19 02.19	



Certificate of Analytical Results 632041

LT Environmental, Inc., Arvada, CO

CORRAL CANYON (RP# NOT ASS)

Sample Id: **BG04**
Lab Sample Id: 632041-004

Matrix: Soil
Date Collected: 07.24.19 09.45

Date Received: 07.25.19 08.55
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096940

Prep Method: SW5030B

% Moisture:

Date Prep: 07.26.19 14.30

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.30.19 00.19	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.30.19 00.19	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.30.19 00.19	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.30.19 00.19	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.30.19 00.19	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.30.19 00.19	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.30.19 00.19	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	118	%	70-130	07.30.19 00.19		
1,4-Difluorobenzene	540-36-3	107	%	70-130	07.30.19 00.19		

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 632041

LT Environmental, Inc. CORRAL CANYON (RP# NOT ASS)

Analytical Method: Chloride by EPA 300

Seq Number: 3096698

MB Sample Id: 7682941-1-BLK

Matrix: Solid

LCS Sample Id: 7682941-1-BKS

Prep Method: E300P

Date Prep: 07.26.19

LCSD Sample Id: 7682941-1-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	255	102	258	103	90-110	1	20	mg/kg	07.26.19 21:05	

Analytical Method: Chloride by EPA 300

Seq Number: 3096698

Parent Sample Id: 632148-083

Matrix: Soil

MS Sample Id: 632148-083 S

Prep Method: E300P

Date Prep: 07.26.19

MSD Sample Id: 632148-083 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	128	501	638	102	636	101	90-110	0	20	mg/kg	07.26.19 21:22	

Analytical Method: Chloride by EPA 300

Seq Number: 3096698

Parent Sample Id: 632158-004

Matrix: Soil

MS Sample Id: 632158-004 S

Prep Method: E300P

Date Prep: 07.26.19

MSD Sample Id: 632158-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	579	502	1050	94	1040	92	90-110	1	20	mg/kg	07.26.19 22:38	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3097314

MB Sample Id: 7683241-1-BLK

Matrix: Solid

LCS Sample Id: 7683241-1-BKS

Prep Method: TX1005P

Date Prep: 07.31.19

LCSD Sample Id: 7683241-1-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	1060	106	1080	108	70-135	2	35	mg/kg	07.31.19 23:11	
Diesel Range Organics (DRO)	<50.0	1000	1140	114	1180	118	70-135	3	35	mg/kg	07.31.19 23:11	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	102		111		112		70-135	%	07.31.19 23:11
o-Terphenyl	122		115		116		70-135	%	07.31.19 23:11

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 632041

LT Environmental, Inc. CORRAL CANYON (RP# NOT ASS)

Analytical Method: TPH by SW8015 Mod

Seq Number: 3097314

Parent Sample Id: 631951-040

Matrix: Soil

MS Sample Id: 631951-040 S

Prep Method: TX1005P

Date Prep: 07.31.19

MSD Sample Id: 631951-040 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1070	107	1020	102	70-135	5	35	mg/kg	08.01.19 00:25	
Diesel Range Organics (DRO)	<50.0	1000	1160	116	1120	112	70-135	4	35	mg/kg	08.01.19 00:25	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	106		104		70-135	%	08.01.19 00:25
o-Terphenyl	105		104		70-135	%	08.01.19 00:25

Analytical Method: BTEX by EPA 8021B

Seq Number: 3096940

MB Sample Id: 7682923-1-BLK

Matrix: Solid

LCS Sample Id: 7682923-1-BKS

Prep Method: SW5030B

Date Prep: 07.26.19

LCSD Sample Id: 7682923-1-BSO

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	0.0928	93	0.104	104	70-130	11	35	mg/kg	07.29.19 14:59	
Toluene	<0.000456	0.100	0.0824	82	0.0934	93	70-130	13	35	mg/kg	07.29.19 14:59	
Ethylbenzene	0.000720	0.100	0.0807	81	0.0918	92	70-130	13	35	mg/kg	07.29.19 14:59	
m,p-Xylenes	<0.00101	0.200	0.161	81	0.183	92	70-130	13	35	mg/kg	07.29.19 14:59	
o-Xylene	0.000480	0.100	0.0849	85	0.0977	98	70-130	14	35	mg/kg	07.29.19 14:59	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	109		102		104		70-130	%	07.29.19 14:59
4-Bromofluorobenzene	108		99		109		70-130	%	07.29.19 14:59

Analytical Method: BTEX by EPA 8021B

Seq Number: 3096940

Parent Sample Id: 631781-040

Matrix: Soil

MS Sample Id: 631781-040 S

Prep Method: SW5030B

Date Prep: 07.26.19

MSD Sample Id: 631781-040 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	0.0875	87	0.0789	79	70-130	10	35	mg/kg	07.29.19 15:39	
Toluene	<0.00202	0.101	0.0768	76	0.0687	69	70-130	11	35	mg/kg	07.29.19 15:39	X
Ethylbenzene	<0.00202	0.101	0.0740	73	0.0661	66	70-130	11	35	mg/kg	07.29.19 15:39	X
m,p-Xylenes	<0.00102	0.202	0.144	71	0.129	65	70-130	11	35	mg/kg	07.29.19 15:39	X
o-Xylene	<0.00202	0.101	0.0729	72	0.0654	65	70-130	11	35	mg/kg	07.29.19 15:39	X

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		106		70-130	%	07.29.19 15:39
4-Bromofluorobenzene	107		101		70-130	%	07.29.19 15:39

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

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

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

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



Chain of Custody

Work Order No: 632041

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

www.xenco.com Page 1 of 1

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

Project Name:	CORRAL CANYON 14H (RP# NOT ASS)	Turn Around	Routine ☒ Rush: ☐
Project Number:	012119153	Rush:	
P.O. Number:		Due Date:	
Sampler's Name:	Benjamin Beill		

SAMPLE RECEIPT	Temp Blank: ☒ Yes ☒ No	Wet Ice: ☒ Yes ☒ No	
Temperature (°C):	4.4	Thermometer ID	T-2002
Received Intact:	Yes ☒ No ☐	Correction Factor:	-0.2
Cooler Custody Seals:	Yes ☒ No ☐	Total Containers:	4
Sample Custody Seals:	Yes ☒ No ☐		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Num	TPH	BTE	Chlor	Sample Comments											
BG01	S	7/24/19	0845	9'	1	X	X	X												
BG02	S		0850	9'	1	X	X	X												
BG03	S		0900	5'	1	X	X	X												
BG04	S	↑	0915	3' 8" 13"	1	X	X	X												
									</											

Total 200.7 / 6010 200.8 / 6020:		8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn			
Circle Method(s) and Metal(s) to be analyzed		TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U			
1631 / 245.1 / 7470 / 7471 : Hg					
Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.					
Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 <i>(Signature)</i>	<i>(Signature)</i>	7/25/19 0855	2		
3			4		
5			6		



Inter-Office Shipment

Page 1 of 1

IOS Number **44973**

Date/Time: 07/25/19 10:42

Created by: Elizabeth McClellan

Please send report to: Jessica Kramer

Lab# From: **Carlsbad**

Delivery Priority:

Address: 1089 N Canal Street

Lab# To: **Midland**

Air Bill No.:

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
632041-001	S	BG01	07/24/19 08:45	SW8015MOD_NM	TPH by SW8015 Mod	07/31/19	08/07/19	JKR	GRO-DRO PHCC10C28 PF	
632041-001	S	BG01	07/24/19 08:45	SW8021B	BTEX by EPA 8021B	07/31/19	08/07/19	JKR	BR4FBZ BZ BZME EBZ X	
632041-001	S	BG01	07/24/19 08:45	E300_CL	Chloride by EPA 300	07/31/19	01/20/20	JKR	CL	
632041-002	S	BG02	07/24/19 08:50	SW8021B	BTEX by EPA 8021B	07/31/19	08/07/19	JKR	BR4FBZ BZ BZME EBZ X	
632041-002	S	BG02	07/24/19 08:50	SW8015MOD_NM	TPH by SW8015 Mod	07/31/19	08/07/19	JKR	GRO-DRO PHCC10C28 PF	
632041-002	S	BG02	07/24/19 08:50	E300_CL	Chloride by EPA 300	07/31/19	01/20/20	JKR	CL	
632041-003	S	BG03	07/24/19 09:00	SW8021B	BTEX by EPA 8021B	07/31/19	08/07/19	JKR	BR4FBZ BZ BZME EBZ X	
632041-003	S	BG03	07/24/19 09:00	SW8015MOD_NM	TPH by SW8015 Mod	07/31/19	08/07/19	JKR	GRO-DRO PHCC10C28 PF	
632041-003	S	BG03	07/24/19 09:00	E300_CL	Chloride by EPA 300	07/31/19	01/20/20	JKR	CL	
632041-004	S	BG04	07/24/19 09:45	SW8021B	BTEX by EPA 8021B	07/31/19	08/07/19	JKR	BR4FBZ BZ BZME EBZ X	
632041-004	S	BG04	07/24/19 09:45	E300_CL	Chloride by EPA 300	07/31/19	01/20/20	JKR	CL	
632041-004	S	BG04	07/24/19 09:45	SW8015MOD_NM	TPH by SW8015 Mod	07/31/19	08/07/19	JKR	GRO-DRO PHCC10C28 PF	

Inter Office Shipment or Sample Comments:

Relinquished By:

Elizabeth McClellan

Date Relinquished: 07/25/2019

Received By: _____

Date Received: _____

Cooler Temperature: _____

Inter-Office Shipment

IOS Number : 45109

Date/Time: 07.29.2019 14:03 Created by: Jessica Kramer
 Lab# From: **Carlsbad** Delivery Priority:
 Lab# To: **Houston** Air Bill No.: 775861346682

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
632041-001	S	BG01	07.24.2019 08:45	SW8015MOD_NM	TPH by SW8015 Mod	07.31.2019	08.07.2019	JKR	GRO-DRO PHCC10C28	
632041-002	S	BG02	07.24.2019 08:50	SW8015MOD_NM	TPH by SW8015 Mod	07.31.2019	08.07.2019	JKR	GRO-DRO PHCC10C28	
632041-003	S	BG03	07.24.2019 09:00	SW8015MOD_NM	TPH by SW8015 Mod	07.31.2019	08.07.2019	JKR	GRO-DRO PHCC10C28	
632041-004	S	BG04	07.24.2019 09:45	SW8015MOD_NM	TPH by SW8015 Mod	07.31.2019	08.07.2019	JKR	GRO-DRO PHCC10C28	

Inter Office Shipment or Sample Comments:

Coming from Midland

Relinquished By: 
 Jessica Kramer

Date Relinquished: 07.29.2019

Received By: 
 Travis Simmons

Date Received: 07.30.2019 15:30

Cooler Temperature: 2.5



XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 44973

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sent By: Elizabeth McClellan

Date Sent: 07/25/2019 10:42 AM

Received By:

Date Received:

Sample Receipt Checklist

Comments

- #1 *Temperature of cooler(s)? _____
- #2 *Shipping container in good condition? _____
- #3 *Samples received with appropriate temperature? _____
- #4 *Custody Seals intact on shipping container/ cooler? _____
- #5 *Custody Seals Signed and dated for Containers/coolers _____
- #6 *IOS present? _____
- #7 Any missing/extra samples? _____
- #8 IOS agrees with sample label(s)/matrix? _____
- #9 Sample matrix/ properties agree with IOS? _____
- #10 Samples in proper container/ bottle? _____
- #11 Samples properly preserved? _____
- #12 Sample container(s) intact? _____
- #13 Sufficient sample amount for indicated test(s)? _____
- #14 All samples received within hold time? _____

*** 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: _____

Date: _____



XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 45109

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : HOU-068

Sent By: Jessica Kramer

Date Sent: 07.29.2019 02.03 PM

Received By: Travis Simmons

Date Received: 07.30.2019 03.30 PM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	2.5
#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:

Coming from Midland

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ Contacted by : _____ Date: _____

Checklist reviewed by:

Travis Simmons

Date: 07.30.2019



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

Date/ Time Received: 07/25/2019 08:55:00 AM

Work Order #: 632041

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-07

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

Subbed to Xenco Midland.

*** 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: 07/25/2019

Checklist reviewed by:


Jessica Kramer

Date: 07/29/2019

Analytical Report 631585

for
LT Environmental, Inc.

Project Manager: Dan Moir
Corral Canyon 146 (BP # Not Assigned)

04-OCT-19

Collected By: Client



1211 W. Florida Ave
Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

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

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



04-OCT-19

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

Reference: XENCO Report No(s): **631585**
Corral Canyon 146 (BP # Not Assigned)
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) 631585. 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. 631585 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
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 631585



LT Environmental, Inc., Arvada, CO

Corral Canyon 146 (BP # Not Assigned)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	07-18-19 17:00	0.5 ft	631585-001
FS02	S	07-18-19 17:15	0.5 ft	631585-002
FS03	S	07-18-19 17:20	0.5 ft	631585-003
PH01	S	07-19-19 07:05	2 ft	631585-004
PH01A	S	07-19-19 08:00	4 ft	631585-005
PH01B	S	07-19-19 08:05	6 ft	631585-006
PH02	S	07-19-19 09:15	2 ft	631585-007
PH02A	S	07-19-19 09:20	4 ft	631585-008
PH02B	S	07-19-19 09:25	6 ft	631585-009
PH02C	S	07-19-19 09:35	8 ft	631585-010
PH02D	S	07-19-19 09:40	10 ft	631585-011
PH02E	S	07-19-19 09:50	11 ft	631585-012
PH03	S	07-19-19 10:10	2 ft	631585-013
PH03A	S	07-19-19 10:15	4 ft	631585-014
PH03B	S	07-19-19 10:20	6 ft	631585-015



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *Corral Canyon 146 (BP # Not Assigned)*

Project ID:
Work Order Number(s): 631585

Report Date: 04-OCT-19
Date Received: 07/22/2019

Sample receipt non conformances and comments:

per clients email, corrected sample 001-003 names. see below. NEW VERSION GENERATED JK
10/04/19

FS17 --> FS01

FS19 --> FS02

FS20 --> FS03

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3096163 Chloride by EPA 300

Lab Sample ID 631591-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 631585-006, -007, -008, -009, -010, -011, -012, -013, -014, -015.

