

October 4, 2019

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

OVDF6-191004-C-1410

**RE: Closure Request
Corral Canyon Federal #1H Flow Line
Remediation Permit Number 2RP-5201
Eddy County, New Mexico**

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following Closure Request detailing remediation activities, including site assessment, excavation, and delineation soil sampling activities, at the Corral Canyon Federal #1H Flow Line (Site), located in Unit D, Section 9, Township 25 South, Range 29 East, in Eddy County, New Mexico (Figure 1). The purpose of the remediation activities was to address impacts to soil following the release of crude oil and produced water at the Site. Based on the results of the soil sampling, excavation, and delineation activities, XTO is submitting this Closure Request, describing remediation that has occurred and requesting no further action for this release.

RELEASE BACKGROUND

On January 9, 2019, a hole developed in a flowline associated with the Corral Canyon Federal #1H well due to rubbing and flexing of the pipe. As a result, approximately 5.6 barrels (bbls) of crude oil and 8.3 bbls of produced water were released onto the surrounding pasture directly adjacent to the lease right-of-way (ROW). The well was shut in until the line was repaired, and a vacuum truck was dispatched to the Site to recover free-standing fluids; approximately 4 bbls of crude oil and 6 bbls of produced water were recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 (Form C-141) on January 23, 2019, and was subsequently assigned Remediation Permit (RP) Number 2RP-5201 (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 was initially estimated to be approximately 40 feet below ground surface (bgs) based on the nearest water well data. The nearest permitted water well was New Mexico Office of the State Engineer (NM OSE) Well #C01880, located



approximately 8,406 feet northwest of the Site. Depth to groundwater has been measured to be 40 feet bgs with a total well depth of 85 feet bgs; however, as part of the remediation efforts at the Site, LTE installed six monitoring wells (MW01 through MW06) in and around the release extent. The monitoring wells were installed between July 18 and July 21, 2019. 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 in monitoring wells MW02 with an average depth to water of 58.80 bgs. Therefore, depth to groundwater at the Site is determined to be approximately 58 feet bgs, which falls between 51 feet and 100 feet bgs. The NM OSE Well #C01880 and Site location are depicted on Figure 1. Monitoring wells MW01 through MW06 are at the Site location. Further discussion of the installation and sampling of the six monitoring wells is included in subsequent sections.

The closest continuously flowing water or significant watercourse to the Site is an unnamed dry wash located approximately 940 feet southeast 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.

CLOSURE CRITERIA

Based on the initial results of the Site Characterization, specifically the depth to water for the closest known water well (NM OSE #C01880) at approximately 40 feet bgs, initial remedial actions were driven by the following NMOC 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 the Site, LTE revised the Site Characterization and utilized the following revised Closure Criteria to assess the Site for closure:

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





INITIAL SITE ASSESSMENT ACTIVITIES

On January 15, 2019, LTE personnel inspected the Site to evaluate the release extent. Surficial staining was observed within the release area in the pasture adjacent to the lease ROW. 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.

The preliminary soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were 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.

Based on visual observations and the laboratory analytical results for preliminary soil samples, specifically BTEX, TPH, and chloride concentrations in soil from preliminary soil sample SS03 and TPH concentrations in soil from preliminary soil sample SS04 exceeding the initial Closure Criteria, excavation and delineation of impacted soil appeared warranted. Delineation via hand augered boreholes was completed to delineate the lateral and vertical extent of impacted soil and direct excavation activities, which occurred simultaneously. Details regarding delineation activities are described in subsequent sections. Laboratory analytical results for the preliminary soil samples are presented on Figure 2 and summarized in Table 1. Photographic documentation was conducted during the Site visit. Photographs are included in Attachment 2.

EXCAVATION ACTIVITIES

On April 5, 2019, LTE personnel was at the Site to oversee excavation of soil as indicated by laboratory analytical results for preliminary soil samples SS03 and SS04, visual observations, and field screening results. To direct excavation activities, LTE screened soil for volatile aromatic hydrocarbons and chloride utilizing a calibrated photoionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. Following the removal of impacted soil, LTE collected 5-point composite samples every 200 square feet from 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. Composite soil samples SW01 through SW06 were collected from the sidewalls of the excavation at depths ranging from the ground surface to approximately 6 feet bgs. Composite soil samples FS01 through FS04 were collected from the floor of the excavation at depths of approximately 6 feet bgs. The excavation composite soil samples were collected and handled as described above and





transported to Xenco for analysis of BTEX, TPH, and chloride. The excavation extent and soil sample locations are depicted on Figure 3.

The excavation extent measured approximately 2,150 square feet in area. A total of approximately 480 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.

DELINEATION ACTIVITIES

From April 5, 2019 through May 20, 2019, LTE personnel oversaw delineation activities as indicated by visible surface staining and laboratory analytical results for the preliminary and excavation confirmation soil samples. Boreholes were advanced at 11 locations within and around the release extent to further assess soil as it related to the initial Closure Criteria. Boreholes BH01 through BH05 were advanced via hand auger around the perimeter of the excavation to a depth of approximately 4.5 feet bgs and soil samples were collected from depths of approximately 0.5 feet and 4 feet bgs. Boreholes BH06 through BH11 were advanced via a track-mounted sonic drilling rig to depths ranging from approximately 19 feet to 70 feet bgs and soil samples were collected from depths ranging from approximately 1-foot to 70 feet bgs. Borehole BH06 was installed within the release extent to a total depth of approximately 70 feet bgs and groundwater was observed at approximately 56 feet bgs. As a result, a grab groundwater sample on May 22, 2019.

During the advancement of each borehole, continuous soil sampling was conducted, which included describing the lithology based on the Unified Soil Classification System (USCS) as specified in American Society for Testing and Materials (ASTM) D2488, observations of staining and odors, and field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated PID and Hach® chloride QuanTab® test strips, respectively. The lithologic/soil sampling logs for boreholes BH01 through BH11 are included in Attachment 3 The discrete delineation soil samples were collected, handled and analyzed as described above. The boreholes and delineation soil sample locations are depicted on Figure 4.

Soil analytical results for the 11 boreholes indicated chloride concentrations generally exceeded the initial Closure Criteria to a maximum depth of approximately 70 feet bgs and chloride did not appear to be vertically or laterally delineated. As such, additional delineation activities appeared warranted.

ADDITIONAL DELINEATION AND MONITORING WELL INSTALLATION ACTIVITIES

Based on the elevated chloride concentrations in and around the release area, LTE personnel oversaw the installation six monitoring wells (MW01 through MW06) from July 18 to July 21, 2019. Boreholes for the six monitoring wells were advanced utilizing a truck-mounted sonic drill rig. Monitoring well MW06 was installed in the vicinity of borehole BH06, located within the





release extent. Monitoring wells MW01, MW03, MW04, and MW05 were installed around the perimeter of the release extent to assess soil laterally from monitoring well MW06. Monitoring well MW02 was installed approximately 600 northwest and topographically upgradient of monitoring well MW06 for use when comparing release extent data to background/naturally occurring concentrations in the region. Monitoring well locations are depicted on Figure 4.

Monitoring well construction followed standard industry practice as detailed in both the ASTM Standard D 5092 – Standard Practice for Design and Installation of Groundwater Monitoring Wells in Aquifers and the New Mexico Environmental Department (NMED) Groundwater Quality Bureau (GWQB) Monitoring Well Construction and Abandonment Guidelines, dated July 2008. The monitoring wells were constructed with 2-inch inside diameter (ID) Schedule 40 polyvinyl chloride (PVC) casing and screen. The screen was factory-slotted with a slot size of 0.010 inches. The screened interval for each monitoring well was 15 feet to 20 feet in length. A 10-20 size silica sand pack was used to fill the annular space from the bottom of the screen to approximately 2 feet above the top of screen. The sand pack was overlain by hydrated bentonite chips to the ground surface. The monitoring wells were completed as stick-ups with approximately 3 feet of PVC riser extending above the excavation floor. The lithologic/soil sampling logs for monitoring wells MW01 through MW06 are included in Attachment 3.

After the six monitoring wells were completed, LTE returned to the Site to develop the monitoring wells by removing 10 casing volumes of water from each monitoring well. Waiting more than 24 hours for the monitoring wells to equilibrate, static water levels measured in monitoring wells MW01 through MW06 on September 13, 2019, ranged from 57.26 feet bgs in monitoring well MW04 to 62.29 in monitoring wells MW02 with an average depth to water of 58.80. Monitoring wells MW01 through MW06 were purged (removal of three casing volumes) prior to sampling for laboratory analysis of total dissolved solids (TDS) following SM 2540 C and chloride. Monitoring well development/purge forms are included in Attachment 4.

Based on the site-specific depth to water measurements on September 13, 2019, the initial Site Characterization was revised to reflect groundwater between 51 feet and 100 feet bgs. This new data revised the Closure Criteria for chloride from 600 mg/kg to 10,000 mg/kg. Based on the revised Closure Criteria, no additional delineation appears warranted at this time.

ANALYTICAL RESULTS

Laboratory analytical results for preliminary soil samples SS01 and SS02 indicated benzene, BTEX, GRO and DRO, and TPH concentrations were compliant with the initial Closure Criteria. Laboratory analytical results indicated BTEX, GRO and DRO, and/or TPH concentrations exceeded the initial Closure Criteria in preliminary soil samples SS03 and SS04. Based on these laboratory analytical results, excavation and delineation of impacted soil appeared warranted.





Laboratory analytical results for the initial excavation confirmation sidewall and floor soil samples collected on April 5, 2019, indicated benzene and BTEX were compliant with the initial and revised Closure Criteria. Laboratory analytical results for sidewall soil samples SW01, SW03, and SW04 indicated concentrations of chloride exceeded the initial Closure Criteria. TPH in soil from sidewall samples SW03 and SW04 exceeded the initial Closure Criteria. All four confirmation floor soil samples (FS01 through FS04), collected at approximately 6 feet bgs, exceeded the initial Closure Criteria; however, benzene, BTEX, and TPH were all compliant with the initial Closure Criteria.

Based on elevated TPH and chloride concentrations as compared to the initial Closure Criteria, additional delineation of contaminants appeared warranted, and boreholes BH01 through BH11 were advanced in and around the release area to delineate the apparent lateral and vertical extents of soil impacts. Laboratory analytical results for the additional delineation soil samples collected on May 19 and May 20, 2019, indicated benzene, BTEX, GRO and DRO, and TPH concentrations were compliant with the initial Closure Criteria. Chloride concentrations in soil from the 11 boreholes ranged from 6.23 mg/kg in soil from borehole BH10 at approximately 3 feet bgs (BH10A) to 2,620 mg/kg in soil from borehole BH11 at approximately 30 feet bgs. Chloride in soil from borehole BH06, located within the release extent footprint, exhibited variable concentrations through the boring to the terminus (approximately 70 feet bgs), some of which exceeded the initial Closure Criteria including at approximately 70 feet bgs (1,610 mg/kg).

Groundwater was observed in borehole BH06 at approximately 58 feet bgs. As such, a grab groundwater sample (WS01) was collected from the borehole for laboratory analysis. Laboratory analysis indicated concentrations of BTEX and TPH were not detected above the laboratory reporting limit. Based on the TDS concentration in groundwater within borehole BH06 (14,200 milligrams per liter (mg/L)), groundwater beneath the Site appeared to be briny as defined by TDS concentrations greater than 10,000 mg/kg. In addition, the chloride concentration in groundwater was elevated.

The installation of monitoring wells MW01 through MW06 was predicated on the initial Site Characterization and Closure Criteria and observed elevated chloride concentrations at varying depths within boreholes BH01 through BH11. Laboratory analytical results for soil in monitoring wells MW01 through MW05 were generally comparable to those of the 11 boreholes. Soil samples from monitoring well MW02 were not collected for laboratory analysis due to its proximity to borehole BH06.