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

Batch: LBA-3096312 BTEX by EPA 8021B

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

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

Samples affected are: 631585-010.



Certificate of Analysis Summary 631585

LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon 146 (BP # Not Assigned)



Project Id:

Contact: Dan Moir

Project Location:

Date Received in Lab: Mon Jul-22-19 08:00 am

Report Date: 04-OCT-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	631585-001	631585-002	631585-003	631585-004	631585-005	631585-006
	<i>Field Id:</i>	FS01	FS02	FS03	PH01	PH01A	PH01B
	<i>Depth:</i>	0.5- ft	0.5- ft	0.5- ft	2- ft	4- ft	6- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jul-18-19 17:00	Jul-18-19 17:15	Jul-18-19 17:20	Jul-19-19 07:05	Jul-19-19 08:00	Jul-19-19 08:05
BTEX by EPA 8021B	<i>Extracted:</i>	Jul-22-19 10:34	Jul-22-19 10:34	Jul-22-19 10:34	Jul-22-19 10:34	Jul-22-19 10:34	Jul-22-19 10:34
	<i>Analyzed:</i>	Jul-23-19 13:57	Jul-23-19 15:19	Jul-23-19 15:39	Jul-23-19 15:59	Jul-22-19 17:53	Jul-23-19 16:20
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00199 0.00199	<0.00201 0.00201	<0.00198 0.00198	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200
Toluene		0.00649 0.00199	0.00223 0.00201	0.00218 0.00198	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200
Ethylbenzene		<0.00199 0.00199	<0.00201 0.00201	<0.00198 0.00198	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200
m,p-Xylenes		<0.00398 0.00398	<0.00402 0.00402	<0.00396 0.00396	<0.00402 0.00402	<0.00399 0.00399	<0.00401 0.00401
o-Xylene		<0.00199 0.00199	<0.00201 0.00201	<0.00198 0.00198	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200
Total Xylenes		<0.00199 0.00199	<0.00201 0.00201	<0.00198 0.00198	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200
Total BTEX		0.00649 0.00199	0.00223 0.00201	0.00218 0.00198	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200
Chloride by EPA 300	<i>Extracted:</i>	Jul-22-19 13:10	Jul-22-19 13:10	Jul-22-19 13:10	Jul-22-19 13:10	Jul-22-19 13:10	Jul-22-19 14:30
	<i>Analyzed:</i>	Jul-22-19 16:35	Jul-22-19 16:40	Jul-22-19 16:46	Jul-22-19 16:51	Jul-22-19 16:56	Jul-22-19 15:55
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		<5.00 5.00	526 5.00	24.5 5.00	751 25.1	1390 4.98	520 5.00
TPH by SW8015 Mod	<i>Extracted:</i>	Jul-23-19 08:00	Jul-23-19 08:00	Jul-23-19 08:00	Jul-23-19 08:00	Jul-23-19 08:00	Jul-23-19 08:00
	<i>Analyzed:</i>	Jul-23-19 11:38	Jul-23-19 12:49	Jul-23-19 13:13	Jul-23-19 13:36	Jul-23-19 14:00	Jul-23-19 14:24
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0
Total TPH		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0
Total GRO-DRO		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 631585

LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon 146 (BP # Not Assigned)



Project Id:

Contact: Dan Moir

Project Location:

Date Received in Lab: Mon Jul-22-19 08:00 am

Report Date: 04-OCT-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	631585-007	631585-008	631585-009	631585-010	631585-011	631585-012
	Field Id:	PH02	PH02A	PH02B	PH02C	PH02D	PH02E
	Depth:	2- ft	4- ft	6- ft	8- ft	10- ft	11- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Jul-19-19 09:15	Jul-19-19 09:20	Jul-19-19 09:25	Jul-19-19 09:35	Jul-19-19 09:40	Jul-19-19 09:50
BTEX by EPA 8021B	Extracted:	Jul-22-19 10:34	Jul-22-19 10:34	Jul-22-19 10:34	Jul-22-19 10:34	Jul-22-19 10:34	Jul-22-19 10:34
	Analyzed:	Jul-22-19 18:34	Jul-22-19 18:54	Jul-23-19 16:40	Jul-23-19 17:00	Jul-22-19 21:14	Jul-22-19 21:34
	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	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199
Toluene		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	0.00324 0.00200	<0.00201 0.00201	<0.00199 0.00199
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199
m,p-Xylenes		<0.00399 0.00399	<0.00400 0.00400	<0.00402 0.00402	<0.00400 0.00400	<0.00402 0.00402	<0.00398 0.00398
o-Xylene		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199
Total Xylenes		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199
Total BTEX		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	0.00324 0.00200	<0.00201 0.00201	<0.00199 0.00199
Chloride by EPA 300	Extracted:	Jul-22-19 14:30	Jul-22-19 14:30	Jul-22-19 14:30	Jul-22-19 14:30	Jul-22-19 14:30	Jul-22-19 14:30
	Analyzed:	Jul-22-19 16:14	Jul-22-19 16:20	Jul-22-19 16:26	Jul-22-19 16:32	Jul-22-19 16:59	Jul-22-19 17:05
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		688 4.96	999 24.9	751 5.00	710 5.05	1200 5.05	1320 4.97
TPH by SW8015 Mod	Extracted:	Jul-23-19 08:00	Jul-23-19 08:00	Jul-23-19 08:00	Jul-23-19 08:00	Jul-23-19 08:00	Jul-23-19 08:00
	Analyzed:	Jul-23-19 14:48	Jul-23-19 15:11	Jul-23-19 15:35	Jul-23-19 15:59	Jul-23-19 16:46	Jul-23-19 17:10
	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	<15.0 15.0
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	38.7 15.0	32.5 15.0
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	<15.0 15.0
Total TPH		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	38.7 15.0	32.5 15.0
Total GRO-DRO		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	38.7 15.0	32.5 15.0

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 631585

LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon 146 (BP # Not Assigned)



Project Id:

Contact: Dan Moir

Project Location:

Date Received in Lab: Mon Jul-22-19 08:00 am

Report Date: 04-OCT-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	631585-013	631585-014	631585-015			
	Field Id:	PH03	PH03A	PH03B			
	Depth:	2- ft	4- ft	6- ft			
	Matrix:	SOIL	SOIL	SOIL			
	Sampled:	Jul-19-19 10:10	Jul-19-19 10:15	Jul-19-19 10:20			
BTEX by EPA 8021B	Extracted:	Jul-22-19 10:34	Jul-22-19 10:34	Jul-22-19 10:34			
	Analyzed:	Jul-22-19 21:54	Jul-22-19 22:15	Jul-23-19 17:20			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
Benzene		<0.00201 0.00201	<0.00200 0.00200	<0.00201 0.00201			
Toluene		<0.00201 0.00201	<0.00200 0.00200	<0.00201 0.00201			
Ethylbenzene		<0.00201 0.00201	<0.00200 0.00200	<0.00201 0.00201			
m,p-Xylenes		<0.00402 0.00402	<0.00401 0.00401	<0.00402 0.00402			
o-Xylene		<0.00201 0.00201	<0.00200 0.00200	<0.00201 0.00201			
Total Xylenes		<0.00201 0.00201	<0.00200 0.00200	<0.00201 0.00201			
Total BTEX		<0.00201 0.00201	<0.00200 0.00200	<0.00201 0.00201			
Chloride by EPA 300	Extracted:	Jul-22-19 14:30	Jul-22-19 14:30	Jul-22-19 14:30			
	Analyzed:	Jul-22-19 17:11	Jul-22-19 17:18	Jul-22-19 17:24			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
Chloride		1030 25.0	752 5.00	53.3 5.00			
TPH by SW8015 Mod	Extracted:	Jul-23-19 08:00	Jul-23-19 08:00	Jul-23-19 08:00			
	Analyzed:	Jul-23-19 17:34	Jul-23-19 17:57	Jul-23-19 18:21			
	Units/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			
Diesel Range Organics (DRO)		42.9 14.9	28.4 15.0	22.2 15.0			
Motor Oil Range Hydrocarbons (MRO)		<14.9 14.9	<15.0 15.0	<15.0 15.0			
Total TPH		42.9 14.9	28.4 15.0	22.2 15.0			
Total GRO-DRO		42.9 14.9	28.4 15.0	22.2 15.0			

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analytical Results 631585



LT Environmental, Inc., Arvada, CO

Corral Canyon 146 (BP # Not Assigned)

Sample Id: **FS01**
Lab Sample Id: 631585-001

Matrix: Soil
Date Collected: 07.18.19 17.00

Date Received: 07.22.19 08.00
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096128

Date Prep: 07.22.19 13.10

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	07.22.19 16.35	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3096275

Date Prep: 07.23.19 08.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.23.19 11.38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.23.19 11.38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.23.19 11.38	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.23.19 11.38	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	07.23.19 11.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	07.23.19 11.38	
o-Terphenyl	84-15-1	87	%	70-135	07.23.19 11.38	



Certificate of Analytical Results 631585



LT Environmental, Inc., Arvada, CO

Corral Canyon 146 (BP # Not Assigned)

Sample Id: **FS01**
Lab Sample Id: 631585-001

Matrix: Soil
Date Collected: 07.18.19 17.00

Date Received: 07.22.19 08.00
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096312

Date Prep: 07.22.19 10.34

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.23.19 13.57	U	1
Toluene	108-88-3	0.00649	0.00199	mg/kg	07.23.19 13.57		1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.23.19 13.57	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.23.19 13.57	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.23.19 13.57	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.23.19 13.57	U	1
Total BTEX		0.00649	0.00199	mg/kg	07.23.19 13.57		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	86	%	70-130	07.23.19 13.57		
1,4-Difluorobenzene	540-36-3	112	%	70-130	07.23.19 13.57		



Certificate of Analytical Results 631585



LT Environmental, Inc., Arvada, CO

Corral Canyon 146 (BP # Not Assigned)

Sample Id: **FS02**
Lab Sample Id: 631585-002

Matrix: Soil
Date Collected: 07.18.19 17.15

Date Received: 07.22.19 08.00
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096128

Date Prep: 07.22.19 13.10

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	526	5.00	mg/kg	07.22.19 16.40		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3096275

Date Prep: 07.23.19 08.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.23.19 12.49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.23.19 12.49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.23.19 12.49	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.23.19 12.49	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	07.23.19 12.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	07.23.19 12.49	
o-Terphenyl	84-15-1	89	%	70-135	07.23.19 12.49	



Certificate of Analytical Results 631585



LT Environmental, Inc., Arvada, CO

Corral Canyon 146 (BP # Not Assigned)

Sample Id: **FS02**
Lab Sample Id: 631585-002

Matrix: Soil
Date Collected: 07.18.19 17.15

Date Received: 07.22.19 08.00
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096312

Date Prep: 07.22.19 10.34

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.23.19 15.19	U	1
Toluene	108-88-3	0.00223	0.00201	mg/kg	07.23.19 15.19		1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.23.19 15.19	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.23.19 15.19	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.23.19 15.19	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.23.19 15.19	U	1
Total BTEX		0.00223	0.00201	mg/kg	07.23.19 15.19		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	106	%	70-130	07.23.19 15.19		
1,4-Difluorobenzene	540-36-3	112	%	70-130	07.23.19 15.19		



Certificate of Analytical Results 631585



LT Environmental, Inc., Arvada, CO

Corral Canyon 146 (BP # Not Assigned)

Sample Id: **FS03**
Lab Sample Id: 631585-003

Matrix: Soil
Date Collected: 07.18.19 17.20

Date Received: 07.22.19 08.00
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096128

Date Prep: 07.22.19 13.10

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	24.5	5.00	mg/kg	07.22.19 16.46		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3096275

Date Prep: 07.23.19 08.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.23.19 13.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.23.19 13.13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.23.19 13.13	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.23.19 13.13	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	07.23.19 13.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	07.23.19 13.13	
o-Terphenyl	84-15-1	104	%	70-135	07.23.19 13.13	



Certificate of Analytical Results 631585



LT Environmental, Inc., Arvada, CO

Corral Canyon 146 (BP # Not Assigned)

Sample Id: **FS03**
Lab Sample Id: 631585-003

Matrix: Soil
Date Collected: 07.18.19 17.20

Date Received: 07.22.19 08.00
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096312

Date Prep: 07.22.19 10.34

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	07.23.19 15.39	U	1
Toluene	108-88-3	0.00218	0.00198	mg/kg	07.23.19 15.39		1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.23.19 15.39	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	07.23.19 15.39	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.23.19 15.39	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	07.23.19 15.39	U	1
Total BTEX		0.00218	0.00198	mg/kg	07.23.19 15.39		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	122	%	70-130	07.23.19 15.39		
1,4-Difluorobenzene	540-36-3	115	%	70-130	07.23.19 15.39		



Certificate of Analytical Results 631585



LT Environmental, Inc., Arvada, CO

Corral Canyon 146 (BP # Not Assigned)

Sample Id: **PH01**
Lab Sample Id: 631585-004

Matrix: Soil
Date Collected: 07.19.19 07.05

Date Received: 07.22.19 08.00
Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096128

Date Prep: 07.22.19 13.10

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	751	25.1	mg/kg	07.22.19 16.51		5

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3096275

Date Prep: 07.23.19 08.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.23.19 13.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.23.19 13.36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.23.19 13.36	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.23.19 13.36	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	07.23.19 13.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	07.23.19 13.36	
o-Terphenyl	84-15-1	100	%	70-135	07.23.19 13.36	