One groundwater sample was collected from each monitoring well on September 13, and submitted to the laboratory for analysis of TDS and chloride. Laboratory analytical results for the groundwater samples indicated TDS concentrations ranged from 10,500 mg/L in monitoring well MW05 to 23,900 mg/L in monitoring well MW03 and chloride concentrations ranged from 6,500 (mg/L) in monitoring well MW05 to 13,300 mg/L in monitoring well MW03. Laboratory analytical



results of TDS in groundwater in and around the release extent and at a distance, as documented in monitoring well MW02, appears to indicate groundwater beneath the Site is briny. Chloride in groundwater also appeared to be comparable in and around the release extent.

Based on the site-specific depth to groundwater information, averaging 58.80 feet bgs, a revised Closure Criteria was developed for groundwater between 51 feet and 100 feet bgs. Utilizing the revised Closure Criteria, soil left in place on the sidewalls and floor of the excavation, as well as soil observed in delineation sample locations are compliant with the revised Closure Criteria.

Laboratory analytical results for soil are summarized in Table 1. Laboratory analytical results for groundwater are summarized in Table 2. The complete laboratory analytical reports are included as Attachment 5.

BACKGROUND / NATURALLY OCCURRING CHLORIDE EVALUATION

Based on the revised Closure Criteria, it appears soil beneath and surrounding the release extent is in compliance with the 10,000 mg/kg Closure Criteria for chloride concentration. Elevated chloride in subsurface soil has been observed within the release extent footprint and surrounding it based on delineation activities. As such, LTE evaluated chloride at depth onsite, at depth approximately 600 feet away (MW02) and within a hill cut in the vicinity of the Corral Canyon 14H well pad, located approximately 3,500 feet west of the Site (see Figure 1).

Chloride concentrations in soil in borehole BH06, located within the release extent, ranged from 830 mg/kg at approximately 48 feet bgs (BH06B) to 1,610 mg/kg at approximately 70 feet bgs (BH06D). Chloride concentrations in soil in nearby boreholes BH01 through BH05 and BH07 through BH11 and monitoring wells MW01 and MW03 through MW05 ranged from 6.23 mg/kg in soil from borehole BH10 at approximately 3 feet bgs (BH10A) to 2,620 mg/kg in soil from borehole BH11 at approximately 30 feet bgs. Chloride concentrations in soil from background monitoring well MW02 ranged from 384 mg/kg at approximately 1-foot bgs (MW02) to 2,020 mg/kg at approximately 60 feet bgs (MW02G). Chloride concentrations within all borehole and monitoring well locations was highly variable and did not exhibit indications of surficial releases gradating from high concentrations at the surface to lower concentrations at depth.

In addition, soil samples collected in the vicinity of the Corral Canyon 14H well pad were compared to chloride concentrations detected in samples collected at the Site. Below is a summary table of chloride concentrations collected from a hill cut topographically upgradient of the well pad and where no oil and gas operations have occurred. The lithology of the hill cut area where the background samples were collected was described by the LTE geologist on Site as a dry, light brown to tan, poorly to moderately consolidated caliche layer with trace silts interbedded. The lithology of the subsurface in this area appears to be similar to the lithological characteristics at the Site. The background soil samples (BG01 through BG04) collected at Corral Canyon 14H are depicted on Figure 5.





BACKGROUND CHLORIDE ANALYTICAL RESULTS

Sample Name	Sample Depth (feet bgs)	Sample Date	Chloride (mg/kg)
BG01	9	07/24/2019	2,950
BG02	9	07/24/2019	7,740
BG03	5	07/24/2019	631
BG04	3	07/24/2019	126

Notes:

bgs – below ground surface

mg/kg – milligrams per kilogram

A review of the background samples collected in the vicinity of the Corral Canyon 14H indicate chloride appears to be highly variable in background soil, with concentrations even greater than those observed at the Site.

Based on site-specific, nearby monitoring well MW02, and hill cut soil analytical results of chloride in subsurface soil, chloride appears naturally variable in magnitude and distribution throughout this region. As such, chloride concentrations in soil in and around the release extent related to RP Number 2RP-5201 appears to be naturally occurring and not reflective of residual impacts from the January 2019 crude oil and produced water release.

The laboratory analytical results for the background samples collected at the Corral Canyon 14H location is included in Attachment 5.

CLOSURE REQUEST

Due to the January 9, 2019, flowline release of approximately 5.6 bbls of crude oil and 8.3 bbls of produced water onto the surrounding pasture directly adjacent to the lease ROW, the following remedial actions were completed to address 2RP-5021:

- The well was shut in until the line was repaired;
- A vacuum truck was dispatched to the Site to recover free-standing fluids; approximately 4 bbls of crude oil and 6 bbls of produced water were recovered;
- Site Characterization was completed and the following initial Closure Criteria was developed:
 - o Benzene: 10 mg/kg;
 - o BTEX: 50 mg/kg;





- o TPH: 100 mg/kg; and
 - o Chloride: 600 mg/kg.
- A total of four preliminary soil samples (SS01 through SS04) were collected from within the release extent to assess for soil impacts on January 15, 2019. Laboratory analytical results indicated exceedances of BTEX, TPH, and chloride within the release extent based on the revised Closure Criteria. As such, excavation of impacted soil appeared warranted;
- A total of approximately 480 cubic yards of soil were excavated within the release extent based on field screening and observations;
- A total of six sidewall soil samples (SW01 through SW06) and four floor soil samples (FS01 through FS04) were collected within the excavation for confirmation of excavation completion;
- Laboratory analytical results for confirmation sidewall soil samples appeared to indicate TPH and chloride exceedances were present based on the initial Closure Criteria. Laboratory analytical results for confirmation floor soil samples appeared to indicate chloride exceedances were present based on the initial Closure Criteria;
- Due to exceedances of TPH and chloride in confirmation samples from the excavation, 11 boreholes (BH01 through BH11) were advanced in and around the excavation in order to delineate the lateral and vertical extents of impacts in soil;
- Groundwater was observed in borehole BH06 at approximately 58 feet bgs and laboratory analytical results of a grab groundwater sample from the boring indicated groundwater beneath the Site was briny;
- A total of six monitoring wells (MW01 through MW06) were completed for soil delineation and groundwater assessment purposes. Monitoring well MW06 was installed within the release extent footprint and monitoring well MW02 was completed approximately 580 feet northwest and topographically upgradient of the release location;
- Average depth to groundwater based on field measurements from monitoring wells MW01 through MW06 was determined to be 58.80 feet bgs. Site-specific depth to groundwater was utilized to revise the Site Characterization and subsequently the revised Closure Criteria is:
 - o Benzene: 10 mg/kg;
 - o BTEX): 50 m/kg;
 - o TPH-gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg;
 - o TPH: 2,500 mg/kg; and
 - o Chloride: 10
- Laboratory analytical results for groundwater within monitoring wells MW01 through MW06 indicates groundwater beneath the Site and likely this region is briny, or contains





TDS greater than 10,000 mg/kg. In addition, chlorides detected in groundwater appear to be naturally occurring and not indicative of vertical migration of surficial impacts leaking to groundwater;

- Soil left in place along the sidewalls and floor of the excavation as well as soil observed in delineation sample locations are compliant with the revised Closure Criteria; and
- Based on site-specific, nearby monitoring well MW02, and hill cut soil analytical results of chloride in subsurface soil, chloride appears naturally variable in magnitude and distribution throughout this region. As such, chloride concentrations in soil in and around the release extent related to 2RP-5201 appears to be naturally occurring and not reflective of residual impacts from the January 2019 crude oil and produced water release.

Initial response efforts and excavation of impacted soil have mitigated impacts at this Site. Chloride in soil beneath the excavation and the Site appears to be naturally occurring and not reflective of residual impacts from the January 2019 release. As such, XTO respectfully requests NMOCD grant no further action for RP Number 2RP-5201. 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.

A handwritten signature in cursive script, reading 'Carol Ann Whaley'.

Carol Ann Whaley
Staff Geologist

A handwritten signature in cursive script, reading 'Ashley L. Ager'.

Ashley L. Ager, P.G.
Senior Geologist

cc: Kyle Littrell, XTO
Jim Amos, United States Bureau Land Management
Robert Hamlet, NMOCD
Victoria Venegas, NMOCD





Attachments:

Figure 1	Site Location Map
Figure 2	Preliminary Soil Sample Locations
Figure 3	Excavation Soil Sample Locations
Figure 4	Delineation Soil Sample Locations
Figure 5	Background Soil Sample Locations
Table 1	Soil Analytical Results
Table 2	Groundwater Analytical Results
Attachment 1	Initial/Final NMOCD Form C-141 (2RP-5201)
Attachment 2	Photographic Log
Attachment 3	Lithologic/Soil Sample Logs
Attachment 4	Monitoring Well Development/Purge Forms
Attachment 5	Laboratory Analytical Reports



LEGEND

○ SITE LOCATION

IMAGE COURTESY OF ESRI



FIGURE 1
SITE LOCATION MAP
CORRAL CANYON FEDERAL #1H FLOW LINE
UNIT D SEC 9 T25S R29E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.



NOTE: REMEDIATION PERMIT
NUMBER 2RP-5201

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
BOLD: INDICATES RESULT EXCEEDS THE
 APPLICABLE CLOSURE CRITERIA

SS01@0.5'
 01/15/2019
 B: <0.00202
 BTEX: 0.00577
 GRO+DRO: 90.2
 TPH: 90.2
 Cl: 121

SS02@0.5'
 01/15/2019
 B: <0.00200
 BTEX: 0.00834
 GRO+DRO: 27.9
 TPH: 27.9
 Cl: 262

SS03@0.5'
 01/15/2019
 B: 0.572
 BTEX: **96.3**
 GRO+DRO: **5,650**
 TPH: **6,100**
 Cl: 6,290

SS04@0.5'
 01/15/2019
 B: 0.0844
 BTEX: 13.9
 GRO+DRO: **1,350**
 TPH: 1,470
 Cl: 201

LEGEND



RELEASE LOCATION



PRELIMINARY SOIL SAMPLE WITH CONCENTRATIONS
 EXCEEDING APPLICABLE CLOSURE CRITERIA



PRELIMINARY 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-5201

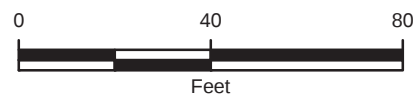


IMAGE COURTESY OF ESRI

FIGURE 2
 PRELIMINARY SOIL SAMPLE LOCATIONS
 CORRAL CANYON FEDERAL #1H FLOW LINE
 UNIT D SEC 9 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
BOLD>: INDICATES RESULT EXCEEDS THE
APPLICABLE CLOSURE CRITERIA