Certificate of Analytical Results 631585



LT Environmental, Inc., Arvada, CO

Corral Canyon 146 (BP # Not Assigned)

Sample Id: **PH01**
Lab Sample Id: 631585-004

Matrix: Soil
Date Collected: 07.19.19 07.05

Date Received: 07.22.19 08.00
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096312

Date Prep: 07.22.19 10.34

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.23.19 15.59	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.23.19 15.59	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.23.19 15.59	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.23.19 15.59	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.23.19 15.59	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.23.19 15.59	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.23.19 15.59	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	107	%	70-130	07.23.19 15.59		
1,4-Difluorobenzene	540-36-3	117	%	70-130	07.23.19 15.59		



Certificate of Analytical Results 631585



LT Environmental, Inc., Arvada, CO

Corral Canyon 146 (BP # Not Assigned)

Sample Id: **PH01A**
Lab Sample Id: 631585-005

Matrix: Soil
Date Collected: 07.19.19 08.00

Date Received: 07.22.19 08.00
Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096128

Date Prep: 07.22.19 13.10

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1390	4.98	mg/kg	07.22.19 16.56		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3096275

Date Prep: 07.23.19 08.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	07.23.19 14.00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	07.23.19 14.00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	07.23.19 14.00	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	07.23.19 14.00	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	07.23.19 14.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	07.23.19 14.00	
o-Terphenyl	84-15-1	99	%	70-135	07.23.19 14.00	



Certificate of Analytical Results 631585



LT Environmental, Inc., Arvada, CO

Corral Canyon 146 (BP # Not Assigned)

Sample Id: **PH01A**
Lab Sample Id: 631585-005

Matrix: Soil
Date Collected: 07.19.19 08.00

Date Received: 07.22.19 08.00
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096312

Date Prep: 07.22.19 10.34

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.22.19 17.53	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.22.19 17.53	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.22.19 17.53	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.22.19 17.53	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.22.19 17.53	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.22.19 17.53	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.22.19 17.53	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	90	%	70-130	07.22.19 17.53		
1,4-Difluorobenzene	540-36-3	111	%	70-130	07.22.19 17.53		



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LT Environmental, Inc., Arvada, CO

Corral Canyon 146 (BP # Not Assigned)

Sample Id: **PH01B**
Lab Sample Id: 631585-006

Matrix: Soil
Date Collected: 07.19.19 08.05

Date Received: 07.22.19 08.00
Sample Depth: 6 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096163

Date Prep: 07.22.19 14.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	520	5.00	mg/kg	07.22.19 15.55		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3096275

Date Prep: 07.23.19 08.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.23.19 14.24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.23.19 14.24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.23.19 14.24	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.23.19 14.24	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	07.23.19 14.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	07.23.19 14.24	
o-Terphenyl	84-15-1	119	%	70-135	07.23.19 14.24	



Certificate of Analytical Results 631585



LT Environmental, Inc., Arvada, CO

Corral Canyon 146 (BP # Not Assigned)

Sample Id: **PH01B**
Lab Sample Id: 631585-006

Matrix: Soil
Date Collected: 07.19.19 08.05

Date Received: 07.22.19 08.00
Sample Depth: 6 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096312

Date Prep: 07.22.19 10.34

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.23.19 16.20	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.23.19 16.20	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.23.19 16.20	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.23.19 16.20	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.23.19 16.20	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.23.19 16.20	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.23.19 16.20	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	106	%	70-130	07.23.19 16.20		
1,4-Difluorobenzene	540-36-3	119	%	70-130	07.23.19 16.20		



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LT Environmental, Inc., Arvada, CO

Corral Canyon 146 (BP # Not Assigned)

Sample Id: **PH02**
Lab Sample Id: 631585-007

Matrix: Soil
Date Collected: 07.19.19 09.15

Date Received: 07.22.19 08.00
Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096163

Date Prep: 07.22.19 14.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	688	4.96	mg/kg	07.22.19 16.14		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3096275

Date Prep: 07.23.19 08.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.23.19 14.48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.23.19 14.48	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.23.19 14.48	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.23.19 14.48	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	07.23.19 14.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	121	%	70-135	07.23.19 14.48	
o-Terphenyl	84-15-1	121	%	70-135	07.23.19 14.48	



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LT Environmental, Inc., Arvada, CO

Corral Canyon 146 (BP # Not Assigned)

Sample Id: **PH02**
Lab Sample Id: 631585-007

Matrix: Soil
Date Collected: 07.19.19 09.15

Date Received: 07.22.19 08.00
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096312

Date Prep: 07.22.19 10.34

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.22.19 18.34	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.22.19 18.34	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.22.19 18.34	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.22.19 18.34	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.22.19 18.34	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.22.19 18.34	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.22.19 18.34	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	114	%	70-130	07.22.19 18.34		
4-Bromofluorobenzene	460-00-4	101	%	70-130	07.22.19 18.34		



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LT Environmental, Inc., Arvada, CO

Corral Canyon 146 (BP # Not Assigned)

Sample Id: **PH02A**
Lab Sample Id: 631585-008

Matrix: Soil
Date Collected: 07.19.19 09.20

Date Received: 07.22.19 08.00
Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096163

Date Prep: 07.22.19 14.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	999	24.9	mg/kg	07.22.19 16.20		5

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3096275

Date Prep: 07.23.19 08.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.23.19 15.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.23.19 15.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.23.19 15.11	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.23.19 15.11	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	07.23.19 15.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	07.23.19 15.11	
o-Terphenyl	84-15-1	103	%	70-135	07.23.19 15.11	



Certificate of Analytical Results 631585



LT Environmental, Inc., Arvada, CO

Corral Canyon 146 (BP # Not Assigned)

Sample Id: **PH02A**
Lab Sample Id: 631585-008

Matrix: Soil
Date Collected: 07.19.19 09.20

Date Received: 07.22.19 08.00
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096312

Date Prep: 07.22.19 10.34

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.22.19 18.54	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.22.19 18.54	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.22.19 18.54	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	07.22.19 18.54	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.22.19 18.54	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.22.19 18.54	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.22.19 18.54	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	112	%	70-130	07.22.19 18.54		
4-Bromofluorobenzene	460-00-4	101	%	70-130	07.22.19 18.54		



Certificate of Analytical Results 631585



LT Environmental, Inc., Arvada, CO

Corral Canyon 146 (BP # Not Assigned)

Sample Id: **PH02B**
Lab Sample Id: 631585-009

Matrix: Soil
Date Collected: 07.19.19 09.25

Date Received: 07.22.19 08.00
Sample Depth: 6 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096163

Date Prep: 07.22.19 14.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	751	5.00	mg/kg	07.22.19 16.26		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3096275

Date Prep: 07.23.19 08.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.23.19 15.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.23.19 15.35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.23.19 15.35	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.23.19 15.35	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	07.23.19 15.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	07.23.19 15.35	
o-Terphenyl	84-15-1	91	%	70-135	07.23.19 15.35	



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LT Environmental, Inc., Arvada, CO

Corral Canyon 146 (BP # Not Assigned)

Sample Id: **PH02B**
Lab Sample Id: 631585-009

Matrix: Soil
Date Collected: 07.19.19 09.25

Date Received: 07.22.19 08.00
Sample Depth: 6 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096312

Date Prep: 07.22.19 10.34

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.23.19 16.40	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.23.19 16.40	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.23.19 16.40	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.23.19 16.40	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.23.19 16.40	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.23.19 16.40	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.23.19 16.40	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	108	%	70-130	07.23.19 16.40		
4-Bromofluorobenzene	460-00-4	127	%	70-130	07.23.19 16.40		



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LT Environmental, Inc., Arvada, CO

Corral Canyon 146 (BP # Not Assigned)

Sample Id: **PH02C** Matrix: Soil Date Received: 07.22.19 08.00
Lab Sample Id: 631585-010 Date Collected: 07.19.19 09.35 Sample Depth: 8 ft
Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: CHE % Moisture:
Analyst: CHE Date Prep: 07.22.19 14.30 Basis: Wet Weight
Seq Number: 3096163

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	710	5.05	mg/kg	07.22.19 16.32		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: DVM % Moisture:
Analyst: ARM Date Prep: 07.23.19 08.00 Basis: Wet Weight
Seq Number: 3096275

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.23.19 15.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.23.19 15.59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.23.19 15.59	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.23.19 15.59	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	07.23.19 15.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	07.23.19 15.59	
o-Terphenyl	84-15-1	97	%	70-135	07.23.19 15.59	



Certificate of Analytical Results 631585



LT Environmental, Inc., Arvada, CO

Corral Canyon 146 (BP # Not Assigned)

Sample Id: **PH02C**
Lab Sample Id: 631585-010

Matrix: Soil
Date Collected: 07.19.19 09.35

Date Received: 07.22.19 08.00
Sample Depth: 8 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096312

Date Prep: 07.22.19 10.34

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.23.19 17.00	U	1
Toluene	108-88-3	0.00324	0.00200	mg/kg	07.23.19 17.00		1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.23.19 17.00	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	07.23.19 17.00	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.23.19 17.00	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.23.19 17.00	U	1
Total BTEX		0.00324	0.00200	mg/kg	07.23.19 17.00		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	07.23.19 17.00		
4-Bromofluorobenzene	460-00-4	133	%	70-130	07.23.19 17.00	**	



Certificate of Analytical Results 631585



LT Environmental, Inc., Arvada, CO

Corral Canyon 146 (BP # Not Assigned)

Sample Id: **PH02D**
Lab Sample Id: 631585-011

Matrix: Soil
Date Collected: 07.19.19 09.40

Date Received: 07.22.19 08.00
Sample Depth: 10 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096163

Date Prep: 07.22.19 14.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1200	5.05	mg/kg	07.22.19 16.59		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3096275

Date Prep: 07.23.19 08.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.23.19 16.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	38.7	15.0	mg/kg	07.23.19 16.46		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.23.19 16.46	U	1
Total TPH	PHC635	38.7	15.0	mg/kg	07.23.19 16.46		1
Total GRO-DRO	PHC628	38.7	15.0	mg/kg	07.23.19 16.46		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	07.23.19 16.46	
o-Terphenyl	84-15-1	87	%	70-135	07.23.19 16.46	



Certificate of Analytical Results 631585



LT Environmental, Inc., Arvada, CO

Corral Canyon 146 (BP # Not Assigned)

Sample Id: **PH02D**
Lab Sample Id: 631585-011

Matrix: Soil
Date Collected: 07.19.19 09.40

Date Received: 07.22.19 08.00
Sample Depth: 10 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096312

Date Prep: 07.22.19 10.34

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.22.19 21.14	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.22.19 21.14	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.22.19 21.14	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.22.19 21.14	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.22.19 21.14	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.22.19 21.14	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.22.19 21.14	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	109	%	70-130	07.22.19 21.14		
1,4-Difluorobenzene	540-36-3	101	%	70-130	07.22.19 21.14		



Certificate of Analytical Results 631585



LT Environmental, Inc., Arvada, CO

Corral Canyon 146 (BP # Not Assigned)

Sample Id: **PH02E**
Lab Sample Id: 631585-012

Matrix: Soil
Date Collected: 07.19.19 09.50

Date Received: 07.22.19 08.00
Sample Depth: 11 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096163

Date Prep: 07.22.19 14.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1320	4.97	mg/kg	07.22.19 17.05		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3096275

Date Prep: 07.23.19 08.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.23.19 17.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	32.5	15.0	mg/kg	07.23.19 17.10		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.23.19 17.10	U	1
Total TPH	PHC635	32.5	15.0	mg/kg	07.23.19 17.10		1
Total GRO-DRO	PHC628	32.5	15.0	mg/kg	07.23.19 17.10		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	07.23.19 17.10	
o-Terphenyl	84-15-1	86	%	70-135	07.23.19 17.10	



Certificate of Analytical Results 631585



LT Environmental, Inc., Arvada, CO

Corral Canyon 146 (BP # Not Assigned)

Sample Id: **PH02E**
Lab Sample Id: 631585-012

Matrix: Soil
Date Collected: 07.19.19 09.50

Date Received: 07.22.19 08.00
Sample Depth: 11 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096312

Date Prep: 07.22.19 10.34

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.22.19 21.34	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.22.19 21.34	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.22.19 21.34	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.22.19 21.34	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.22.19 21.34	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.22.19 21.34	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.22.19 21.34	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	96	%	70-130	07.22.19 21.34		
1,4-Difluorobenzene	540-36-3	110	%	70-130	07.22.19 21.34		



Certificate of Analytical Results 631585



LT Environmental, Inc., Arvada, CO

Corral Canyon 146 (BP # Not Assigned)

Sample Id: **PH03**
Lab Sample Id: 631585-013

Matrix: Soil
Date Collected: 07.19.19 10.10

Date Received: 07.22.19 08.00
Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096163

Date Prep: 07.22.19 14.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1030	25.0	mg/kg	07.22.19 17.11		5

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3096275

Date Prep: 07.23.19 08.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	07.23.19 17.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	42.9	14.9	mg/kg	07.23.19 17.34		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	07.23.19 17.34	U	1
Total TPH	PHC635	42.9	14.9	mg/kg	07.23.19 17.34		1
Total GRO-DRO	PHC628	42.9	14.9	mg/kg	07.23.19 17.34		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	07.23.19 17.34	
o-Terphenyl	84-15-1	113	%	70-135	07.23.19 17.34	



Certificate of Analytical Results 631585



LT Environmental, Inc., Arvada, CO

Corral Canyon 146 (BP # Not Assigned)

Sample Id: **PH03**
Lab Sample Id: 631585-013

Matrix: Soil
Date Collected: 07.19.19 10.10

Date Received: 07.22.19 08.00
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096312