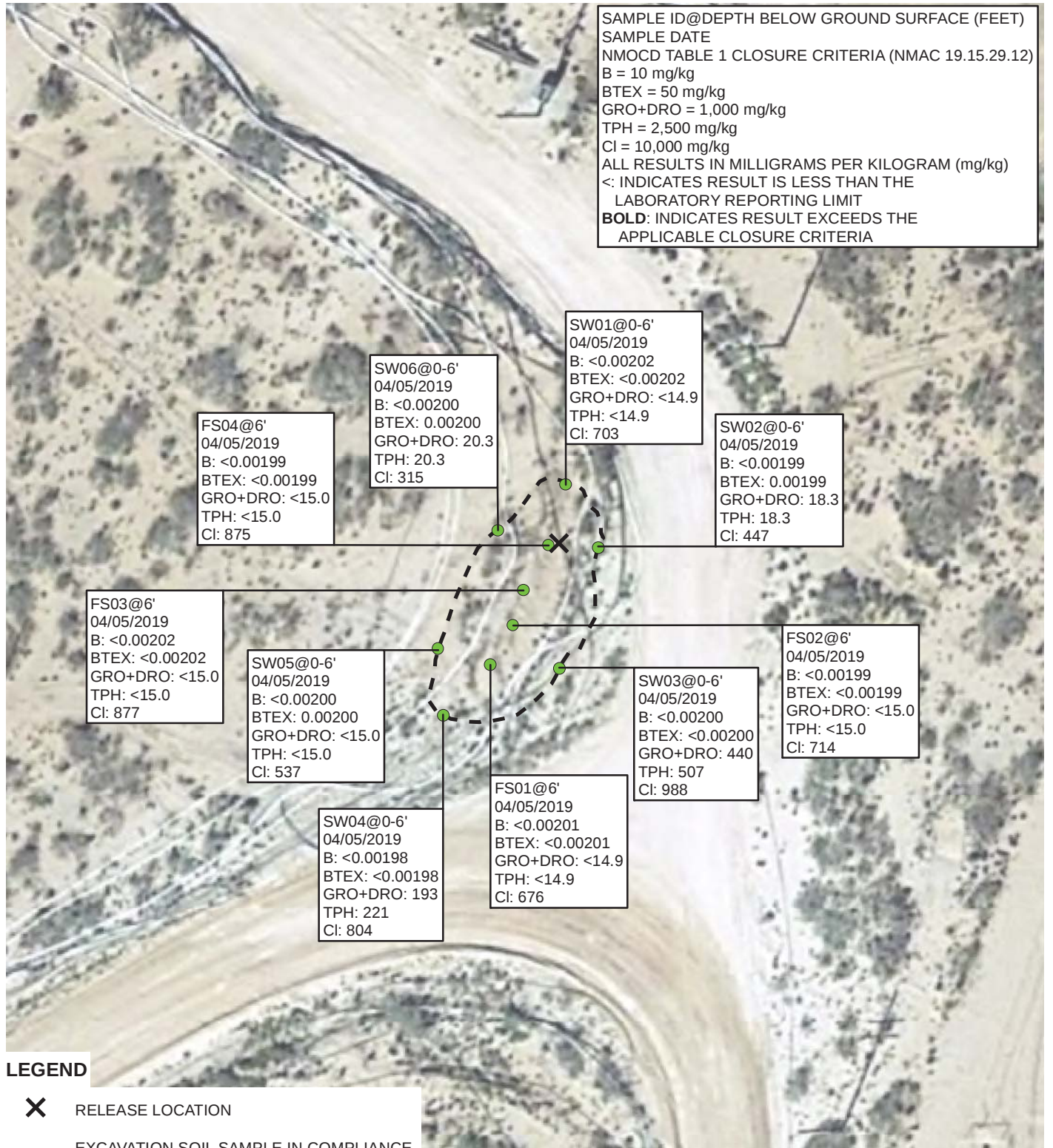


IMAGE COURTESY OF GOOGLE EARTH 2017

LEGEND



RELEASE LOCATION



EXCAVATION SOIL SAMPLE IN COMPLIANCE
 WITH APPLICABLE CLOSURE CRITERIA



EXCAVATION 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-5201

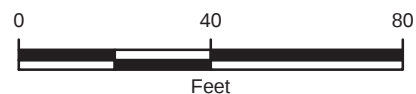


FIGURE 3
EXCAVATION SOIL SAMPLE LOCATIONS
CORRAL CANYON FEDERAL #1H FLOW LINE
UNIT D SEC 9 T25S R29E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.



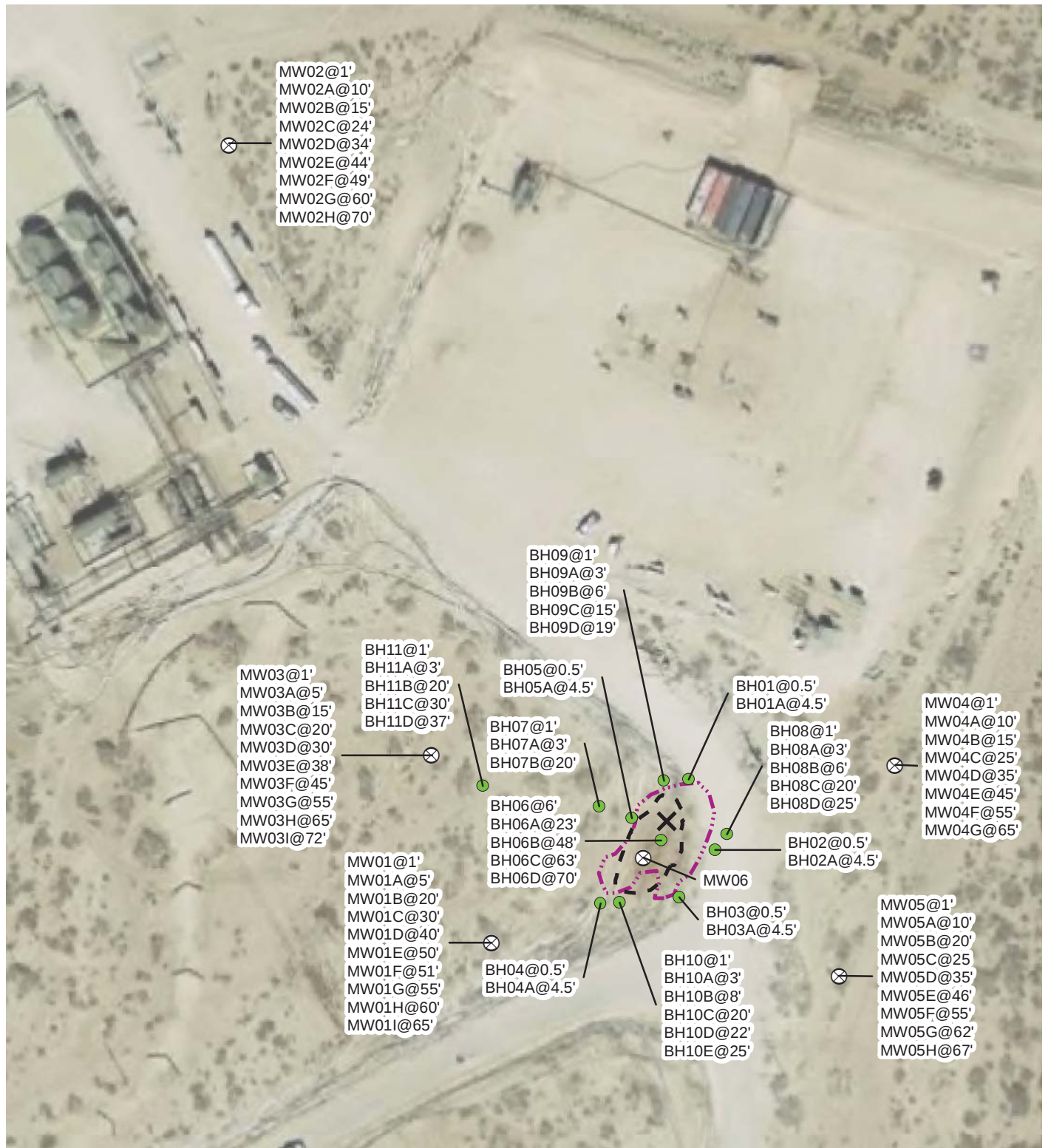


IMAGE COURTESY OF GOOGLE EARTH 2017

LEGEND

- X** RELEASE LOCATION
- DELINEATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- ⊗** MONITORING WELL LOCATION
- - -** EXCAVATION EXTENT

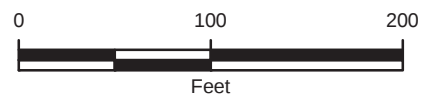


FIGURE 4
DELINEATION SOIL SAMPLE LOCATIONS
CORRAL CANYON FEDERAL #1H FLOW LINE
UNIT D SEC 9 T25S R29E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.



NOTE: REMEDIATION PERMIT NUMBER 2RP-5201



LEGEND



BACKGROUND SOIL SAMPLE



CORRAL CANYON FEDERAL COM #014H WELLHEAD

IMAGE COURTESY OF ESRI

SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)

SAMPLE DATE

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-5201

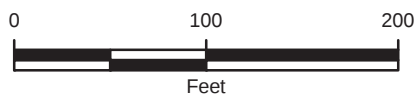


FIGURE 5
BACKGROUND SOIL SAMPLE LOCATIONS
CORRAL CANYON FEDERAL #1H FLOW LINE
UNIT D SEC 9 T25S R29E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.



TABLE 1
SOIL ANALYTICAL RESULTS

**CORRAL CANYON FEDERAL #1H FLOW LINE
REMEDATION PERMIT NUMBER 2RP-5201
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	01/15/2019	<0.00202	<0.00202	<0.00202	0.00577	0.00577	<15.0	90.2	<15.0	90.2	90.2	121
SS02	0.5	01/15/2019	<0.00200	<0.00200	<0.00200	0.00834	0.00834	<15.0	27.9	<15.0	27.9	27.9	262
SS03	0.5	01/15/2019	0.572	15.4	15.5	64.8	96.3	1,700	3,950	450	5,650	6,100	6,290
SS04	0.5	01/15/2019	0.0844	1.76	2.30	9.79	13.9	355	996	116	1,350	1,470	201
BH01	0.5	04/05/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	35.0
BH01A	4.5	04/05/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	215
BH02	0.5	04/05/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	39.9	<15.0	39.9	39.9	299
BH02A	4.5	04/05/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<14.9	19.2	<14.9	19.2	19.2	120
BH03	0.5	04/05/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	12.4
BH03A	4.5	04/05/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	106
BH04	0.5	04/05/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	26.0
BH04A	4.5	04/05/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	40.1
BH05	0.5	04/05/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	121
BH05A	4.5	04/05/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	100
BH06	6	05/19/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	850
BH06A	23	05/19/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	1,550
BH06B	48	05/19/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	830
BH06C	63	05/19/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	1,580
BH06D	70	05/19/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	1,610
BH07	1	05/19/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	166
BH07A	3	05/19/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	874
BH07B	20	05/19/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	1,330
BH08	1	05/19/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	406
BH08A	3	05/19/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<14.9	<14.9	<14.9	<14.9	<14.9	1,260
BH08B	6	05/19/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	455
BH08C	20	05/19/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	1,200
BH08D	25	05/19/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	1,180
BH09	1	05/19/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	297



TABLE 1
SOIL ANALYTICAL RESULTS

**CORRAL CANYON FEDERAL #1H FLOW LINE
REMEDATION PERMIT NUMBER 2RP-5201
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.**

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (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)
BH09A	3	05/19/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	59.0
BH09B	6	05/19/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	405
BH09C	15	05/19/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	1,290
BH09D	19	05/19/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	1,760
BH10	1	05/19/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	21.9	<15.0	21.9	21.9	81.7
BH10A	3	05/19/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	6.23
BH10B	8	05/19/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	476
BH10C	20	05/19/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	980
BH10D	22	05/19/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	1,220
BH10E	25	05/19/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	1,090
BH11	1	05/20/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	696
BH11A	3	05/20/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	1,160
BH11B	20	05/20/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<14.9	<14.9	<14.9	<14.9	<14.9	1,120
BH11C	30	05/20/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	2,620
BH11D	37	05/20/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	1,740
SW01	0 - 6	04/05/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<14.9	<14.9	<14.9	<14.9	<14.9	703
SW02	0 - 6	04/05/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	18.3	<15.0	18.3	18.3	447
SW03	0 - 6	04/05/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	19.7	424	62.9	440	507	988
SW04	0 - 6	04/05/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	193	28.1	193	221	804
SW05	0 - 6	04/05/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	537
SW06	0 - 6	04/05/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	20.3	<15.0	20.3	20.3	315
FS01	6	04/05/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<14.9	<14.9	<14.9	<14.9	<14.9	676
FS02	6	04/05/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	714
FS03	6	04/05/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	877
FS04	6	04/05/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	875
MW01	1	07/19/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	99.2
MW01A	5	07/19/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	329
MW01B	20	07/19/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	1,240



TABLE 1
SOIL ANALYTICAL RESULTS

**CORRAL CANYON FEDERAL #1H FLOW LINE
REMEDATION PERMIT NUMBER 2RP-5201
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 BTX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
MW01C	30	07/19/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	1,090
MW01D	40	07/19/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	1,610
MW01E	50	07/19/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	1,930
MW01F	51	07/20/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	1,730
MW01G	55	07/20/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	1,900
MW01H	60	07/20/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	1,190
MW01I	65	07/20/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	1,420
MW02	1	07/21/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	384
MW02A	10	07/21/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	532
MW02B	15	07/21/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	955
MW02C	24	07/21/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	1,270
MW02D	34	07/21/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	592
MW02E	44	07/21/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	1,420
MW02F	49	07/21/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	166
MW02G	60	07/21/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	2,020
MW02H	70	07/21/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	1,680
MW03	1	07/19/2019	<0.00213	<0.00213	<0.00213	<0.00213	<0.00213	<15.0	<15.0	<15.0	<15.0	<15.0	581
MW03A	5	07/19/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	886
MW03B	15	07/19/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	1,670
MW03C	20	07/19/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	1,970
MW03D	30	07/19/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	1,620
MW03E	38	07/19/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	1,150
MW03F	45	07/19/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	1,020
MW03G	55	07/19/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	1,350
MW03H	65	07/19/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	24.6
MW03I	72	07/19/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	1,180
MW04	1	07/20/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	33.1
MW04A	10	07/20/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	1,300
MW04B	15	07/20/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<14.9	<14.9	<14.9	<14.9	<14.9	1,550



TABLE 1
SOIL ANALYTICAL RESULTS

**CORRAL CANYON FEDERAL #1H FLOW LINE
REMEDATION PERMIT NUMBER 2RP-5201
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.**

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (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)
MW04C	25	07/20/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	664
MW04D	35	07/20/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	1,770
MW04E	45	07/20/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	1,440
MW04F	55	07/20/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	902
MW04G	65	07/21/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	1,670
MW05	1	07/20/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	285
MW05A	10	07/20/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	703
MW05B	20	07/20/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	1,130
MW05C	25	07/20/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	1,210
MW05D	35	07/20/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<14.9	<14.9	<14.9	<14.9	<14.9	1,380
MW05E	46	07/20/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	1,060
MW05F	55	07/20/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	397
MW05G	62	07/20/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	1,150
MW05H	67	07/20/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	1,390
NMOCDC Table 1 Closure Criteria			10	NE	NE	NE	50	NE	NE	NE	1,000	2,500	10,000

Notes:

bgs - below ground surface

BTEX - benzene, toluene, ethylbenzene, and total xylenes

DRO - diesel range organics

GRO - gasoline range organics

mg/kg - milligrams per kilogram

ORO - motor oil range organics

NMAC - New Mexico Administrative Code

NMOCDC - New Mexico Oil Conservation Division

NE - not established

Bold - indicates result exceeds the applicable regulatory standard

< - indicates result is below laboratory reporting limits

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

TPH - total petroleum hydrocarbons



TABLE 2
GROUNDWATER ANALYTICAL RESULTS
CORRAL CANYON FEDERAL 1H FLOW LINE
REMEDIATION PERMIT NUMBER 2RP-5201
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Total Depth (feet bgs)	Depth to Water (feet bgs)	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethyl-benzene (mg/L)	Total Xylenes (mg/L)	TDS (mg/L)	Chloride (mg/L)
WS01 (BH06)	70.0	57.0	05/22/2019	<0.00200	<0.00200	<0.00200	<0.00200	14,200	8,400
MW01	65.0	68.4	09/13/2019	N/A	N/A	N/A	N/A	17,100	9,320
MW02	70.0	68.1	09/13/2019	N/A	N/A	N/A	N/A	21,800	11,900
MW03	72.0	75.6	09/13/2019	N/A	N/A	N/A	N/A	23,900	13,300
MW04	65.0	69.1	09/13/2019	N/A	N/A	N/A	N/A	18,900	12,600
MW05	67.0	64.2	09/13/2019	N/A	N/A	N/A	N/A	10,500	6,500
MW06	70.0	64.1	09/13/2019	N/A	N/A	N/A	N/A	11,600	8,600
NMWQCC Groundwater Standard*				NE	NE	NE	NE	NE	NE

Notes:

bgs - below ground surface
 NE - not established
 mg/L - milligrams per liter
 N/A - not analyzed

TDS - total dissolved solids

< - indicates result is below laboratory reporting limits

NMWQCC - New Mexico Water Quality Control Commission

BTEX - benzene, toluene, ethylbenzene, and total xylenes

* - groundwater standards are established based on TDS less than 10,000 mg/L





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	NAB1902458364
District RP	2 2RP-5201
Facility ID	
Application ID	pAB1902458116

Release Notification

Responsible Party

Responsible Party XTO Energy	OGRID 5380
Contact Name Kyle Littrell	Contact Telephone 432-221-7331
Contact email Kyle_Littrell@xtoenergy.com	Incident # (assigned by OCD) NAB1902458364
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.151392° Longitude -103.997525°
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Corral Canyon Federal #1H flow line	Site Type Producing Well Flow Line
Date Release Discovered 1/9/2019	API# (if applicable) 30-015-43428

Unit Letter	Section	Township	Range	County
D	9	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) 5.6	Volume Recovered (bbls) 4
☒ Produced Water	Volume Released (bbls) 8.3	Volume Recovered (bbls) 6
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

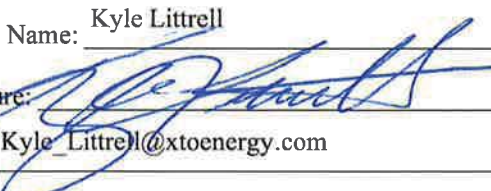
A release occurred from the flex pipe flow line associated with the well. A hole developed in the line due to rubbing and flexing of the pipe. A vacuum truck recovered free standing fluids. The well was shut in until the line could be repaired. An environmental contractor will be retained to assist with remediation efforts.

Incident ID	NAB1902458364
District RP	2 2RP-5201
Facility ID	
Application ID	pAB1902458116

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: N/A	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: Kyle Littrell	Title: SH&E Coordinator
Signature: 	Date: 1-23-19
email: Kyle.Littrell@xtoenergy.com	Telephone: 432-221-7331
OCD Only	
Received by: 	Date: 1/24/2019

Incident ID	
District RP	2RP-5201
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.*

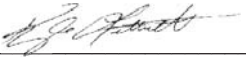
- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☒ Field data
- ☒ Data table of soil contaminant concentration data
- ☒ Depth to water determination
- ☒ Determination of water sources and significant watercourses within ½-mile 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-5201
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: 10/04/2019

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

OCD Only

Received by: _____ Date: _____

Incident ID	
District RP	2RP-5201
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: 10/04/2019

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 extent facing west during site assessment activities.

Project: 012919018	XTO Energy, Inc. Corral Canyon #1H flow line	 <i>Advancing Opportunity</i>
January 15, 2019	Photographic Log	



Northern view of final excavation extent.

Project: 012919018	XTO Energy, Inc. Corral Canyon #1H flow line	 Advancing Opportunity
April 5, 2019	Photographic Log	



Northern view of groundwater monitoring well MW05 after installation and development.

Project: 012919018	XTO Energy, Inc. Corral Canyon #1H flow line	 <i>Advancing Opportunity</i>
September 4, 2019	Photographic Log	



 L.T. Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88520 Compliance - Engineering - Remediation		Identifier: BH02	Date: 4/5/19
Project Name: Cornel Canyon 1H		RP Number: 2 RP-5201	
Method: Hand Auger		Total Depth: 4.5'	

LITHOLOGIC / SOIL SAMPLING LOG				Lithology/Remarks	
Log Long:	Field Screening:	Sample #	Depth (ft. bgs)		
St. 151386-105.99722	10' & Back of test strip				
		1	0.5'	brown to light brown poorly graded silt sand (m.c.), fractions of organics, no odor or plasticity inc. compactness with depth	
		2	1.0'		
		3	2.1'		
		4	3.1'		
		5	4.5'		
					TOT DEPTH

Moisture Content	Chloride (ppm)	Vapor (ppm)	Sealing	Sample #	Depth (ft. bgs)	Soil/Rock Type
				1	0.5'	brown to light brown poorly graded silt sand (m.c.), fractions of organics, no odor or plasticity inc. compactness with depth
				2	1.0'	
				3	2.1'	
				4	3.1'	
				5	4.5'	

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation		Identifier: BHS 3	Date: 4/5/19
		Project Name: Corral Canyon HH Flare Line	RP Number: 2EP-5201
LITHOLOGIC / SOIL SAMPLING LOG		Logged By: AB Hole Diameter: 2.5" - 3"	Method: Hand Auger Total Depth: 4.5'
Easting: 32.158245 North: -103.897155 PID: 4HCH Test: thps			
Comments:			

Moisture Content	Chloride (ppm)	Vapor (ppm)	Sealing	Sample #	Depth (ft. bgs)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	440	0	10	643	1	0.5'	SN	brown to light brown poorly graded silt sand (m.-c.), traces of organics, no plasticity or odor inc. compactness w/ depth
	440				2	1.0'		
	440				3	2.1'		
	440				4	3.1'		
	440				5	4.5'		
					6			Ter. Depth
					8			
					10			
					12			
					14			
					16			
					18			
					20			
					22			

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation		Identifier: BH04	Date: 4/5/19
Project Name: Corral Canyon IH		BP Number: 200-5201	
Logged By: ATB		Method: Hand Auger	
Hole Diameter: 2.5 - 3"		Total Depth: 4.5'	

LITHOLOGIC / SOIL SAMPLING LOG					
Lab Sample #	Field Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D-198	BH04	1	0.5'	SM	brown to light brown silt-sand (m-c.), poorly graded, trace organics, no plasticity or odor
		2	1'		
		3	2'		
		4	3'		
		4	4.5'		
		6			inc. compactness w/ depth
		8			
		10			
		12			
		14			
		16			
		18			
		20			
		22			

Total Depth

 LTI Environmental, Inc. 600 West Stevens Street Carlsbad, New Mexico 88220 Compliance • Engineering • Remediation		Identifier: BND 5	Date: 4/5/19
Project Name: Cornal Canyon 1H		RP Number: 22P-5201	
Logged By: AB		Method: Hand Auger	
Hole Diameter: 2.5 - 3"		Total Depth: 4.5'	

LITHOLOGIC / SOIL SAMPLING LOG						
Lab Log #	Field Screening	Sample #	Depth (ft. bgs)	Sample Depth	Soil/Rock Type	Lithology/Remarks
32-151448	PID 4 HCH 11-Kit strips	8th/5	0	0.5'	SN	brown to light brown poorly graded silt sand (m.-c.), trace organics, no odor or plasticity inc compactness with depth Tor DATA
			1	1'		
			2	2'		
			3	3'		
			4	4.5'		
		8th/5				

Moisture Content	Chloride (ppm)	Vapor (ppm)	Smelling
0.14	0.14	0.14	NO
0.14	0.14	0.14	
0.14	0.14	0.14	
0.14	0.14	0.14	
0.14	0.14	0.14	

 L.T. Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance • Engineering • Remediation		Identifier: Date: 5/7/19						
Project Name: Corral Canyon Fed H Flowline		REP Number: 25P-5201						
Logged By: BEN BELL Hole Diameter:		Method: Total Depth:						
LITHOLOGIC / SOIL BORING LOG Field Screening: CHLORIDES, TPH, BTEX, GRO, MRO, and DRO.								
Lab/Log:								
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
					24			
					25			
					26			
					27			
10%	1376	4.3	N		28	28'	CRACK	SAT
					29			
					30			
					31			
					32			
D	1841	2.5	N		33	33'	CRACK	SAT
					34			
					35			
					36			

 L'E Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance - Engineering - Remediation		Identifier: Date: 5/7/19						
Project Name: Cornil Canyon Fed IS Flowline		REP Number: 28P-5201						
Logged By: BEN BELL Hole Diameter:		Method: Total Depth:						
LITHOLOGIC / SOIL BORING LOG Field Screening: CHLORIDES, TPH, BTEX, GRO, MBO, and DRO.		Comment: All Chloride test include a 50% error factor.						
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					36			
					37			
D 1600 5.4			N		38	38'		PALE SAND
					39			
					40			
					41			
					42			
D 1600 3.7			N		43	43'		PALE, dry, tan / 1/2 in. sand, high / medium rhyolite, no odor.
					44			
					45			
					46	46'		
D 1801 4.2			N		47	47'		SAND w/ coarse, dry, tan / 1/2 in. well graded, some calcareous, p. no odor.
					48			

1100

1115

 LTP Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance - Engineering - Remediation		Identifier: BH08 Date: 5/12/19 Project Name: Canal Canyon Fed 1H RP Number: 20P-501
LITHOLOGIC / SOIL SAMPLING LOG Logged By: BEN REJILL Hole Diameter: 4" Method: SN-2 Total Depth: 25'		
Lab Test: 22, 3346, 405, 93345 Comment: All Chloride test include a 60% error factor.	Paid Screening: CHLORIDES, TPH, BTEX, GRO, DRO, and MRO.	