Date Prep: 07.22.19 10.34

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.22.19 21.54	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.22.19 21.54	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.22.19 21.54	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.22.19 21.54	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.22.19 21.54	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.22.19 21.54	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.22.19 21.54	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	07.22.19 21.54		
4-Bromofluorobenzene	460-00-4	101	%	70-130	07.22.19 21.54		



Certificate of Analytical Results 631585



LT Environmental, Inc., Arvada, CO

Corral Canyon 146 (BP # Not Assigned)

Sample Id: **PH03A**
Lab Sample Id: 631585-014

Matrix: Soil
Date Collected: 07.19.19 10.15

Date Received: 07.22.19 08.00
Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096163

Date Prep: 07.22.19 14.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	752	5.00	mg/kg	07.22.19 17.18		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3096275

Date Prep: 07.23.19 08.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.23.19 17.57	U	1
Diesel Range Organics (DRO)	C10C28DRO	28.4	15.0	mg/kg	07.23.19 17.57		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.23.19 17.57	U	1
Total TPH	PHC635	28.4	15.0	mg/kg	07.23.19 17.57		1
Total GRO-DRO	PHC628	28.4	15.0	mg/kg	07.23.19 17.57		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	07.23.19 17.57	
o-Terphenyl	84-15-1	111	%	70-135	07.23.19 17.57	



Certificate of Analytical Results 631585



LT Environmental, Inc., Arvada, CO

Corral Canyon 146 (BP # Not Assigned)

Sample Id: **PH03A**
Lab Sample Id: 631585-014

Matrix: Soil
Date Collected: 07.19.19 10.15

Date Received: 07.22.19 08.00
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096312

Date Prep: 07.22.19 10.34

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.22.19 22.15	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.22.19 22.15	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.22.19 22.15	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.22.19 22.15	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.22.19 22.15	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.22.19 22.15	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.22.19 22.15	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	101	%	70-130	07.22.19 22.15		
1,4-Difluorobenzene	540-36-3	108	%	70-130	07.22.19 22.15		



Certificate of Analytical Results 631585



LT Environmental, Inc., Arvada, CO

Corral Canyon 146 (BP # Not Assigned)

Sample Id: **PH03B**
Lab Sample Id: 631585-015

Matrix: Soil
Date Collected: 07.19.19 10.20

Date Received: 07.22.19 08.00
Sample Depth: 6 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096163

Date Prep: 07.22.19 14.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	53.3	5.00	mg/kg	07.22.19 17.24		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3096275

Date Prep: 07.23.19 08.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.23.19 18.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	22.2	15.0	mg/kg	07.23.19 18.21		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.23.19 18.21	U	1
Total TPH	PHC635	22.2	15.0	mg/kg	07.23.19 18.21		1
Total GRO-DRO	PHC628	22.2	15.0	mg/kg	07.23.19 18.21		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	07.23.19 18.21	
o-Terphenyl	84-15-1	95	%	70-135	07.23.19 18.21	



Certificate of Analytical Results 631585



LT Environmental, Inc., Arvada, CO

Corral Canyon 146 (BP # Not Assigned)

Sample Id: **PH03B**
Lab Sample Id: 631585-015

Matrix: Soil
Date Collected: 07.19.19 10.20

Date Received: 07.22.19 08.00
Sample Depth: 6 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096312

Date Prep: 07.22.19 10.34

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.23.19 17.20	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.23.19 17.20	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.23.19 17.20	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.23.19 17.20	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.23.19 17.20	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.23.19 17.20	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.23.19 17.20	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	103	%	70-130	07.23.19 17.20		
1,4-Difluorobenzene	540-36-3	114	%	70-130	07.23.19 17.20		

- 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 631585

LT Environmental, Inc.

Corral Canyon 146 (BP # Not Assigned)

Analytical Method: Chloride by EPA 300

Seq Number: 3096128

MB Sample Id: 7682537-1-BLK

Matrix: Solid

LCS Sample Id: 7682537-1-BKS

Prep Method: E300P

Date Prep: 07.22.19

LCSD Sample Id: 7682537-1-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	247	99	243	97	90-110	2	20	mg/kg	07.22.19 14:21	

Analytical Method: Chloride by EPA 300

Seq Number: 3096128

MB Sample Id: 7682538-1-BLK

Matrix: Solid

LCS Sample Id: 7682538-1-BKS

Prep Method: E300P

Date Prep: 07.22.19

LCSD Sample Id: 7682538-1-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	239	96	240	96	90-110	0	20	mg/kg	07.22.19 15:42	

Analytical Method: Chloride by EPA 300

Seq Number: 3096128

Parent Sample Id: 631641-001

Matrix: Soil

MS Sample Id: 631641-001 S

Prep Method: E300P

Date Prep: 07.22.19

MSD Sample Id: 631641-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	32.1	249	287	102	284	101	90-110	1	20	mg/kg	07.22.19 14:37	

Analytical Method: Chloride by EPA 300

Seq Number: 3096128

Parent Sample Id: 631643-002

Matrix: Soil

MS Sample Id: 631643-002 S

Prep Method: E300P

Date Prep: 07.22.19

MSD Sample Id: 631643-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	9.95	251	267	102	265	102	90-110	1	20	mg/kg	07.22.19 15:52	

Analytical Method: Chloride by EPA 300

Seq Number: 3096128

Parent Sample Id: 631585-006

Matrix: Soil

MS Sample Id: 631585-006 S

Prep Method: E300P

Date Prep: 07.22.19

MSD Sample Id: 631585-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	520	250	743	89	743	89	90-110	0	20	mg/kg	07.22.19 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 631585

LT Environmental, Inc.

Corral Canyon 146 (BP # Not Assigned)

Analytical Method: Chloride by EPA 300

Seq Number: 3096163

Parent Sample Id: 631591-001

Matrix: Soil

MS Sample Id: 631591-001 S

Prep Method: E300P

Date Prep: 07.22.19

MSD Sample Id: 631591-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	161	250	404	97	403	97	90-110	0	20	mg/kg	07.22.19 17:37	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3096275

MB Sample Id: 7682642-1-BLK

Matrix: Solid

LCS Sample Id: 7682642-1-BKS

Prep Method: TX1005P

Date Prep: 07.23.19

LCSD Sample Id: 7682642-1-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	1020	102	989	99	70-135	3	20	mg/kg	07.23.19 10:51	
Diesel Range Organics (DRO)	<8.13	1000	1040	104	1020	102	70-135	2	20	mg/kg	07.23.19 10:51	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	103		105		96		70-135	%	07.23.19 10:51
o-Terphenyl	87		110		99		70-135	%	07.23.19 10:51

Analytical Method: TPH by SW8015 Mod

Seq Number: 3096275

Parent Sample Id: 631585-001

Matrix: Soil

MS Sample Id: 631585-001 S

Prep Method: TX1005P

Date Prep: 07.23.19

MSD Sample Id: 631585-001 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)	8.74	998	983	98	1020	102	70-135	4	20	mg/kg	07.23.19 12:02	
Diesel Range Organics (DRO)	8.12	998	1100	109	1160	116	70-135	5	20	mg/kg	07.23.19 12:02	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	91		95		70-135	%	07.23.19 12:02
o-Terphenyl	85		86		70-135	%	07.23.19 12:02

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

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

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

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



QC Summary 631585

LT Environmental, Inc.

Corral Canyon 146 (BP # Not Assigned)

Analytical Method: BTEX by EPA 8021B

Seq Number: 3096312

MB Sample Id: 7682517-1-BLK

Matrix: Solid

LCS Sample Id: 7682517-1-BKS

Prep Method: SW5030B

Date Prep: 07.22.19

LCSD Sample Id: 7682517-1-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	0.121	121	0.124	124	70-130	2	35	mg/kg	07.22.19 14:21	
Toluene	0.000490	0.100	0.0949	95	0.102	102	70-130	7	35	mg/kg	07.22.19 14:21	
Ethylbenzene	<0.00200	0.100	0.0868	87	0.0948	95	70-130	9	35	mg/kg	07.22.19 14:21	
m,p-Xylenes	<0.00400	0.200	0.175	88	0.194	97	70-130	10	35	mg/kg	07.22.19 14:21	
o-Xylene	<0.00200	0.100	0.0854	85	0.0940	94	70-130	10	35	mg/kg	07.22.19 14:21	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	113		116		115		70-130	%	07.22.19 14:21
4-Bromofluorobenzene	90		84		88		70-130	%	07.22.19 14:21

Analytical Method: BTEX by EPA 8021B

Seq Number: 3096312

Parent Sample Id: 631585-001

Matrix: Soil

MS Sample Id: 631585-001 S

Prep Method: SW5030B

Date Prep: 07.22.19

MSD Sample Id: 631585-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.106	106	0.111	111	70-130	5	35	mg/kg	07.22.19 15:02	
Toluene	0.00649	0.0996	0.0892	83	0.0892	83	70-130	0	35	mg/kg	07.22.19 15:02	
Ethylbenzene	0.00134	0.0996	0.0805	79	0.0793	78	70-130	2	35	mg/kg	07.22.19 15:02	
m,p-Xylenes	0.00395	0.199	0.160	78	0.160	78	70-130	0	35	mg/kg	07.22.19 15:02	
o-Xylene	0.00157	0.0996	0.0804	79	0.0790	77	70-130	2	35	mg/kg	07.22.19 15:02	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	116		118		70-130	%	07.22.19 15:02
4-Bromofluorobenzene	98		95		70-130	%	07.22.19 15:02

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. 631585

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 2

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

Project Name:	Laral Canyon Well (RST Unit 151944)	Turn Around	Routine ☐ Rush: 24hr ☒
Project Number:		Due Date:	
P.O. Number:			
Sampler's Name:	Benjamin Beill		

Temp Blank:	Yes ☒ No ☐	Wet Ice:	Yes ☐ No ☒
Temperature (°C):	3.8/3.6	Thermometer ID:	R8
Received Intact:	Yes ☒ No ☐	Correction Factor:	0.1
Cooler Custody Seals:	Yes ☒ No ☐ N/A ☐	Total Containers:	1
Sample Custody Seals:	Yes ☒ No ☐ N/A ☐		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0-8021)	Chloride (EPA 300.0)	ANALYSIS REQUEST	Work Order Notes
PS01-F547	S	7/18/19	1730	0.5'	1	X	X	X		
PS02-F547			1715			X	X	X		
PS03-F520		7/19/19	0750	2'		X	X	X		
PH01			0800	4'		X	X	X		
PH01A			0805	6'		X	X	X		
PH01B			0415	2'		X	X	X		
PH02			0420	4'		X	X	X		
PH02A			0425	6'		X	X	X		
PH02B			0435	8'		X	X	X		
PH02C						X	X	X		

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

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

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
		07/19/19 @ 1:30			7/19/19 14:24
		7/19/19 04:40			7/22/19 8:00



Chain of Custody

Work Order No: 1031585

2 of 2

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 (770-448-8800) Tampa, FL (813-620-2000)

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Page 2

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

Project Name:	Level Layer 14th (APPROX 1500)	Turn Around	Routine ☐
Project Number:		Rush:	24hr
P.O. Number:		Due Date:	
Sampler's Name:	Benjamin Bellil		

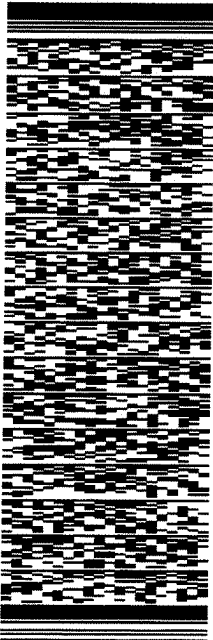
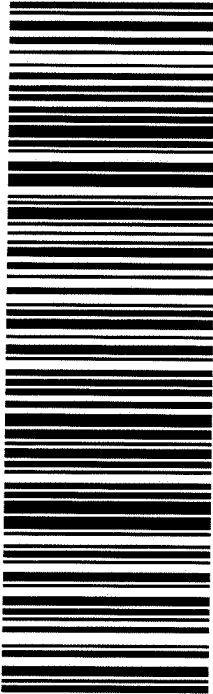
Program: UST/PT	☐ PRP	☐ brownfields	☐ RC	☐ Superfund
State of Project:				
Reporting Level II	☐ Level III	☐ ST/UST	☐ RRP	☐ Level IV
Deliverables: EDD	☐ ADAPT	☐ Other:		

SAMPLE RECEIPT				Temp Blank: Yes ☒ No ☐				Well Ice: Yes ☒ No ☐				Thermometer ID											
Temperature (°C):				38.3.6																			
Received Intact:				Yes ☒ No ☐																			
Cooler Custody Seals:				Yes ☒ No ☐				Correction Factor:				R8											
Sample Custody Seals:				Yes ☒ No ☐				Total Containers:				-0.2											
Sample Identification				Matrix				Data Sampled				Time Sampled				Depth							
PH02D				S				7/14/19				0940				10'							
PH02E																0950				11'			
PH03																1010				12'			
PH03A																1015				4'			
PH03B																1020				6'			
Number of Containers																							
TPH (EPA 8015)																							
BTX (EPA 0-8021)																							
Chloride (EPA 300.0)																							
ANALYSIS REQUEST																							
Work Order Notes																							
TAT starts the day received 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 Ti Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U 1631 / 245.1 / 7470 / 7471 : Hg

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	07/19/19 @ 1520	<i>[Signature]</i>	<i>[Signature]</i>	7/19/19 14:24
<i>[Signature]</i>	<i>[Signature]</i>	7/19/19 14:30	<i>[Signature]</i>	<i>[Signature]</i>	7/22/19 8:00