Moisture Content	Chloride (ppm)	Vapor (ppm)	Straining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D 5.5	21	N		1	1'		CHALKY fill	CHALKY, dry, fine, poly could, no odor, fill. ↓
D 17.5	3.3	N		3	3'		SN	SAND, dry, brn / 11 bag, well graded, f.-c., trace brn silt, no odor.
D 4.0	2.7	N		6	6'		SW	SAA
D 3.5	2.5	N		8	8'		SW	SAA
D 5.5	6.0	N		10	10'		SW	Silty SAND, dry brn / 11 bag, poly graded, f.-m., no odor. ↓

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance Engineering - Remediation		Identifier: Date: 5/7/19						
Project Name: Cortez Canyon Fed 1H Flowline		RP Number: ZRP-5201						
Logged By: BEN BELL Hole Diameter:		Method: Total Depth:						
LITHOLOGIC / SOIL BORING LOG Field Screening: CHLORIDES, TPH, BTEX, GRO, MBO, and DRO. Lab Log:								
Comment: All Chloride test include a 60% error factor.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Swelling	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					12			
					13			
					14			
					15			
					16			
					17			
					18			
					19			
					20			
					21			
					22			
					23			
					24			

M 742.2.2 N
 15' (8'-5") SAT
 D 1376 1.2 N
 CALICHE, tan/off wht, w/ll
 coarse, no odor.

 LTP Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance - Engineering - Remediation		Identifier: Date: 5/7/19
Project Name: Corral Canyon Fed 1H Pipeline		IDP Number: 28P-5301
Logged By: BEN BELL Hole Diameter:		Method: Total Depth:
LITHOLOGIC / SOIL BORING LOG Field Screening: CHLORIDES, TPH, BTEX, GRO, MGO, and DBO.		
Lab/Log:		
Comment: All Chloride test include a 65% error factor.		

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					24			
					25			
					26			
					27			
					28			
					29			
					30			
					31			
					32			
					33			
					34			
					35			
					36			

Handwritten notes on the log:
 - At depth 25: "1376 722 N 3.6" (next to Chloride, Vapor, and Staining columns)
 - At depth 25: "25' depth SA 4" (circled around the depth column)
 - At depth 25: "5200' E" (written vertically next to the lithology/remarks column)

 LTI Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88520 Compliance - Engineering - Remediation		Identifier: 6609 Date: 5/9/14 Project Name: Coral Canyon Fed HRP Number: 202-5201						
LITHOLOGIC / SOIL SAMPLING LOG Field Screening: CHLORIDES, TPH, BTEX, GRO, DRO, and MRO. Comment: All Chloride test include a 65% error factor.		Logged By: BEN BELL Hole Diameter: 1 1/4" Method: SOIL C. Total Depth: 20'						
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft bgs)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D 244	1.7	N	6109	1	1	1	(SP-SM)	Silty SAND, dry, brackish, fine grained, f.-m., trace vegetation roots, no odor.
D 531	1.4	N	6109A	3	3	3	(SP-SM)	SAND
D 672	2.5	N	6109B	6	6	6	(SP-SM)	Silty SAND, dry, brackish, fine grained, f.-m., no odor.
D 608	2.7	N		8	8	8	(SP-SM)	SAND
D 742	3.9	N		10	10	10	(SP-SM)	SAND

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance • Engineering • Remediation		Identifier: Date: 5/7/19 Project Name: Coral Cayen Fed 1H Flowline REP Number: 28P-5201						
LITHOLOGIC / SOIL BORING LOG Field Screening: CHLORIDES, TPH, BTX, GHO, MRO, and DRO.		Logged By: BEN BELL Hole Diameter: Method: Total Depth:						
Comment: All Chloride test include a 50% error factor.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					12			
					13			
					14			
					15			15' SP-SM SILTY SAND w/ Caliche, dry, 14 hrs, pri-ly graded, 1-2 m. above Caliche sand, no odor.
					16			
					17			
					18			
					19			CALICHE, dry, 0.5 m. / 1 m, mod. earth no odor.
					20			
					21			END @ 20'
					22			
					23			
					24			

 L.T. Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance - Engineering - Remediation		Identifier: BH25-10 Date: 5/9/19 Project Name: Corral Canyon Red 11 RP Number: 26P-5201						
LITHOLOGIC / SOIL SAMPLING LOG Field Screening: CHLORIDES, TPH, BTEX, GRO, DRO, and NRO. (Comment: All Chloride test include a 60% error factor.)		Logged By: BEN BELL Method: Soil Total Depth: 25'						
Moisture	Chloride (ppm)	Vapor (ppm)	Straining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	<112	5.5	N	6110	1'	1'	(p.s.m)	Silty SAND, dry, 1/8" - 1/4" bgs, poly graded, f.-m., no odor, trace vegetation roots.
M	<112	3.9	N	6110A	3'	3' (30-50)	SAND	
M	<112	2.5	N		6'	6' (p.s.m)	Silty SAND, dry, 1/8" - 1/4" bgs, poly graded, f.-m., no odor.	
D	672	2.9	N	6110B	8'	8' (58-5m)	SAND	
D	992	1.9			10'	10' (55m)	SAND	

545

555

 L'E Environmental, Inc. 508 West Sivers Street Carlsbad, New Mexico 88220 Compliance - Engineering - Remediation		Identifier: Date: 5/7/19						
Project Name: Corral Canyon Ped 1H Flowline		RP Number: 28P-3201						
Method: Total Depth:		Logged By: BEN BELLIL Hole Diameter:						
LITHOLOGIC / SOIL BORING LOG Field Screening: CHLORIDES, TPH, HTEX, GRC, MRO, and DRO.								
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
					12			
					13			
					14			
					15	15'	SP-SM	Subst.
					16			
					17			
					18			
					19			
					20	20'	SP-SM	Subst.
					21			
					22	22'	CRACK	CRACK, dry, tan/light, poly crad, no odor.
					23			
					24			

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance • Engineering • Remediation		Identifier: Date: 5/7/19						
LITHOLOGIC / SOIL BORING LOG Field Screening: CHLORIDES, TPH, GTEX, GRC, MRC, and DRC.		RP Number: 2015-011						
Project Name: Coastal Canyon Fed 1H Flowline		Method: Test Depth:						
Logged By: BEN BELIL Hole Diameter:								
Comment: All Chloride test include a 50% error factor.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					24			
					25			
					26			
					27			
					28			
					29			
					30			
					31			
					32			
					33			
					34			
					35			
					36			

65

25' QUARTZ SAND

520025'

 LTI Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance - Engineering - Remediation		Identifier: 8H11 Project Name: Cornal Canyon Ped H RP Number: 20P-5201	Date: 5/6/19 Method: See below Total Depth: 32'					
LITHOLOGIC / SOIL SAMPLING LOG Field Screening: CHLORIDES, TPH, BYTEX, GRC, DRO, and MRO.								
Log Log: 32.0131512, -107.471900 Comment: All Chloride test include a 50% error factor.								
Molality	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D 1433	492	0.1	N	1	1'		SP-SM	Silty SAND, dry, brn/lt brn, prly granular, f.m., some vegetation/roots, no odor.
O 1600	16	N	N	3	3'		SP-SM	SAND
D 1273	127	1.2	N	6	6'		SP-SM	Silty SAND, dry, brn, prly granular, f.m., no odor
D 112	112	2.9	N	8	8'		SP-SM	Silt
D 1177	1177	1.2	N	10	10'		SP-SM	Silt

 L'E Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance Engineering - Remediation		Identifier: Date: 5/7/19						
Project Name: Cerro Canyon Fed 1H Flowline		RP Number: 28P-3201						
Logged By: BEN BELL Hole Diameter:		Method: Total Depth:						
LITHOLOGIC / SOIL BORING LOG Field Screening: CHLORIDES, TPH, HTEX, GRO, MRO, and DRO.								
Lab Log Comment: All Chloride test include a 65% error factor.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					12			
					13			
					14			
					15			15' (6P-50) Silty S(NC), moist, brn, pr. ly. granular, fl.-m., no odor.
					16			
					17			
					18			
					19			
					20			
0.1376	3.4	N		64115	20	20'	EXCELLENT	CLAY (WF, dry, off-white tan, pr. ly. end d, high moisture to HCL, no odor.
					21			
					22			
					23			
					24			

 LTI Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance - Engineering - Remediation		Identifier: Date: 5/7/19						
Project Name: Coral Canyon Fed 114 Fluvial		REP Number: REP-5201						
Method: Total Depth:		Logged By: BEN BELL Hole Diameter:						
LITHOLOGIC / SOIL BORING LOG Field Screening: CHLORIDES, TPH, BTEX, GRO, MRO, and DRO.								
Lab/Log:								
Consistent: All Chloride test include a 50% error factor.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Swelling	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					24			
					25	25'	GRAVEL	
					26			
					27			
					28			
					29			
					30	30'	GRAVEL	
					31			
					32			
					33			
					34			
					35	35'	GRAVEL	
					36			

25' GRAVEL

GRAVEL
 (solid, with fragments of HCL, no odor)

35' GRAVEL

 L.T. Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance - Engineering - Remediation		Identifier: Project Name: Corel Canyon Ped 1H Flowline Logged By: BEN BELILL Hole Diameter: Method: Total Depth:	Date: 5/6/19 RP Number: 28P-5201
LITHOLOGIC / SOIL BORING LOG Field Sampling: CHLORIDES, TPH, ETX, GRC, MRO, and DRG.			
Comment: All Chloride test include a 65% error factor			
Moisture Content Chloride (ppm) Vapor (ppm) Staining Sample # Depth (ft. bgs.) Sample Depth Soil/Rock Type Lithology/Remarks	36 37 38 39 40 41 42 43 44 45 46 47 48	P 1750 4.3 37 38 39 40 41 42 43 44 45 46 47 48	37 38 39 40 41 42 43 44 45 46 47 48

1030

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 LT Environmental, Inc. 518 West Stevens Street Carroll, New Mexico 88220 Compliance • Engineering • Remediation		Identifier: MAY 01 Project Name: CORRAL CANYON FED 1H Logged By: BEN BELLI Hole Diameter: 6"	Date: 7/19/19 RP Number: 2RP-5201 Method: SONIC DRILLING Total Depth: 65'					
LITHOLOGIC / SOIL BORING LOG Field Screening: CHLORIDES, PID								
Test Log: _____ Contract: MCHS013001								
Moderate	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					12			
					13			
					14			
					15			
					16			
					17			
					18			
					19			
					20			
					21			
					22			
					23			
					24			
					25			
					26			
					27			
					28			
					29			
					30			
					31			
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					82			
					83			
					84			
					85			
					86			
					87			
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					90			
					91			
					92			
					93			
					94			
					95			
					96			
					97			
					98			
					99			
					100			

 LIT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance • Engineering • Remediation		Identifier: <u>17101</u> Project Name: <u>CORRAL CANYON FED 1H</u>	Date: <u>7/19/19</u> REP Number: <u>2RF-S201</u>					
LITHOLOGIC / SOIL BORING LOG Log Scale: <u>CHLORIDES, PPM</u>		Logged By: <u>HB</u> Hole Diameter: <u>6"</u>	Method: <u>SONIC DRILLING</u> Total Depth: <u>65'</u>					
Comments: <u>Handwritten notes and data</u>								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Satting	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	21.1	2.1	N		24			
					25	25'	CLAY	SMA (17.00)
					26			
					27			
					28			
					29			
D	1.5	1.5	N		30	30'	CLAY	SMA (17.05)
					31			
					32			
					33			
					34			
D	1.1	1.1	N		35	35'	CLAY	SMA (17.15)
					36			

 LT Environmental Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance • Engineering • Remediation		Identifier: <u>ML01</u> Project Name: <u>CORRAL CANYON RED 1H</u> Logged By: <u>HB</u> Hole Diameter: <u>6"</u>	Date: <u>7/12/19</u> RP Number: <u>28P-5201</u> Method: <u>IONIC DRILLING</u> Total Depth: <u>65'</u>					
LITHOLOGIC / SOIL BORING LOG Field Sampling: CHLORIDES, PID.								
TAIL Log: _____ Comment: _____								
Mechanism	Chloride (ppm)	Vapor (ppm)	Sampling	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	4100	1.5	N	NOTE	50	50'	ML	SILT w/ (white, dry, red-brown non-plastic, no odor. (17:50)
M	1500	0.7	N	NOTE	51	51'	ML	Dolomite w/ silt, moist, H green, poorly sorted, fa xln, trace gypsum, no odor (08:10)
M	550	1.0	N	NOTE	55	55'	ML	clayey SILT, moist, brown-red, low plasticity, no odor. (08:30)

7/19
2021

 LTI Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance • Engineering • Remediation		Identifier: 41601 Date: 7/19/19
Project Name: CORRAL CANYON FED 1H		RP Number: 2RP-5201
Method: SONIC DRILLING		Total Depth: 65'
Logged By: BB		Hole Diameter: 6"
LITHOLOGIC / SOIL BORING LOG Field Screening: CHLORIDES, PID		
Last Log: 41601 Comment: 41601		

Moisture Content	Chloride (ppm)	Vapor (ppm)	Stratigraphy	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
W 14.0%	0.7	N	1001H	60	60'	60'	Dark grey silt	DOLMITE silt, wet, it green, grey could be a clay, fine grained, no odor. (08 240) TOW @ 60' * Used Interface probe to check depth to water and means to 55' due to pressure in subsurface,
W 28.0%	0.5	N	1001I	65	65'	65'	Dark grey silt	SAA (08245) EOB @ 65'
					66			
					67			
					68			
					69			
					70			
					71			
					72			

 LTI Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance - Engineering - Remediation		Identifier: 11/102 Project Name: CORRAL CANYON FID 1H Legged By: BB Hole Diameter: 6"	Date: 7/21/99 RP Number: 20P-5201 Method: SONIC DRILLING Total Depth: 70'					
LITHOLOGIC / SOIL SAMPLING LOG Field Screening: CHLORIDES, PID.								
Comment: At 10' depth								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Swelling	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	10000 10000 10000	1.6	N	10052	0	1'	(S-S)	Silty SHA, dry brown - 1' brown partly graded, 1' no odor (09.05)
D	10000 10000 10000	1.4	N		5	5'	(S-S)	SHA (Succ. to 10' to 10' (09.30))
D	10000 10000 10000	3.1	N	10054	10	10'	(S-S)	SHA (09.15)

 LIT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance • Engineering • Remediation		Identifier: MV02 Date: 7/2/19						
Project Name: CORRAL CANYON FED IH		RF Number: 280-5201						
Method: SONIC DRILLING		Total Depth: 6'						
LITHOLOGIC / SOIL BORING LOG								
Field Screening: CHLORIDES, PH								
Logging By: BB								
Hole Diameter: 6"								
Comment:								
Moisture (%)	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					36			
					37			
					38			
					39			
					40			
					41			
					42			
					43			
					44			
					45			
					46			
					47			
					48			

 LF Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance • Engineering • Remediation		Identifier: MW2 Project Name: CORRAL CANYON FID 1H Method: SONIC DRILLING	Date: 7/21/19 RP Number: ZPS-5201 Total Depth: 70'					
LITHOLOGIC / SOIL BORING LOG Field Screening: CHLORIDES, PID.								
Lab Log:	Hole Diameter: 6"							
Comment: See attached								
Mol/L	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					48			
					49			
P	99.8 91.1-116	6.6	N	49	49'	49'	CLAYE W Sand	CLAYE W Sand, dry, tan-lt brown, mod-moist consolidated, micro-fine silty, no odor. (10.55)
D	24.0-116	1.6	N	51	51'	51'	SP	SAND w/ Caliche, dry, tan-lt brown, poorly graded, f-m, no odor.
					52			
					53			
					54			
					55			
M	78.0 91.1-116	0.4	N	56	56'	56'	SP	SAND, moist, tan-lt brown, poorly graded, f-m, true chloride good, no odor.
					57			
					58			
					59			
					60			

 LTI Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance • Engineering • Remediation		Identifier: MW03 Date: 7/17/19		
Project Name: CORRAL CANYON TED 1H		RP Number: 282-5201		
Method: SONIC DRILLING		Total Depth: 72'		
Logged By: BB Hole Diameter: 6"				
LITHOLOGIC / SOIL SAMPLING LOG Field Screening: CHLORIDES, PID.				
Comment: All Chlorides and PIDs are within background levels.				
Mechanism	Depth (ft. bgs.)	Sample #	Soil/Rock Type	Lithology/Remarks
D Moisture Content 12.1% Chloride (ppm) 150 Vapor (ppm) 0.7 Staining N MW03	0	1	1' (SP-Sa)	Silty SAND, dry, brown - (16 brown, poorly graded, f.m., no odor, (13:00)
D Moisture Content 12.1% Chloride (ppm) 150 Vapor (ppm) 1.5 Staining N MW03A	5		5' (SP-Sa)	SAA (Same as Above) (13:05)
	6			
	7			
	8			
	9			
	10			
	11			
	12			

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance • Engineering • Remediation		Identifier: MY03 Date: 7/19/19
LITHOLOGIC / SOIL BORING LOG Field Screening: CHLORIDES, PDA		Project Name: COBBAL CANYON FPD IH
Logged By: DEN BELL Hole Diameter: 6"		Method: SONIC DRILLING Total Depth: 22'
Comment: 44-46-48-50-52-54-56-58-60-62-64-66-68-70-72-74-76-78-80-82-84-86-88-90-92-94-96-98-100		

Moisture Content	Chloride (ppm)	Vapor (ppm)	Sealing	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					12			
					13			
					14			
					15			
D 24050	0.8		N	MM305	15'	15'	CLAYE	CLAYE, dry, tan, mod. cased, fine xln, no other. (13:10)
					16			
					17			
					18			
					19			
					20			
D 13665	1.2		N	MM306	20'	20'	CLAYE	SAND (13:30)
					21			
					22			
					23			
					24			

 LT Environmental, Inc. 505 West Stevens Street Carlsbad, New Mexico 88220 Compliance - Engineering - Remediation		Identifier: MND3 (Conf) Project Name: CORRAL CANYON FPD IH	Date: 7/19/19 RP Number: 202-5301					
LITHOLOGIC / SOIL BORING LOG Field Screening: CHLORIDES, PID		Logged By: DB Hole Diameter: 6"	Method: SONIC DRILLING Total Depth: 27					
Lab Log: _____ Comment: At Carlsbad, New Mexico								
Mechanism	Chloride (ppm)	Vapor (ppm)	Slugging	Sample #	Depth (ft. bgs)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	2165.4 N = 44	1.2	N		25	25' CLCUP		SAA (13:40)
D	2165.4 N = 44	1.2	N		30	30' CLCUP		SAA (13:45)
D	2165.4 N = 44	2.7	N		35	35' CLCUP		SAA (14:00)

 LTI Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance - Engineering - Remediation		Identifier: MP03 Date: 7/9/19						
Project Name: CORRAL CANYON FID 1H		RP Number: ZEP-5001						
Logged By: BB Hole Diameter: 1.9		Method: SONIC DRILLING Total Depth: 22						
LITHOLOGIC / SOIL BORING LOG Field Screening CHLORIDES, PID								
LTI Log: _____ Comment: <i>See comments on other logs</i>								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					48			
					49			
12.0%		2.2	N		50	50'	AL	SILT w/ calc. pebbles, <i>pebbles as large as 1/4"</i> Basal calc. pebbles, no odor. (14:25)
					51			
					52			
					53			
					54			
					55	55'	AL	clayey SILT, moist - wet, brown - 1" brown, non-plastic, no odor. (14:30)
					56			
					57			
					58			
					59			
					60			

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance • Engineering • Remediation		Identifier: AB 03 (cont) Project Name: CORRAL CANYON PED 1H		Date: 7/19/19 RP Number: ZRP-5301					
LITHOLOGIC / SOIL BORING LOG Field Seating: CHLORIDES, PPD.		Logged By: BB Hole Diameter: 6"		Method: SONIC DRILLING Total Depth: 72'					
Comment: <i>Handwritten notes and data entries</i>									
Mobility	Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
W	0.021%	1.9	N	60'	60'	60'	60'	AL	Clayey SILT, moist, brown, ^{low} plasticity, no odor. (14:40)
						61			
						62			Tow @ 62, interface probe indicated depth is at 55' due to pressure.
						63			
						64			
						65	65'	ML	Silt (14:45)
						66			
						67			
						68			Clayey SILT, wet, brown - red, moderate plasticity, no odor, 1
						69			
						70			
						71			
D	0.021%	1.9	N	72'	72'	72'	72'	AL	Silt, clay, moist, brown, bold is 15' from, dry, 15' from, trace odor, no odor. (15:12)

 LTP Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance • Engineering • Remediation		Identifier: APW04 Date: 7/20/19
Project Name: CORRAL CANYON FED IH		REP Number: 20P-5001
Logged By: BB Hole Diameter: 6"		Method: SONIC DRILLING Total Depth: 65'
LITHOLOGIC / SOIL SAMPLING LOG Field Screening: CHLORIDES, PH		
LTP Carlsbad, New Mexico 88220		
Contract: APW04-19-001		
Moisture Content	Chloride (ppm)	Vapor (ppm)
Sample #	Depth (ft. bgs.)	Soil/Rock Type
1	0	SP-SUB, 14y SAND, dry, brown - 14 brown, poorly graded, A-on, no odor, granular fine (U/S)
2	1	1'
3	2	
4	3	
5	4	
6	5	5' (SP-SUB) S&A (Same As Above) (U/S)
7	6	
8	7	
9	8	
10	9	
11	10	10' (SP-SUB) S&A (U/S)
12	11	
13	12	