ORIGIN ID:CAOA (281) 240-4200 SAMPLE CUSTODY SAMPLE CUSTODY 1089 N CANAL ST CARLSBAD, NM 88220 UNITED STATES US		SHIP DATE: 19 JUL 19 ACTWGT: 60.00 LB CAD: 114488676/NET 4160 DIMS: 13x9x9 IN BILL SENDER
TO SAMPLE RECEIVING MIDLAND FEDEx OFFICE PRINT & SHIP CENTER FEDEx OFFICE PRINT & SHIP CENTER 200 W INTERSTATE 20 MIDLAND TX 79701 REF: (432) 704-5440 INV: PO: DEPT:		
 		
TRK# 7757 8998 4947 0201	SATURDAY HOLD PRIORITY OVERNIGHT HLD MAFKI TX-US LBB	41 MAFA 

567J2/A6F9/A05A2

After printing this label:

1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
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XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

Date/ Time Received: 07/22/2019 08:00:00 AM

Work Order #: 631585

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 *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)?	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:

Katie Lowe

Date: 07/22/2019

Checklist reviewed by:

Jessica Kramer

Date: 07/22/2019

Analytical Report 632221

**for
LT Environmental, Inc.**

Project Manager: Dan Moir

Corral Canyon 14 H

012919153

04-OCT-19

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

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

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



04-OCT-19

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

Reference: XENCO Report No(s): **632221**
Corral Canyon 14 H
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) 632221. 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. 632221 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

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

Jessica Kramer
Project Assistant

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

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



Sample Cross Reference 632221

LT Environmental, Inc., Arvada, CO

Corral Canyon 14 H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS04	S	07-26-19 11:00	0.5 ft	632221-001
FS05	S	07-26-19 11:05	0.5 ft	632221-002
FS06	S	07-26-19 11:10	0.5 ft	632221-003
FS07	S	07-26-19 11:15	0.5 ft	632221-004
FS08	S	07-26-19 11:20	0.5 ft	632221-005
FS09	S	07-26-19 11:25	0.5 ft	632221-006
FS10	S	07-26-19 11:30	0.5 ft	632221-007
FS11	S	07-26-19 11:35	0.5 ft	632221-008
FS12	S	07-26-19 11:40	0.5 ft	632221-009
FS13	S	07-26-19 11:45	0.5 ft	632221-010
FS14	S	07-26-19 12:00	0.5 ft	632221-011
FS15	S	07-26-19 12:10	0.5 ft	632221-012
FS16	S	07-26-19 12:20	0.5 ft	632221-013
FS17	S	07-26-19 12:30	0.5 ft	632221-014
FS18	S	07-26-19 12:35	0.5 ft	632221-015
FS19	S	07-26-19 12:40	0.5 ft	632221-016
FS20	S	07-26-19 12:45	0.5 ft	632221-017



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *Corral Canyon 14 H*

Project ID: 012919153
Work Order Number(s): 632221

Report Date: 04-OCT-19
Date Received: 07/26/2019

Sample receipt non conformances and comments:

Per clients email, corrected all sample names to read as follows. NEW VERSION GENERATED JK
10/04/19

FS01--> FS04
FS02 --> FS05
FS03 --> FS06
FS04--> FS07
FS05--> FS08
FS06--> FS09
FS07 --> FS10
FS08 --> FS11
FS09 --> FS12
FS10 --> FS13
FS11 --> FS14
FS12 --> FS15
FS13 --> FS16
FS14 --> FS17
FS15--> FS18
FS16 --> FS19
FS18 --> FS20

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3097423 BTEX by EPA 8021B

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

Batch: LBA-3097550 BTEX by EPA 8021B

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



Certificate of Analysis Summary 632221

LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon 14 H

Project Id: 012919153

Contact: Dan Moir

Project Location:

Date Received in Lab: Fri Jul-26-19 02:30 pm

Report Date: 04-OCT-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	632221-001	632221-002	632221-003	632221-004	632221-005	632221-006
	Field Id:	FS04	FS05	FS06	FS07	FS08	FS09
	Depth:	0.5- ft	0.5- ft	0.5- ft	0.5- ft	0.5- ft	0.5- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Jul-26-19 11:00	Jul-26-19 11:05	Jul-26-19 11:10	Jul-26-19 11:15	Jul-26-19 11:20	Jul-26-19 11:25
BTEX by EPA 8021B SUB: T104704400-19-19	Extracted:	Jul-31-19 10:05	Jul-31-19 10:05	Jul-31-19 10:05	Jul-31-19 10:05	Jul-31-19 10:05	Jul-31-19 10:05
	Analyzed:	Aug-01-19 09:28	Aug-01-19 09:48	Aug-01-19 10:08	Aug-01-19 10:29	Aug-01-19 11:47	Aug-01-19 12:07
	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	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200
	Toluene	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200
m,p-Xylenes		<0.00399 0.00399	<0.00399 0.00399	<0.00399 0.00399	<0.00398 0.00398	<0.00402 0.00402	<0.00401 0.00401
o-Xylene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200
Total Xylenes		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200
Total BTEX		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200
Chloride by EPA 300 SUB: T104704400-19-19	Extracted:	Jul-30-19 10:00	Jul-30-19 10:00	Jul-30-19 10:00	Jul-30-19 10:00	Jul-30-19 10:00	Jul-30-19 10:00
	Analyzed:	Jul-30-19 11:47	Jul-30-19 13:19	Jul-30-19 12:03	Jul-30-19 12:09	Jul-30-19 12:14	Jul-30-19 12:20
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Chloride	200 5.04	11.4 5.02	294 5.02	2770 25.3	582 5.05	108 5.04
TPH by SW8015 Mod SUB: T104704400-19-19	Extracted:	Aug-02-19 10:00	Aug-02-19 10:00	Aug-02-19 10:00	Aug-02-19 10:00	Aug-02-19 10:00	Aug-02-19 10:00
	Analyzed:	Aug-04-19 11:31	Aug-04-19 12:40	Aug-04-19 13:03	Aug-04-19 13:26	Aug-04-19 13:49	Aug-04-19 14:12
	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	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
	Diesel Range Organics (DRO)	<15.0 15.0	<14.9 14.9	<15.0 15.0	38.6 15.0	<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	<15.0 15.0	<15.0 15.0
Total TPH		<15.0 15.0	<14.9 14.9	<15.0 15.0	38.6 15.0	<15.0 15.0	<15.0 15.0
Total GRO-DRO		<15.0 15.0	<14.9 14.9	<15.0 15.0	38.6 15.0	<15.0 15.0	<15.0 15.0

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

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

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 632221

LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon 14 H

Project Id: 012919153

Contact: Dan Moir

Project Location:

Date Received in Lab: Fri Jul-26-19 02:30 pm

Report Date: 04-OCT-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	632221-007	632221-008	632221-009	632221-010	632221-011	632221-012
	Field Id:	FS10	FS11	FS12	FS13	FS14	FS15
	Depth:	0.5- ft	0.5- ft	0.5- ft	0.5- ft	0.5- ft	0.5- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Jul-26-19 11:30	Jul-26-19 11:35	Jul-26-19 11:40	Jul-26-19 11:45	Jul-26-19 12:00	Jul-26-19 12:10
BTX by EPA 8021B SUB: T104704400-19-19	Extracted:	Jul-31-19 10:05	Jul-31-19 10:05	Jul-31-19 10:05	Jul-31-19 10:05	Jul-31-19 10:05	Jul-31-19 10:05
	Analyzed:	Aug-01-19 12:27	Aug-01-19 12:47	Aug-01-19 13:28	Aug-01-19 13:48	Aug-01-19 14:08	Aug-01-19 14:28
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Benzene	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198
	Toluene	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198
Ethylbenzene	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198
m,p-Xylenes	<0.00398 0.00398	<0.00400 0.00400	<0.00401 0.00401	<0.00401 0.00401	<0.00399 0.00399	<0.00397 0.00397	<0.00198 0.00198
o-Xylene	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00198 0.00198
Total Xylenes	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00198 0.00198
Total BTX	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00198 0.00198
Chloride by EPA 300 SUB: T104704400-19-19	Extracted:	Jul-30-19 10:00	Jul-30-19 10:00	Jul-30-19 10:00	Jul-30-19 10:00	Jul-30-19 10:00	Jul-30-19 10:00
	Analyzed:	Jul-30-19 12:52	Jul-30-19 12:58	Jul-30-19 13:03	Jul-30-19 13:09	Jul-30-19 13:14	Jul-30-19 13:36
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Chloride	1190 25.3	812 25.0	468 4.99	519 4.97	1100 25.2	148 5.02
TPH by SW8015 Mod SUB: T104704400-19-19	Extracted:	Aug-02-19 10:00	Aug-02-19 10:00	Aug-02-19 10:00	Aug-02-19 10:00	Aug-02-19 10:00	Aug-02-19 10:00
	Analyzed:	Aug-04-19 14:37	Aug-04-19 15:00	Aug-04-19 15:23	Aug-04-19 15:46	Aug-04-19 16:34	Aug-04-19 16:57
	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	<14.9 14.9	<15.0 15.0	<15.0 15.0	<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	<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	<15.0 15.0	<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	<15.0 15.0	<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	<15.0 15.0	<15.0 15.0	<15.0 15.0

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

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 632221

LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon 14 H

Project Id: 012919153

Contact: Dan Moir

Project Location:

Date Received in Lab: Fri Jul-26-19 02:30 pm

Report Date: 04-OCT-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	632221-013	632221-014	632221-015	632221-016	632221-017	
	Field Id:	FS16	FS17	FS18	FS19	FS20	
	Depth:	0.5- ft	0.5- ft	0.5- ft	0.5- ft	0.5- ft	
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	
	Sampled:	Jul-26-19 12:20	Jul-26-19 12:30	Jul-26-19 12:35	Jul-26-19 12:40	Jul-26-19 12:45	
BTEX by EPA 8021B SUB: T104704400-19-19	Extracted:	Jul-31-19 10:05	Jul-31-19 10:05	Jul-31-19 10:45	Jul-31-19 10:45	Jul-31-19 10:45	
	Analyzed:	Aug-01-19 14:48	Aug-01-19 15:08	Aug-03-19 12:53	Aug-03-19 01:14	Aug-03-19 01:34	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Benzene		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	
Toluene		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	
Ethylbenzene		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	
m,p-Xylenes		<0.00400 0.00400	<0.00398 0.00398	<0.00400 0.00400	<0.00400 0.00400	<0.00401 0.00401	
o-Xylene		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	
Total Xylenes		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	
Total BTEX		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	
Chloride by EPA 300 SUB: T104704400-19-19	Extracted:	Jul-30-19 10:00	Jul-30-19 10:00	Jul-30-19 10:00	Jul-30-19 10:00	Jul-30-19 10:00	
	Analyzed:	Jul-30-19 13:41	Jul-30-19 13:57	Jul-30-19 14:03	Jul-30-19 14:08	Jul-30-19 14:13	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		557 4.99	217 4.95	68.2 5.02	921 5.00	598 4.97	
TPH by SW8015 Mod SUB: T104704400-19-19	Extracted:	Aug-02-19 10:00	Aug-02-19 10:00	Aug-02-19 10:00	Aug-02-19 10:00	Aug-02-19 10:00	
	Analyzed:	Aug-04-19 17:21	Aug-04-19 17:44	Aug-04-19 18:08	Aug-04-19 18:32	Aug-04-19 18:55	
	Units/RL:	mg/kg 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	<15.0 15.0	
Diesel Range Organics (DRO)		<15.0 15.0	<14.9 14.9	<15.0 15.0	<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	<15.0 15.0	
Total TPH		<15.0 15.0	<14.9 14.9	<15.0 15.0	<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	<15.0 15.0	

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Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Jessica Kramer
Project Assistant



Certificate of Analytical Results 632221

LT Environmental, Inc., Arvada, CO

Corral Canyon 14 H

Sample Id: **FS04**
Lab Sample Id: 632221-001

Matrix: Soil
Date Collected: 07.26.19 11.00

Date Received: 07.26.19 14.30
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096993

Date Prep: 07.30.19 10.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	200	5.04	mg/kg	07.30.19 11.47		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097491

Date Prep: 08.02.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.04.19 11.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.04.19 11.31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.04.19 11.31	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.04.19 11.31	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.04.19 11.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	08.04.19 11.31	
o-Terphenyl	84-15-1	87	%	70-135	08.04.19 11.31	



Certificate of Analytical Results 632221

LT Environmental, Inc., Arvada, CO

Corral Canyon 14 H

Sample Id: **FS04**
Lab Sample Id: 632221-001

Matrix: Soil
Date Collected: 07.26.19 11.00

Date Received: 07.26.19 14.30
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: ALG

Seq Number: 3097550

Prep Method: SW5030B

% Moisture:

Date Prep: 07.31.19 10.05

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.01.19 09.28	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.01.19 09.28	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.01.19 09.28	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.01.19 09.28	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.01.19 09.28	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.01.19 09.28	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.01.19 09.28	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	107	%	70-130	08.01.19 09.28		
4-Bromofluorobenzene	460-00-4	122	%	70-130	08.01.19 09.28		



Certificate of Analytical Results 632221

LT Environmental, Inc., Arvada, CO

Corral Canyon 14 H

Sample Id: **FS05**
Lab Sample Id: 632221-002

Matrix: Soil
Date Collected: 07.26.19 11.05

Date Received: 07.26.19 14.30
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096993

Date Prep: 07.30.19 10.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	11.4	5.02	mg/kg	07.30.19 13.19		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097491

Date Prep: 08.02.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	08.04.19 12.40	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	08.04.19 12.40	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	08.04.19 12.40	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	08.04.19 12.40	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	08.04.19 12.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	08.04.19 12.40	
o-Terphenyl	84-15-1	102	%	70-135	08.04.19 12.40	



Certificate of Analytical Results 632221

LT Environmental, Inc., Arvada, CO

Corral Canyon 14 H

Sample Id: **FS05**
Lab Sample Id: 632221-002

Matrix: Soil
Date Collected: 07.26.19 11.05

Date Received: 07.26.19 14.30
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: ALG