 LT Environmental Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance • Engineering • Remediation		Identifier: PNW04 Project Name: CORRAL CANYON FED 1H	Date: 7/20/19 RP Number: 2RP-5301					
LITHOLOGIC / SOIL BORING LOG Field Screening: CHLORIDES, PID		Logged By: BEN BELL Hole Diameter: 6"	Method: SONIC DRILLING Total Depth: 65'					
Test Log: _____ Comment: Not to be used for regulatory purposes								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Sampling	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					12			
					13			
					14			
					15			
D 27.0%	2.4		N	10045	15'	CLAY		CLAY, silty, poorly consolidated p-micro silty, gradational transition from sand, no odor. (14.20)
					16			
					17			
					18			
					19			
					20	20'	CLAY	SAND (14.25)
					21			
					22			
					23			
					24			
D 28.0%	1.3		N					

 LT Environmental, Inc. 500 West Stevens Street Carlsbad, New Mexico 88220 Compliance • Engineering • Remediation		Identifier: MW04 Project Name: CORRAL CANYON FID 1H	Date: 7/20/19 RP Number: 282-5201				
LITHOLOGIC / SOIL BORING LOG Field Screening CHLORIDES, PID.		Logged By: EB Bore Diameter: 6"	Method: SONIC DRILLING Total Depth: 65'				
Lab Log: _____ Comment: <i>See attached log for details</i>							
Moisture Content	Chloride (ppm)	Vapor (ppm)	Striking	Sample #	Depth (ft. bgs)	Soil/Rock Type	Lithology/Remarks
D 10.5%	17	N	25'	25'	CLAYE	CLAYE	CLAYE
D 10.5%	3.3	N	30'	30'	CLAYE	CLAYE	CLAYE
D 21.5%	2.7	N	35'	35'	CLAYE	CLAYE	CLAYE

CLAYE CLAYE CLAYE
 poorly consolidated, fine grained, no odor. (1450)

SHA (15:00)

 LTI Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance • Engineering • Remediation		Identifier: MW04 Date: 7/20/19		
LITHOLOGIC / SOIL BORING LOG Field Screening: CHLORIDES, PID,		RP Number: ZRP-5201		
Project Name: CORRAL CANYON FED 1H		Method: SONIC DRILLING		
Logged By: BBS Hole Diameter: 6"		Total Depth: 65'		
Test Log:				
Contaminant:				
Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
	48			
	49			
	50	50'	SP	SAA (15-50)
	51			
	52			
	53			
	54			
	55	55'	SP	Silt (16-25) 7/20 @ 55' 7/21
	56			
	57			
	58			
	59			
	60			

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 86220 Compliance • Engineering • Remediation		Identifier: MM04 Project Name: CORRAL CANYON FED 1H Logged By: BB Hole Diameter: 6"	Date: 7/24/19 RP Number: 2RP-5201 Method: SONIC DRILLING Total Depth: 65'
LITHOLOGIC / SOIL BORING LOG Field Sampling: CHLORIDES, PID			
Lab/Job: Comment:	Sample # Staining Vapor (ppm) Chloride (ppm) Moisture	Depth (ft. bgs.) Sample Depth Soil/Rock Type	Lithology/Remarks
	211.54 24.92	60 61 62 63 64	60' at which SILT W/GRADE, wet/brown - red, non plastic trace m. sand, no odor (0.820) At TOW @ 60', interface from indicated depth to water to b 55' due to pressure.
211.54 24.92	0.6 N	65 66 67 68 69 70 71 72	65' CLAY w/ sand C.A. 11.4% w/ sand, wet, tan, well-sorted consolidating & clay, sand is red w/ m. grains, no odor. (0.820) FOB @ 65'

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance • Engineering • Remediation		Identifier: MW05 (cont.)	Date: 7/20/19
LITHOLOGIC / SOIL BORING LOG Field Screening: CHLORIDES, PID		Project Name: CORRAL CANYON FED 1H	RP Number: 28P-5501
Logged By: BEN BULLI Hole Diameter: 6"		Method: SONIC DRILLING Total Depth: 61'	
Lab/Log: _____ Comment: ALL CHLORIDES < 1000 PPM			

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgn.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					12			
					13			
					14			
P	2.4	2.4	N		15	5 ft		Silt (10.32)
					16			
					17			
					18			
					19			
					20			
P	2.7	2.7	N	MW05	20	20'	CLAYE	CLAYE, dry, tan, moderately consolidated, no odor. (10.37)
					21			
					22			
					23			
					24			

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance • Engineering • Remediation		Identifier: MH05 (conf)		Date: 7/20/19				
		Project Name: CORRAL CANYON PED 1H		RFP Number: ZRP-5201				
		Logged By: BB		Method: SONIC DRILLING				
		Field Screening: CHLORIDES, PID		Test Depth: 67'				
LITHOLOGIC / SOIL BORING LOG								
Last Log:								
Comments:								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Stratig	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D 13.8%	965	0.7	N	MH05C	25	25	CLAY	(10:10) SAK
					26			
					27			
					28			
					29			
D 13.8%	965	1.9	N		30	30'	CLAYE MSH	CLAYE w/ silt, dry, tan, poorly consolidated, flk. etc., no odor. (10:50)
					31			
					32			
					33			
					34			
D 13.8%	965	2.7	N	MH05D	35	35'	CLAYE MSH	(10:11) SAK
					36			

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance • Engineering • Remediation		Identifier: <u>M105 (ent)</u> Date: <u>7/20/19</u> Project Name: <u>CORRAL CANYON FID 1H</u> RP Number: <u>2RP-5201</u>						
LITHOLOGIC / SOIL BORING LOG Field Screening: CHLORIDES, PID		Logged By: <u>BB</u> Hole Diameter: <u>6 in</u> Method: <u>SONIC DRILLING</u> Total Depth: <u>121'</u>						
Lab/Log: _____ Comment: <u>APC checked in and verified for correct location</u>								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					36			
					37			
					38			
					39			
					40			
					41			
					42			
					43			
					44			
					45			
					46			
					47			
					48			
0 W204 1.7 47-772			N		40	40'	QUICK SAND (11:15)	
AA W204 2.5 47-772			N		46	46'	DUO	DELOMITTE marl, lt grey, med. Considered micr sil, trace calcite, no afor. (12:00)

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance • Engineering • Remediation		Identifier: MW05 (cont) Project Name: CORRAL CANYON FED 1H	Date: 9/20/19 RP Number: 28P-5201						
LITHOLOGIC / SOIL BORING LOG Field Screening: CHLORIDES, PID		Logged By: BB Hole Diameter: 6"	Method: SONIC DRILLING Total Depth: 67'						
Log Scale: _____ Comments: _____									
Mudstone	Moisture Content	Chloride (ppm)	Vapor (ppm)	Stratigraphy	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
M-W	15.0	2.2	N	60	60'	60	60'	DOL	DOLomite, moist - wet, lt green, mod-well consolidated, micro xla, no odor. (12:35)
M	17.5	2.2	N	62	62'	62	62'	DOL	DOLomite, wet, lt green, well-mod. consolidated, micro xla, no odor. (12:50)
				63					* Water Table found at 62' bgs, due to pressure the TOW went up to 55' after using interface probe.
				64					
				65					
				66					
				67					
M	15.0	2.2	N	67	67'	67	67'	DOL	SAND (12:55)
				68					
				69					
				70					
				71					
				72					
EOB 67'									

Logged By: BEN BELL	Method: Sam's
---------------------	---------------

Hole Diameter:	6.15"	Total Depth:	70'
----------------	-------	--------------	-----

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
Δ	1209	6.4	✓		11	11'		
D	1204	0.2	N	8008	6	6'		
					0		gr	Backfill Material
					1			
					2			
					3			
					4			
					5			
					6			
					7			silty SAND, dry, brn/lt brn, prly graded, t-m, no odor
					8			
					9			
					10			
					11			
					12			

 L7 Environmental, Inc. 508 West Stevens Street Carlebad, New Mexico 88220 Compliance • Engineering • Remediation		Identifier: 6426 / m206 Project Name: Cornal Canyon Fed 1H Flowline Date: 5/9/19						
LITHOLOGIC / SOIL BORING LOG Field Screening: CHLORIDES, TPH, DTEX, GRO, MRO, and DRO.		RP Number: 285-5201 Method: Soil Total Depth: 22						
Logged By: BBN BELL Hole Diameter: 6"								
Comment: All Chloride test include a 60% error factor.								
Mechanism	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	1275	5.4	N		16	16'		silty SAND w/ calcareous material, (+ bio), gravel size calcareous, only soaked, no odor.
D	1400	5.9	N		21	21'		
D	1971	6.1	N		23	23'		
D	1971	6.1	N		24	24'		

CHLORIDE, dry, odor about 100% CHLORIDE, high concentrations HCl, no odor.

 LIT Environmental Inc. 508 West Stevens Street Carlsbad, New Mexico 88520 Compliance • Engineering • Remediation		Identifier: <u>60104/MDDB</u> Project Name: <u>Cornal Canyon Fed 181 Flowline</u>	Date: <u>5/19/19</u> RP Number: <u>288-S201</u>					
LITHOLOGIC / SOIL BORING LOG Field Screening: CHLORIDES, TPH, BTEX, GRO, MRO, and DRO.		Logged By: <u>BEN BELL</u> Bore Diameter: <u>6.15"</u>	Method: <u>Soil Drilling</u> Total Depth: <u>70'</u>					
Log Log: _____ Comment: All Chloride test include a 60% error factor								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Straining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					24			
					25			
					26			
					27			
					28			
					29			
					30			
					31			
					32			
					33			
					34			
					35			
					36			

1045

D 1876 H.3 N

28' coarse S&A

D 1444 Z.5 N

33' fine S&A

 LT Environmental, Inc. 509 West Stevens Street Carlsbad, New Mexico 86220 Compliance • Engineering • Remediation		Identifier: 8106/1006	Date: 8/24/99 5/19/19
LITHOLOGIC / SOIL BORING LOG Field Screening: CHLORIDES, TPH, BTEX, GRO, MRO, and DRO.		Project Name: Cornal Canyon Fed 14 Flowline	BIP Number: 28P-5201
Logged By: BEN BRILL Hole Diameter: 6"		Method: 5117 Total Depth: 70'	
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
					36			
					37			
D 4600	5.4	N			38	30'	CLAYE Silt	
					39			
					40			
					41			
					42			
D 4600	3.7	N			43	45'		PAUCINE, dry, brn / 11 cm, medium ^{small} , medium ^{small} no odor
					44			
					45			
D 4600	4.2	N			46	46'		SAND w/ calc. dry, brn / 11 cm, medium ^{small} , medium ^{small} well sorted, some latitic sand, p. ph. no odor.
					47			
					48			

		LT Environmental, Inc. 608 West Stevens Street Carlsbad, New Mexico 88220 Compliance • Engineering • Remediation		Identifier: 6806 / MW06	Date: 6/17/17			
		Project Name: Coral Canyon Fed 14 Flowline		RP Number: 2H P-5201				
		Logged By: BEN BILLIL Hole Diameter: 6"		Method: SPT Total Depth: 70'				
LITHOLOGIC / SOIL BORING LOG Field Screening: CHLORIDES, TPH, HTEX, GRC, MRO, and DRO.								
Lab/Long: _____ Comment: All Chloride test include a 60% error factor.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Stratigraphy	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D 825	9.7			1066	48'	48'	DD	DOLomite, 11.5m / 18.5m, will Correlate, no order!
					49'			
					50'			
					51'			
					52'			
D 825	8.8		N		53'	53'	DD	SAT
					54'			
					55'			
					56'			
					57'			
					58'			
D 825	11.9		N		58'	58'	DD	SAT
					59'			
					60'			