Seq Number: 3097550

Prep Method: SW5030B

% Moisture:

Date Prep: 07.31.19 10.05

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.01.19 09.48	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.01.19 09.48	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.01.19 09.48	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.01.19 09.48	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.01.19 09.48	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.01.19 09.48	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.01.19 09.48	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	121	%	70-130	08.01.19 09.48		
1,4-Difluorobenzene	540-36-3	108	%	70-130	08.01.19 09.48		



Certificate of Analytical Results 632221

LT Environmental, Inc., Arvada, CO

Corral Canyon 14 H

Sample Id: **FS06**
Lab Sample Id: 632221-003

Matrix: Soil
Date Collected: 07.26.19 11.10

Date Received: 07.26.19 14.30
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096993

Date Prep: 07.30.19 10.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	294	5.02	mg/kg	07.30.19 12.03		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097491

Date Prep: 08.02.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.04.19 13.03	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.04.19 13.03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.04.19 13.03	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.04.19 13.03	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.04.19 13.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	08.04.19 13.03	
o-Terphenyl	84-15-1	84	%	70-135	08.04.19 13.03	



Certificate of Analytical Results 632221

LT Environmental, Inc., Arvada, CO

Corral Canyon 14 H

Sample Id: **FS06**
Lab Sample Id: 632221-003

Matrix: Soil
Date Collected: 07.26.19 11.10

Date Received: 07.26.19 14.30
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: ALG

Seq Number: 3097550

Prep Method: SW5030B

% Moisture:

Date Prep: 07.31.19 10.05

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.01.19 10.08	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.01.19 10.08	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.01.19 10.08	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.01.19 10.08	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.01.19 10.08	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.01.19 10.08	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.01.19 10.08	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	120	%	70-130	08.01.19 10.08		
1,4-Difluorobenzene	540-36-3	109	%	70-130	08.01.19 10.08		



Certificate of Analytical Results 632221

LT Environmental, Inc., Arvada, CO

Corral Canyon 14 H

Sample Id: **FS07**
Lab Sample Id: 632221-004

Matrix: Soil
Date Collected: 07.26.19 11.15

Date Received: 07.26.19 14.30
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096993

Date Prep: 07.30.19 10.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2770	25.3	mg/kg	07.30.19 12.09		5

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097491

Date Prep: 08.02.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.04.19 13.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	38.6	15.0	mg/kg	08.04.19 13.26		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.04.19 13.26	U	1
Total TPH	PHC635	38.6	15.0	mg/kg	08.04.19 13.26		1
Total GRO-DRO	PHC628	38.6	15.0	mg/kg	08.04.19 13.26		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	08.04.19 13.26	
o-Terphenyl	84-15-1	84	%	70-135	08.04.19 13.26	



Certificate of Analytical Results 632221

LT Environmental, Inc., Arvada, CO

Corral Canyon 14 H

Sample Id: **FS07**
Lab Sample Id: 632221-004

Matrix: Soil
Date Collected: 07.26.19 11.15

Date Received: 07.26.19 14.30
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: ALG

Seq Number: 3097550

Prep Method: SW5030B

% Moisture:

Date Prep: 07.31.19 10.05

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.01.19 10.29	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.01.19 10.29	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.01.19 10.29	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.01.19 10.29	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.01.19 10.29	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.01.19 10.29	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.01.19 10.29	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	105	%	70-130	08.01.19 10.29		
1,4-Difluorobenzene	540-36-3	103	%	70-130	08.01.19 10.29		



Certificate of Analytical Results 632221

LT Environmental, Inc., Arvada, CO

Corral Canyon 14 H

Sample Id: **FS08**
Lab Sample Id: 632221-005

Matrix: Soil
Date Collected: 07.26.19 11.20

Date Received: 07.26.19 14.30
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300
Tech: SPC
Analyst: SPC
Seq Number: 3096993

Date Prep: 07.30.19 10.00

Prep Method: E300P
% Moisture:
Basis: Wet Weight
SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	582	5.05	mg/kg	07.30.19 12.14		1

Analytical Method: TPH by SW8015 Mod
Tech: DVM
Analyst: ARM
Seq Number: 3097491

Date Prep: 08.02.19 10.00

Prep Method: TX1005P
% Moisture:
Basis: Wet Weight
SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.04.19 13.49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.04.19 13.49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.04.19 13.49	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.04.19 13.49	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.04.19 13.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	08.04.19 13.49	
o-Terphenyl	84-15-1	100	%	70-135	08.04.19 13.49	



Certificate of Analytical Results 632221

LT Environmental, Inc., Arvada, CO

Corral Canyon 14 H

Sample Id: **FS08**
Lab Sample Id: 632221-005

Matrix: Soil
Date Collected: 07.26.19 11.20

Date Received: 07.26.19 14.30
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: ALG

Seq Number: 3097550

Prep Method: SW5030B

% Moisture:

Date Prep: 07.31.19 10.05

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.01.19 11.47	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.01.19 11.47	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.01.19 11.47	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.01.19 11.47	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.01.19 11.47	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.01.19 11.47	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.01.19 11.47	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	107	%	70-130	08.01.19 11.47		
1,4-Difluorobenzene	540-36-3	105	%	70-130	08.01.19 11.47		



Certificate of Analytical Results 632221

LT Environmental, Inc., Arvada, CO

Corral Canyon 14 H

Sample Id: **FS09**
Lab Sample Id: 632221-006

Matrix: Soil
Date Collected: 07.26.19 11.25

Date Received: 07.26.19 14.30
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096993

Date Prep: 07.30.19 10.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	108	5.04	mg/kg	07.30.19 12.20		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097491

Date Prep: 08.02.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.04.19 14.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.04.19 14.12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.04.19 14.12	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.04.19 14.12	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.04.19 14.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	08.04.19 14.12	
o-Terphenyl	84-15-1	94	%	70-135	08.04.19 14.12	



Certificate of Analytical Results 632221

LT Environmental, Inc., Arvada, CO

Corral Canyon 14 H

Sample Id: **FS09**
Lab Sample Id: 632221-006

Matrix: Soil
Date Collected: 07.26.19 11.25

Date Received: 07.26.19 14.30
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: ALG

Seq Number: 3097550

Prep Method: SW5030B

% Moisture:

Date Prep: 07.31.19 10.05

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.01.19 12.07	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.01.19 12.07	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.01.19 12.07	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.01.19 12.07	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.01.19 12.07	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.01.19 12.07	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.01.19 12.07	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	108	%	70-130	08.01.19 12.07		
4-Bromofluorobenzene	460-00-4	108	%	70-130	08.01.19 12.07		



Certificate of Analytical Results 632221

LT Environmental, Inc., Arvada, CO

Corral Canyon 14 H

Sample Id: **FS10**
Lab Sample Id: 632221-007

Matrix: Soil
Date Collected: 07.26.19 11.30

Date Received: 07.26.19 14.30
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096993

Date Prep: 07.30.19 10.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1190	25.3	mg/kg	07.30.19 12.52		5

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097491

Date Prep: 08.02.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.04.19 14.37	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.04.19 14.37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.04.19 14.37	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.04.19 14.37	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.04.19 14.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	08.04.19 14.37	
o-Terphenyl	84-15-1	79	%	70-135	08.04.19 14.37	



Certificate of Analytical Results 632221

LT Environmental, Inc., Arvada, CO

Corral Canyon 14 H

Sample Id: **FS10**
Lab Sample Id: 632221-007

Matrix: Soil
Date Collected: 07.26.19 11.30

Date Received: 07.26.19 14.30
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: ALG

Seq Number: 3097550

Prep Method: SW5030B

% Moisture:

Date Prep: 07.31.19 10.05

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.01.19 12.27	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.01.19 12.27	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.01.19 12.27	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.01.19 12.27	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.01.19 12.27	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.01.19 12.27	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.01.19 12.27	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	108	%	70-130	08.01.19 12.27		
1,4-Difluorobenzene	540-36-3	107	%	70-130	08.01.19 12.27		



Certificate of Analytical Results 632221

LT Environmental, Inc., Arvada, CO

Corral Canyon 14 H

Sample Id: **FS11**
Lab Sample Id: 632221-008

Matrix: Soil
Date Collected: 07.26.19 11.35

Date Received: 07.26.19 14.30
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096993

Date Prep: 07.30.19 10.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	812	25.0	mg/kg	07.30.19 12.58		5

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097491

Date Prep: 08.02.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	08.04.19 15.00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	08.04.19 15.00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	08.04.19 15.00	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	08.04.19 15.00	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	08.04.19 15.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	08.04.19 15.00	
o-Terphenyl	84-15-1	78	%	70-135	08.04.19 15.00	



Certificate of Analytical Results 632221

LT Environmental, Inc., Arvada, CO

Corral Canyon 14 H

Sample Id: **FS11**
Lab Sample Id: 632221-008

Matrix: Soil
Date Collected: 07.26.19 11.35

Date Received: 07.26.19 14.30
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: ALG

Seq Number: 3097550

Prep Method: SW5030B

% Moisture:

Date Prep: 07.31.19 10.05

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.01.19 12.47	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.01.19 12.47	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.01.19 12.47	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.01.19 12.47	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.01.19 12.47	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.01.19 12.47	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.01.19 12.47	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	110	%	70-130	08.01.19 12.47		
1,4-Difluorobenzene	540-36-3	109	%	70-130	08.01.19 12.47		



Certificate of Analytical Results 632221

LT Environmental, Inc., Arvada, CO

Corral Canyon 14 H

Sample Id: **FS12**
Lab Sample Id: 632221-009

Matrix: Soil
Date Collected: 07.26.19 11.40

Date Received: 07.26.19 14.30
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300
Tech: SPC
Analyst: SPC
Seq Number: 3096993

Date Prep: 07.30.19 10.00

Prep Method: E300P
% Moisture:
Basis: Wet Weight
SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	468	4.99	mg/kg	07.30.19 13.03		1

Analytical Method: TPH by SW8015 Mod
Tech: DVM
Analyst: ARM
Seq Number: 3097491

Date Prep: 08.02.19 10.00

Prep Method: TX1005P
% Moisture:
Basis: Wet Weight
SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.04.19 15.23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.04.19 15.23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.04.19 15.23	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.04.19 15.23	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.04.19 15.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	08.04.19 15.23	
o-Terphenyl	84-15-1	81	%	70-135	08.04.19 15.23	



Certificate of Analytical Results 632221

LT Environmental, Inc., Arvada, CO

Corral Canyon 14 H

Sample Id: **FS12**
Lab Sample Id: 632221-009

Matrix: Soil
Date Collected: 07.26.19 11.40

Date Received: 07.26.19 14.30
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: ALG

Seq Number: 3097550

Prep Method: SW5030B

% Moisture:

Date Prep: 07.31.19 10.05

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.01.19 13.28	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.01.19 13.28	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.01.19 13.28	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.01.19 13.28	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.01.19 13.28	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.01.19 13.28	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.01.19 13.28	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	109	%	70-130	08.01.19 13.28		
4-Bromofluorobenzene	460-00-4	111	%	70-130	08.01.19 13.28		



Certificate of Analytical Results 632221

LT Environmental, Inc., Arvada, CO

Corral Canyon 14 H

Sample Id: **FS13**
Lab Sample Id: 632221-010

Matrix: Soil
Date Collected: 07.26.19 11.45

Date Received: 07.26.19 14.30
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096993

Date Prep: 07.30.19 10.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	519	4.97	mg/kg	07.30.19 13.09		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097491

Date Prep: 08.02.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.04.19 15.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.04.19 15.46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.04.19 15.46	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.04.19 15.46	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.04.19 15.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	08.04.19 15.46	
o-Terphenyl	84-15-1	72	%	70-135	08.04.19 15.46	



Certificate of Analytical Results 632221

LT Environmental, Inc., Arvada, CO

Corral Canyon 14 H

Sample Id: **FS13**
Lab Sample Id: 632221-010

Matrix: Soil
Date Collected: 07.26.19 11.45

Date Received: 07.26.19 14.30
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: ALG

Seq Number: 3097550

Prep Method: SW5030B

% Moisture:

Date Prep: 07.31.19 10.05

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.01.19 13.48	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.01.19 13.48	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.01.19 13.48	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.01.19 13.48	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.01.19 13.48	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.01.19 13.48	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.01.19 13.48	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	108	%	70-130	08.01.19 13.48		
4-Bromofluorobenzene	460-00-4	112	%	70-130	08.01.19 13.48		



Certificate of Analytical Results 632221

LT Environmental, Inc., Arvada, CO

Corral Canyon 14 H

Sample Id: **FS14**
Lab Sample Id: 632221-011

Matrix: Soil
Date Collected: 07.26.19 12.00

Date Received: 07.26.19 14.30
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096993

Date Prep: 07.30.19 10.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1100	25.2	mg/kg	07.30.19 13.14		5

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097491

Date Prep: 08.02.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.04.19 16.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.04.19 16.34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.04.19 16.34	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.04.19 16.34	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.04.19 16.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	08.04.19 16.34	
o-Terphenyl	84-15-1	77	%	70-135	08.04.19 16.34	



Certificate of Analytical Results 632221

LT Environmental, Inc., Arvada, CO

Corral Canyon 14 H

Sample Id: **FS14**
Lab Sample Id: 632221-011

Matrix: Soil
Date Collected: 07.26.19 12.00

Date Received: 07.26.19 14.30
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: ALG

Seq Number: 3097550

Prep Method: SW5030B

% Moisture:

Date Prep: 07.31.19 10.05

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.01.19 14.08	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.01.19 14.08	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.01.19 14.08	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.01.19 14.08	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.01.19 14.08	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.01.19 14.08	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.01.19 14.08	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	108	%	70-130	08.01.19 14.08		
4-Bromofluorobenzene	460-00-4	113	%	70-130	08.01.19 14.08		



Certificate of Analytical Results 632221

LT Environmental, Inc., Arvada, CO

Corral Canyon 14 H

Sample Id: **FS15**
Lab Sample Id: 632221-012

Matrix: Soil
Date Collected: 07.26.19 12.10

Date Received: 07.26.19 14.30
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096993

Date Prep: 07.30.19 10.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	148	5.02	mg/kg	07.30.19 13.36		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097491

Date Prep: 08.02.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.04.19 16.57	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.04.19 16.57	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.04.19 16.57	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.04.19 16.57	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.04.19 16.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	08.04.19 16.57	
o-Terphenyl	84-15-1	75	%	70-135	08.04.19 16.57	



Certificate of Analytical Results 632221

LT Environmental, Inc., Arvada, CO

Corral Canyon 14 H

Sample Id: **FS15**
Lab Sample Id: 632221-012

Matrix: Soil
Date Collected: 07.26.19 12.10

Date Received: 07.26.19 14.30
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: ALG

Seq Number: 3097550

Prep Method: SW5030B

% Moisture:

Date Prep: 07.31.19 10.05

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.01.19 14.28	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.01.19 14.28	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.01.19 14.28	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	08.01.19 14.28	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.01.19 14.28	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.01.19 14.28	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.01.19 14.28	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	113	%	70-130	08.01.19 14.28		
1,4-Difluorobenzene	540-36-3	109	%	70-130	08.01.19 14.28		



Certificate of Analytical Results 632221

LT Environmental, Inc., Arvada, CO

Corral Canyon 14 H

Sample Id: **FS16**
Lab Sample Id: 632221-013

Matrix: Soil
Date Collected: 07.26.19 12.20

Date Received: 07.26.19 14.30
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096993

Date Prep: 07.30.19 10.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	557	4.99	mg/kg	07.30.19 13.41		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097491

Date Prep: 08.02.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.04.19 17.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.04.19 17.21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.04.19 17.21	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.04.19 17.21	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.04.19 17.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	08.04.19 17.21	
o-Terphenyl	84-15-1	77	%	70-135	08.04.19 17.21	



Certificate of Analytical Results 632221

LT Environmental, Inc., Arvada, CO

Corral Canyon 14 H

Sample Id: **FS16**
Lab Sample Id: 632221-013

Matrix: Soil
Date Collected: 07.26.19 12.20

Date Received: 07.26.19 14.30
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: ALG

Seq Number: 3097550

Prep Method: SW5030B

% Moisture:

Date Prep: 07.31.19 10.05

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.01.19 14.48	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.01.19 14.48	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.01.19 14.48	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.01.19 14.48	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.01.19 14.48	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.01.19 14.48	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.01.19 14.48	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	107	%	70-130	08.01.19 14.48		
4-Bromofluorobenzene	460-00-4	115	%	70-130	08.01.19 14.48		



Certificate of Analytical Results 632221

LT Environmental, Inc., Arvada, CO

Corral Canyon 14 H

Sample Id: **FS17**
Lab Sample Id: 632221-014

Matrix: Soil
Date Collected: 07.26.19 12.30

Date Received: 07.26.19 14.30
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096993

Date Prep: 07.30.19 10.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	217	4.95	mg/kg	07.30.19 13.57		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097491

Date Prep: 08.02.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	08.04.19 17.44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	08.04.19 17.44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	08.04.19 17.44	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	08.04.19 17.44	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	08.04.19 17.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	08.04.19 17.44	
o-Terphenyl	84-15-1	81	%	70-135	08.04.19 17.44	



Certificate of Analytical Results 632221

LT Environmental, Inc., Arvada, CO

Corral Canyon 14 H

Sample Id: **FS17**
Lab Sample Id: 632221-014

Matrix: Soil
Date Collected: 07.26.19 12.30

Date Received: 07.26.19 14.30
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: ALG

Seq Number: 3097550

Prep Method: SW5030B

% Moisture:

Date Prep: 07.31.19 10.05

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.01.19 15.08	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.01.19 15.08	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.01.19 15.08	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.01.19 15.08	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.01.19 15.08	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.01.19 15.08	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.01.19 15.08	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	116	%	70-130	08.01.19 15.08		
1,4-Difluorobenzene	540-36-3	109	%	70-130	08.01.19 15.08		



Certificate of Analytical Results 632221

LT Environmental, Inc., Arvada, CO

Corral Canyon 14 H

Sample Id: **FS18**
Lab Sample Id: 632221-015

Matrix: Soil
Date Collected: 07.26.19 12.35

Date Received: 07.26.19 14.30
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300
Tech: SPC
Analyst: SPC
Seq Number: 3096993

Date Prep: 07.30.19 10.00

Prep Method: E300P
% Moisture:
Basis: Wet Weight
SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	68.2	5.02	mg/kg	07.30.19 14.03		1

Analytical Method: TPH by SW8015 Mod
Tech: DVM
Analyst: ARM
Seq Number: 3097491

Date Prep: 08.02.19 10.00

Prep Method: TX1005P
% Moisture:
Basis: Wet Weight
SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.04.19 18.08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.04.19 18.08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.04.19 18.08	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.04.19 18.08	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.04.19 18.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	08.04.19 18.08	
o-Terphenyl	84-15-1	87	%	70-135	08.04.19 18.08	



Certificate of Analytical Results 632221

LT Environmental, Inc., Arvada, CO

Corral Canyon 14 H

Sample Id: **FS18**
Lab Sample Id: 632221-015

Matrix: Soil
Date Collected: 07.26.19 12.35

Date Received: 07.26.19 14.30
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: ALG

Seq Number: 3097423

Prep Method: SW5030B

% Moisture:

Date Prep: 07.31.19 10.45

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.03.19 12.53	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.03.19 12.53	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.03.19 12.53	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.03.19 12.53	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.03.19 12.53	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.03.19 12.53	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.03.19 12.53	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	102	%	70-130	08.03.19 12.53		
4-Bromofluorobenzene	460-00-4	99	%	70-130	08.03.19 12.53		



Certificate of Analytical Results 632221

LT Environmental, Inc., Arvada, CO

Corral Canyon 14 H

Sample Id: **FS19**
Lab Sample Id: 632221-016

Matrix: Soil
Date Collected: 07.26.19 12.40

Date Received: 07.26.19 14.30
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096993

Date Prep: 07.30.19 10.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	921	5.00	mg/kg	07.30.19 14.08		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097491

Date Prep: 08.02.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.04.19 18.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.04.19 18.32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.04.19 18.32	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.04.19 18.32	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.04.19 18.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	08.04.19 18.32	
o-Terphenyl	84-15-1	84	%	70-135	08.04.19 18.32	



Certificate of Analytical Results 632221

LT Environmental, Inc., Arvada, CO

Corral Canyon 14 H

Sample Id: **FS19**
Lab Sample Id: 632221-016

Matrix: Soil
Date Collected: 07.26.19 12.40

Date Received: 07.26.19 14.30
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: ALG

Seq Number: 3097423

Prep Method: SW5030B

% Moisture:

Date Prep: 07.31.19 10.45

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.03.19 01.14	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.03.19 01.14	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.03.19 01.14	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.03.19 01.14	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.03.19 01.14	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.03.19 01.14	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.03.19 01.14	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	113	%	70-130	08.03.19 01.14		
1,4-Difluorobenzene	540-36-3	104	%	70-130	08.03.19 01.14		



Certificate of Analytical Results 632221

LT Environmental, Inc., Arvada, CO

Corral Canyon 14 H

Sample Id: **FS20**
Lab Sample Id: 632221-017

Matrix: Soil
Date Collected: 07.26.19 12.45

Date Received: 07.26.19 14.30
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3096993

Date Prep: 07.30.19 10.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	598	4.97	mg/kg	07.30.19 14.13		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097491

Date Prep: 08.02.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.04.19 18.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.04.19 18.55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.04.19 18.55	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.04.19 18.55	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.04.19 18.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	08.04.19 18.55	
o-Terphenyl	84-15-1	83	%	70-135	08.04.19 18.55	



Certificate of Analytical Results 632221

LT Environmental, Inc., Arvada, CO

Corral Canyon 14 H

Sample Id: **FS20**
Lab Sample Id: 632221-017

Matrix: Soil
Date Collected: 07.26.19 12.45

Date Received: 07.26.19 14.30
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: ALG

Seq Number: 3097423

Prep Method: SW5030B

% Moisture:

Date Prep: 07.31.19 10.45

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.03.19 01.34	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.03.19 01.34	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.03.19 01.34	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.03.19 01.34	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.03.19 01.34	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.03.19 01.34	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.03.19 01.34	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	109	%	70-130	08.03.19 01.34		
1,4-Difluorobenzene	540-36-3	105	%	70-130	08.03.19 01.34		

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 632221

LT Environmental, Inc.
Corral Canyon 14 H

Analytical Method: Chloride by EPA 300

Seq Number: 3096993

MB Sample Id: 7683141-1-BLK

Matrix: Solid

LCS Sample Id: 7683141-1-BKS

Prep Method: E300P

Date Prep: 07.30.19

LCSD Sample Id: 7683141-1-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	269	108	268	107	90-110	0	20	mg/kg	07.30.19 11:36	

Analytical Method: Chloride by EPA 300

Seq Number: 3096993

Parent Sample Id: 632221-001

Matrix: Soil

MS Sample Id: 632221-001 S

Prep Method: E300P

Date Prep: 07.30.19

MSD Sample Id: 632221-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	200	252	463	104	460	103	90-110	1	20	mg/kg	07.30.19 11:53	

Analytical Method: Chloride by EPA 300

Seq Number: 3096993

Parent Sample Id: 632221-002

Matrix: Soil

MS Sample Id: 632221-002 S

Prep Method: E300P

Date Prep: 07.30.19

MSD Sample Id: 632221-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	11.4	251	279	107	278	106	90-110	0	20	mg/kg	07.30.19 13:25	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3097491

MB Sample Id: 7683385-1-BLK

Matrix: Solid

LCS Sample Id: 7683385-1-BKS

Prep Method: TX1005P

Date Prep: 08.02.19

LCSD Sample Id: 7683385-1-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	965	97	1060	106	70-135	9	20	mg/kg	08.04.19 10:45	
Diesel Range Organics (DRO)	<8.13	1000	1090	109	1110	111	70-135	2	20	mg/kg	08.04.19 10:45	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	91		85		97		70-135	%	08.04.19 10:45
o-Terphenyl	81		109		107		70-135	%	08.04.19 10:45

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 632221

LT Environmental, Inc. Corral Canyon 14 H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3097491

Parent Sample Id: 632221-001

Matrix: Soil

MS Sample Id: 632221-001 S

Prep Method: TX1005P

Date Prep: 08.02.19

MSD Sample Id: 632221-001 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)	<7.99	999	911	91	954	96	70-135	5	20	mg/kg	08.04.19 11:54	
Diesel Range Organics (DRO)	<8.12	999	993	99	1010	101	70-135	2	20	mg/kg	08.04.19 11:54	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	89		93		70-135	%	08.04.19 11:54
o-Terphenyl	110		110		70-135	%	08.04.19 11:54

Analytical Method: BTEX by EPA 8021B

Seq Number: 3097550

MB Sample Id: 7683178-1-BLK

Matrix: Solid

LCS Sample Id: 7683178-1-BKS

Prep Method: SW5030B

Date Prep: 07.31.19

LCSD Sample Id: 7683178-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000385	0.100	0.0927	93	0.0869	87	70-130	6	35	mg/kg	08.01.19 05:28	
Toluene	0.000470	0.100	0.0899	90	0.0863	86	70-130	4	35	mg/kg	08.01.19 05:28	
Ethylbenzene	<0.00200	0.100	0.0914	91	0.0883	88	70-130	3	35	mg/kg	08.01.19 05:28	
m,p-Xylenes	<0.00101	0.200	0.184	92	0.180	90	70-130	2	35	mg/kg	08.01.19 05:28	
o-Xylene	<0.000344	0.100	0.0965	97	0.0964	96	70-130	0	35	mg/kg	08.01.19 05:28	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		98		101		70-130	%	08.01.19 05:28
4-Bromofluorobenzene	115		108		120		70-130	%	08.01.19 05:28

Analytical Method: BTEX by EPA 8021B

Seq Number: 3097423

MB Sample Id: 7683184-1-BLK

Matrix: Solid

LCS Sample Id: 7683184-1-BKS

Prep Method: SW5030B

Date Prep: 07.31.19

LCSD Sample Id: 7683184-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0978	98	0.0905	91	70-130	8	35	mg/kg	08.02.19 10:52	
Toluene	<0.00200	0.100	0.0945	95	0.0875	88	70-130	8	35	mg/kg	08.02.19 10:52	
Ethylbenzene	<0.00200	0.100	0.105	105	0.0975	98	70-130	7	35	mg/kg	08.02.19 10:52	
m,p-Xylenes	<0.00400	0.200	0.212	106	0.195	98	70-130	8	35	mg/kg	08.02.19 10:52	
o-Xylene	<0.00200	0.100	0.104	104	0.0960	96	70-130	8	35	mg/kg	08.02.19 10:52	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		102		104		70-130	%	08.02.19 10:52
4-Bromofluorobenzene	92		109		117		70-130	%	08.02.19 10:52

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

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

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

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



QC Summary 632221

LT Environmental, Inc. Corral Canyon 14 H

Analytical Method: BTEX by EPA 8021B

Seq Number: 3097550

Parent Sample Id: 632058-053

Matrix: Soil

MS Sample Id: 632058-053 S

Prep Method: SW5030B

Date Prep: 07.31.19

MSD Sample Id: 632058-053 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0831	83	0.0646	65	70-130	25	35	mg/kg	08.01.19 06:08	X
Toluene	<0.000457	0.100	0.0811	81	0.0643	64	70-130	23	35	mg/kg	08.01.19 06:08	X
Ethylbenzene	<0.00200	0.100	0.0831	83	0.0658	66	70-130	23	35	mg/kg	08.01.19 06:08	X
m,p-Xylenes	<0.00102	0.200	0.167	84	0.134	67	70-130	22	35	mg/kg	08.01.19 06:08	X
o-Xylene	<0.00200	0.100	0.0874	87	0.0713	71	70-130	20	35	mg/kg	08.01.19 06:08	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		100		70-130	%	08.01.19 06:08
4-Bromofluorobenzene	123		115		70-130	%	08.01.19 06:08

Analytical Method: BTEX by EPA 8021B

Seq Number: 3097423

Parent Sample Id: 632071-001

Matrix: Soil

MS Sample Id: 632071-001 S

Prep Method: SW5030B

Date Prep: 07.31.19

MSD Sample Id: 632071-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.0970	98	0.108	108	70-130	11	35	mg/kg	08.05.19 01:01	
Toluene	<0.00199	0.0994	0.0966	97	0.107	107	70-130	10	35	mg/kg	08.05.19 01:01	
Ethylbenzene	<0.00199	0.0994	0.110	111	0.119	119	70-130	8	35	mg/kg	08.05.19 01:01	
m,p-Xylenes	<0.00398	0.199	0.225	113	0.243	122	70-130	8	35	mg/kg	08.05.19 01:01	
o-Xylene	<0.00199	0.0994	0.105	106	0.117	117	70-130	11	35	mg/kg	08.05.19 01:01	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	97		101		70-130	%	08.05.19 01:01
4-Bromofluorobenzene	113		125		70-130	%	08.05.19 01:01

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

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

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

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



Chain of Custody

Work Order No: 1632221

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 2

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

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:	Crail Canyon 14H	Turn Around	
Project Number:	012919153	Routine	☒
P.O. Number:		Rush:	
Sampler's Name:	Benjamin Beill	Due Date:	

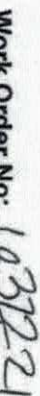
SAMPLE RECEIPT	Temp Blank:	☒ Yes	☐ No	Wet Ice:	☒ Yes	☐ No
Temperature (°C):	4.4	Thermometer ID				
Received Inlet:	☒ Yes	☐ No	Correction Factor:			7-NM-07
Cooler Custody Seals:	☒ Yes	☐ No	Total Containers:			17
Sample Custody Seals:	☒ Yes	☐ No				

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number	TPH (EPA 8015)	BTEX (EPA 8015)	Chloride (EPA 8015)	Sample Comments											
FS04-F501	S	7/6/19	1100	0.5'	1	X	X	X												
FS05-F502			1105			X	X	X												
FS06-F503			1110			X	X	X												
FS07-F504			1115			X	X	X												
FS08-F505			1120			X	X	X												
FS09-F506			1125			X	X	X												
FS10-F507			1130			X	X	X												
FS11-F508			1135			X	X	X												
FS12-F509			1140			X	X	X												
FS13-F510			1145			X	X	X												

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	2	7/6/19 14:30	3	4	
5	6				



Page 2 of 2



Inter-Office Shipment

Page 1 of 3

IOS Number **45072**

Date/Time: 07/26/19 15:46

Created by: Elizabeth McClellan

Please send report to: Jessica Kramer

Lab# From: **Carlsbad**

Delivery Priority:

Address: 1089 N Canal Street

Lab# To: **Midland**

Air Bill No.: 775849111879

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
632221-001	S	FS01	07/26/19 11:00	SW8015MOD_NM	TPH by SW8015 Mod	08/01/19	08/09/19	JKR	GRO-DRO PHCC10C28 PF	
632221-001	S	FS01	07/26/19 11:00	SW8021B	BTEX by EPA 8021B	08/01/19	08/09/19	JKR	BR4FBZ BZ BZME EBZ X	
632221-001	S	FS01	07/26/19 11:00	E300_CL	Chloride by EPA 300	08/01/19	01/22/20	JKR	CL	
632221-002	S	FS02	07/26/19 11:05	SW8015MOD_NM	TPH by SW8015 Mod	08/01/19	08/09/19	JKR	GRO-DRO PHCC10C28 PF	
632221-002	S	FS02	07/26/19 11:05	SW8021B	BTEX by EPA 8021B	08/01/19	08/09/19	JKR	BR4FBZ BZ BZME EBZ X	
632221-002	S	FS02	07/26/19 11:05	E300_CL	Chloride by EPA 300	08/01/19	01/22/20	JKR	CL	
632221-003	S	FS03	07/26/19 11:10	E300_CL	Chloride by EPA 300	08/01/19	01/22/20	JKR	CL	
632221-003	S	FS03	07/26/19 11:10	SW8021B	BTEX by EPA 8021B	08/01/19	08/09/19	JKR	BR4FBZ BZ BZME EBZ X	
632221-003	S	FS03	07/26/19 11:10	SW8015MOD_NM	TPH by SW8015 Mod	08/01/19	08/09/19	JKR	GRO-DRO PHCC10C28 PF	
632221-004	S	FS04	07/26/19 11:15	E300_CL	Chloride by EPA 300	08/01/19	01/22/20	JKR	CL	
632221-004	S	FS04	07/26/19 11:15	SW8015MOD_NM	TPH by SW8015 Mod	08/01/19	08/09/19	JKR	GRO-DRO PHCC10C28 PF	
632221-004	S	FS04	07/26/19 11:15	SW8021B	BTEX by EPA 8021B	08/01/19	08/09/19	JKR	BR4FBZ BZ BZME EBZ X	
632221-005	S	FS05	07/26/19 11:20	SW8015MOD_NM	TPH by SW8015 Mod	08/01/19	08/09/19	JKR	GRO-DRO PHCC10C28 PF	
632221-005	S	FS05	07/26/19 11:20	SW8021B	BTEX by EPA 8021B	08/01/19	08/09/19	JKR	BR4FBZ BZ BZME EBZ X	
632221-005	S	FS05	07/26/19 11:20	E300_CL	Chloride by EPA 300	08/01/19	01/22/20	JKR	CL	
632221-006	S	FS06	07/26/19 11:25	E300_CL	Chloride by EPA 300	08/01/19	01/22/20	JKR	CL	
632221-006	S	FS06	07/26/19 11:25	SW8015MOD_NM	TPH by SW8015 Mod	08/01/19	08/09/19	JKR	GRO-DRO PHCC10C28 PF	
632221-006	S	FS06	07/26/19 11:25	SW8021B	BTEX by EPA 8021B	08/01/19	08/09/19	JKR	BR4FBZ BZ BZME EBZ X	
632221-007	S	FS07	07/26/19 11:30	SW8015MOD_NM	TPH by SW8015 Mod	08/01/19	08/09/19	JKR	GRO-DRO PHCC10C28 PF	
632221-007	S	FS07	07/26/19 11:30	E300_CL	Chloride by EPA 300	08/01/19	01/22/20	JKR	CL	
632221-007	S	FS07	07/26/19 11:30	SW8021B	BTEX by EPA 8021B	08/01/19	08/09/19	JKR	BR4FBZ BZ BZME EBZ X	
632221-008	S	FS08	07/26/19 11:35	E300_CL	Chloride by EPA 300	08/01/19	01/22/20	JKR	CL	
632221-008	S	FS08	07/26/19 11:35	SW8015MOD_NM	TPH by SW8015 Mod	08/01/19	08/09/19	JKR	GRO-DRO PHCC10C28 PF	
632221-008	S	FS08	07/26/19 11:35	SW8021B	BTEX by EPA 8021B	08/01/19	08/09/19	JKR	BR4FBZ BZ BZME EBZ X	
632221-009	S	FS09	07/26/19 11:40	SW8015MOD_NM	TPH by SW8015 Mod	08/01/19	08/09/19	JKR	GRO-DRO PHCC10C28 PF	



Inter-Office Shipment

Page 2 of 3

IOS Number **45072**

Date/Time: 07/26/19 15:46

Created by: Elizabeth McClellan

Please send report to: Jessica Kramer

Lab# From: **Carlsbad**

Delivery Priority:

Address: 1089 N Canal Street

Lab# To: **Midland**

Air Bill No.: 775849111879

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
632221-009	S	FS09	07/26/19 11:40	SW8021B	BTEX by EPA 8021B	08/01/19	08/09/19	JKR	BR4FBZ BZ BZME EBZ X	
632221-009	S	FS09	07/26/19 11:40	E300_CL	Chloride by EPA 300	08/01/19	01/22/20	JKR	CL	
632221-010	S	FS10	07/26/19 11:45	E300_CL	Chloride by EPA 300	08/01/19	01/22/20	JKR	CL	
632221-010	S	FS10	07/26/19 11:45	SW8021B	BTEX by EPA 8021B	08/01/19	08/09/19	JKR	BR4FBZ BZ BZME EBZ X	
632221-010	S	FS10	07/26/19 11:45	SW8015MOD_NM	TPH by SW8015 Mod	08/01/19	08/09/19	JKR	GRO-DRO PHCC10C28 PF	
632221-011	S	FS11	07/26/19 12:00	SW8021B	BTEX by EPA 8021B	08/01/19	08/09/19	JKR	BR4FBZ BZ BZME EBZ X	
632221-011	S	FS11	07/26/19 12:00	E300_CL	Chloride by EPA 300	08/01/19	01/22/20	JKR	CL	
632221-011	S	FS11	07/26/19 12:00	SW8015MOD_NM	TPH by SW8015 Mod	08/01/19	08/09/19	JKR	GRO-DRO PHCC10C28 PF	
632221-012	S	FS12	07/26/19 12:10	SW8021B	BTEX by EPA 8021B	08/01/19	08/09/19	JKR	BR4FBZ BZ BZME EBZ X	
632221-012	S	FS12	07/26/19 12:10	SW8015MOD_NM	TPH by SW8015 Mod	08/01/19	08/09/19	JKR	GRO-DRO PHCC10C28 PF	
632221-012	S	FS12	07/26/19 12:10	E300_CL	Chloride by EPA 300	08/01/19	01/22/20	JKR	CL	
632221-013	S	FS13	07/26/19 12:20	E300_CL	Chloride by EPA 300	08/01/19	01/22/20	JKR	CL	
632221-013	S	FS13	07/26/19 12:20	SW8021B	BTEX by EPA 8021B	08/01/19	08/09/19	JKR	BR4FBZ BZ BZME EBZ X	
632221-013	S	FS13	07/26/19 12:20	SW8015MOD_NM	TPH by SW8015 Mod	08/01/19	08/09/19	JKR	GRO-DRO PHCC10C28 PF	
632221-014	S	FS14	07/26/19 12:30	E300_CL	Chloride by EPA 300	08/01/19	01/22/20	JKR	CL	
632221-014	S	FS14	07/26/19 12:30	SW8015MOD_NM	TPH by SW8015 Mod	08/01/19	08/09/19	JKR	GRO-DRO PHCC10C28 PF	
632221-014	S	FS14	07/26/19 12:30	SW8021B	BTEX by EPA 8021B	08/01/19	08/09/19	JKR	BR4FBZ BZ BZME EBZ X	
632221-015	S	FS15	07/26/19 12:35	SW8021B	BTEX by EPA 8021B	08/01/19	08/09/19	JKR	BR4FBZ BZ BZME EBZ X	
632221-015	S	FS15	07/26/19 12:35	SW8015MOD_NM	TPH by SW8015 Mod	08/01/19	08/09/19	JKR	GRO-DRO PHCC10C28 PF	
632221-015	S	FS15	07/26/19 12:35	E300_CL	Chloride by EPA 300	08/01/19	01/22/20	JKR	CL	
632221-016	S	FS16	07/26/19 12:40	SW8021B	BTEX by EPA 8021B	08/01/19	08/09/19	JKR	BR4FBZ BZ BZME EBZ X	
632221-016	S	FS16	07/26/19 12:40	SW8015MOD_NM	TPH by SW8015 Mod	08/01/19	08/09/19	JKR	GRO-DRO PHCC10C28 PF	
632221-016	S	FS16	07/26/19 12:40	E300_CL	Chloride by EPA 300	08/01/19	01/22/20	JKR	CL	
632221-017	S	FS18	07/26/19 12:45	E300_CL	Chloride by EPA 300	08/01/19	01/22/20	JKR	CL	
632221-017	S	FS18	07/26/19 12:45	SW8015MOD_NM	TPH by SW8015 Mod	08/01/19	08/09/19	JKR	GRO-DRO PHCC10C28 PF	

Inter Office Shipment or Sample Comments:



Inter-Office Shipment

Page 3 of 3

IOS Number **45072**

Date/Time: 07/26/19 15:46

Created by: Elizabeth McClellan

Please send report to: Jessica Kramer

Lab# From: **Carlsbad**

Delivery Priority:

Address: 1089 N Canal Street

Lab# To: **Midland**

Air Bill No.: 775849111879

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
632221-017	S	FS18	07/26/19 12:45	SW8021B	BTEX by EPA 8021B	08/01/19	08/09/19	JKR	BR4FBZ BZ BZME EBZ X	

Inter Office Shipment or Sample Comments:

Relinquished By:

Elizabeth McClellan

Date Relinquished:

07/26/2019

Received By:

Brianna Teel

Date Received:

Cooler Temperature: 07/29/2019 07:56

0.4



XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 45072

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sent By: Elizabeth McClellan

Date Sent: 07/26/2019 03:46 PM

Received By: Brianna Teel

Date Received: 07/29/2019 07:56 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	.4
#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: 07/29/2019



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 07/26/2019 02:30:00 PM

Work Order #: 632221

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-07

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	4.4
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	No
#5 Custody Seals intact on sample bottles?	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 Subbed to Xenco Midland.
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by:


Elizabeth McClellan

Date: 07/26/2019

Checklist reviewed by:


Jessica Kramer

Date: 07/31/2019