136820

 LT Environmental, Inc. 518 West Stevens Street Carlsbad, New Mexico 88220 Compliance • Engineering • Remediation		Identifier: <u>SH-674706</u> Date: <u>5/19/19</u> Project Name: <u>Cornal Canyon Fed 1H Flowline</u> REP Number: <u>2RP-5201</u> Method: <u>2002</u> Total Depth: <u>70'</u>
LITHOLOGIC / SOIL BORING LOG Field Screenings: CHLORIDES, TPH, BTEX, GRO, MRO, and DRO.		
Logged By: <u>BBN/BILL</u> Hole Diameter: <u>12"</u>		
Comment: All Chloride test include a 60% error discount		
Moisture Content Chloride (ppm) Vapor (ppm) Swelling Sample #	Depth (ft. bgs.) Sample Depth Soil/Rock Type	Lithology/Remarks
1971 1.3 N 6002	0.0 1.0 2.0 3.0 4.0 5.0 6.0 7.0 8.0 9.0 10.0 11.0 12.0 13.0 14.0 15.0 16.0 17.0 18.0 19.0 20.0 21.0 22.0 23.0 24.0 25.0 26.0 27.0 28.0 29.0 30.0 31.0 32.0 33.0 34.0 35.0 36.0 37.0 38.0 39.0 40.0 41.0 42.0 43.0 44.0 45.0 46.0 47.0 48.0 49.0 50.0 51.0 52.0 53.0 54.0 55.0 56.0 57.0 58.0 59.0 60.0 61.0 62.0 63.0 64.0 65.0 66.0 67.0 68.0 69.0 70.0	Data not F, not, it's a 15% well case, no data
1571 2.3 N 6002	0.0 1.0 2.0 3.0 4.0 5.0 6.0 7.0 8.0 9.0 10.0 11.0 12.0 13.0 14.0 15.0 16.0 17.0 18.0 19.0 20.0 21.0 22.0 23.0 24.0 25.0 26.0 27.0 28.0 29.0 30.0 31.0 32.0 33.0 34.0 35.0 36.0 37.0 38.0 39.0 40.0 41.0 42.0 43.0 44.0 45.0 46.0 47.0 48.0 49.0 50.0 51.0 52.0 53.0 54.0 55.0 56.0 57.0 58.0 59.0 60.0 61.0 62.0 63.0 64.0 65.0 66.0 67.0 68.0 69.0 70.0	Data not F, not, it's a 15% well case, no data. END @ 70'

1300





WELL DEVELOPMENT/PURGING FORM

Well ID: MW01

Purging Method: PUMP

Initials:[illegible]

Casing Volume = 0.163 (for 2" diameter wells) x (Total Depth of Well from measuring point ____ - Initial Water Depth ____)
(Use 0.653 for 4" diameter wells or 1.469 for 6" diameter wells or 0.041 for 1" diameter wells)

MW01

Pump

Bailer

Other

Comments

(Color, Turbidity, Odor, NAPL)

BC, High, No, No

BC, Hi/Med, No, No

BC, med/low, No, No

____ x 3 well volumes = ____

Page ____ of ____



WELL DEVELOPMENT/PURGING FORM

Project Name: Coral Carpel H

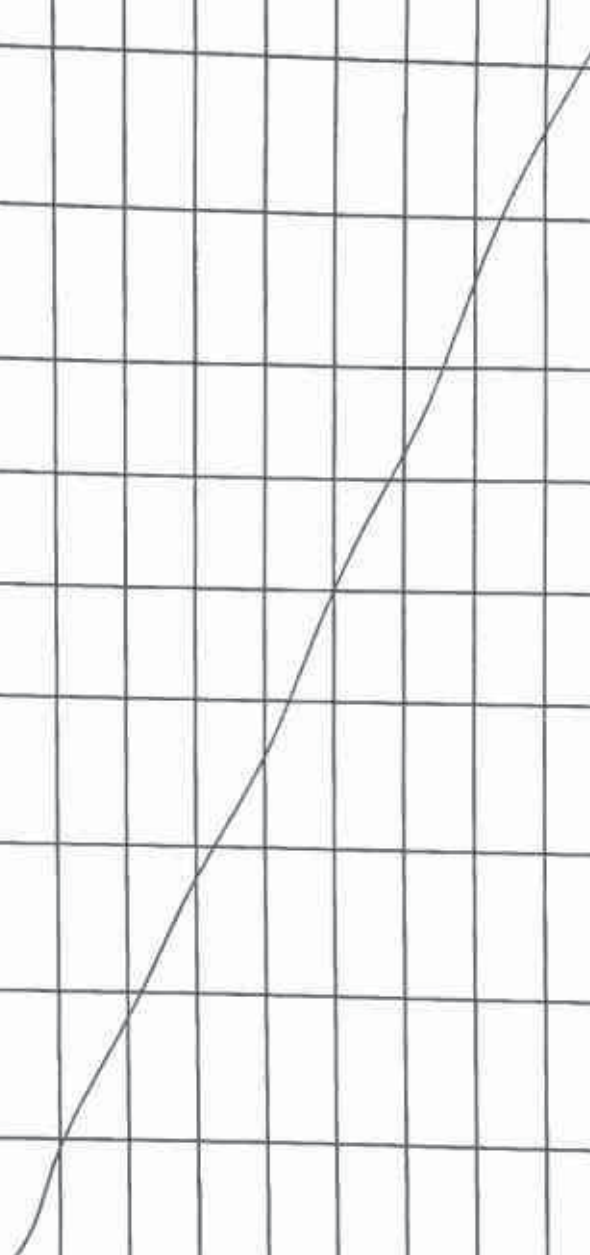
Project Number: 0291906

Well ID: MW07

Developer's

Initials: M

Purging Method: *pump*

Date	Time	Initial Water Depth (ft)	Total Depth (ft)	pH	Temp (C)	S.C. (n-S)	Dissolved Oxygen (mg/L)	Volume Removed (gallons)	Casing Volumes Removed
9/13	9:16	62.20	68.10	7.01	23.5	2745	1.89	.94	1
↓	9:20	↓	↓	7.07	22.0	2850	1.92	1.88	2
↓	9:23	↓	↓	7.06	21.8	2853	2.14	2.82	3
									

Casing Volume = 0.163 (for 2" diameter wells) x (Total Depth of Well from measuring point - Initial Water Depth)
(Use 0.653 for 4" diameter wells or 1.469 for 6" diameter wells or 0.041 for 1" diameter wells)

MW02

Pump

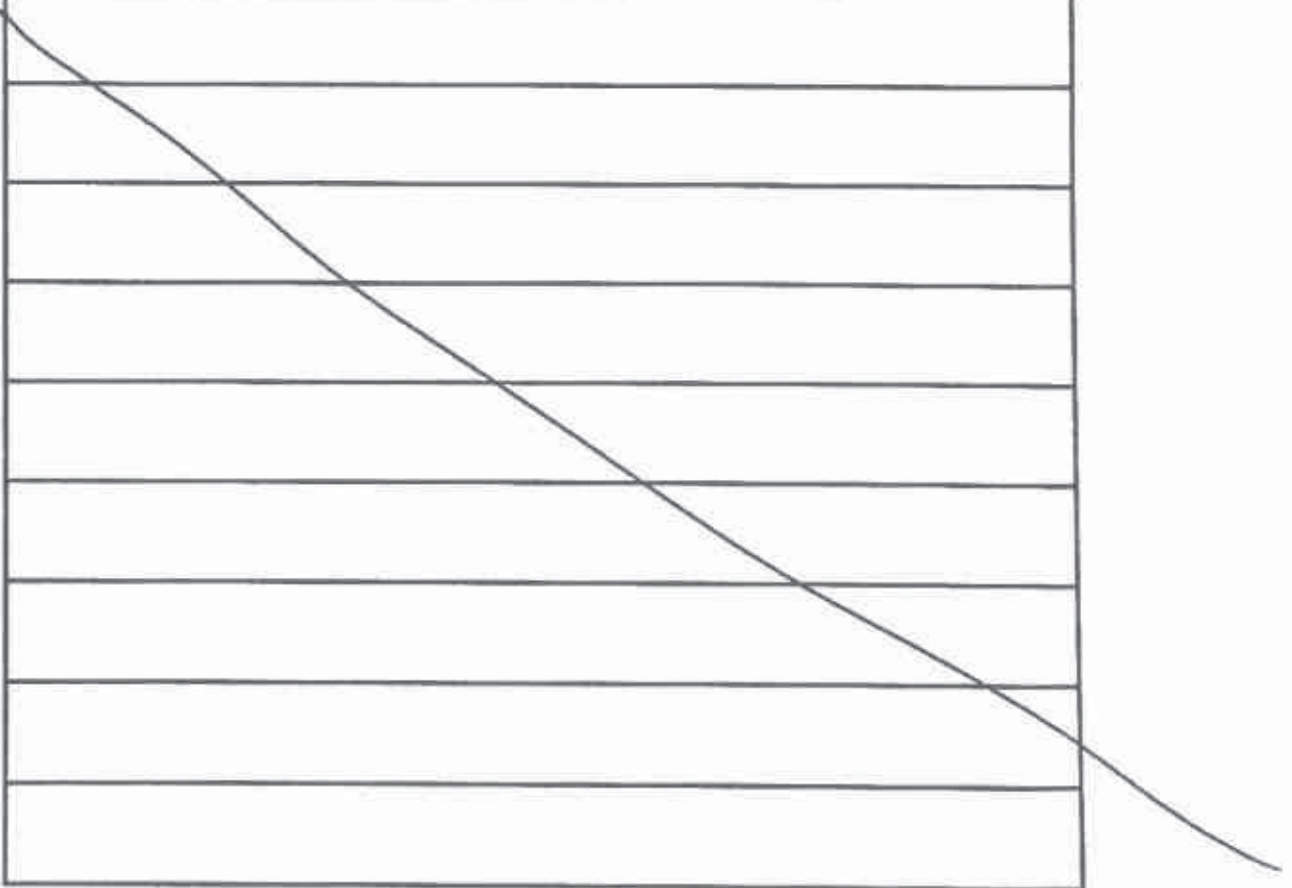
Bailer

Other

Comments

(Color, Turbidity, Odor, NAPL)

Brown, High Turb, Earthy Odor, No NAPL



____ x 3 well volumes = ____

Page ____ of ____



WELL DEVELOPMENT/PURGING FORM

Well ID: MW03

Project Number: 012919018

Initials: VM

Purging Method: Pump

[illegible]

Casing Volume = 0.163 (for 2" diameter wells) x (Total Depth of Well from measuring point - Initial Water Depth) =
(Use 0.653 for 4" diameter wells or 1.469 for 6" diameter wells or 0.041 for 1" diameter wells)

MW03

Pump

Bailer

Other

Comments

(Color, Turbidity, Odor, NAPL)

Rd/BS, Medium, NO, NO

↓, Med/LOW, NO, NO

Rd/A, Low, NO, NO

____ x 3 well volumes = ____

Page ____ of ____



WELL DEVELOPMENT/PURGING FORM

Project Name: Coffal Canyon / H
Wright

Well ID: MW04

Project Number: 012919018

Developer's

Initials:

Purging Method: *purge*

[illegible]

Casing Volume = 0.163 (for 2" diameter wells) x (Total Depth of Well from measuring point - Initial Water Depth) =
(Use 0.653 for 4" diameter wells or 1.469 for 6" diameter wells or 0.041 for 1" diameter wells)

MW04

Pump

Bailer

Other

Comments

(Color, Turbidity, Odor, NAPL)

BC, High, NO, NO

↓ ↓ ↓ ↓

BC, med/LOW, NO, NO

___ x 3 well volumes = ___

Page ___ of ___



WELL DEVELOPMENT/PURGING FORM

Well ID: 44/35

Project Number: 02919015

Initials: WV

Purging Method: Pump

[illegible]

Casing Volume = 0.163 (for 2" diameter wells) x (Total Depth of Well from measuring point - Initial Water Depth) =
(Use 0.653 for 4" diameter wells or 1.469 for 6" diameter wells or 0.041 for 1" diameter wells)

MW05

Pump

Bailer

Other

Comments

(Color, Turbidity, Odor, NAPL)

Tan/White, High, Earthy, NO



Tan/White, Medium, ↓



___ x 3 well volumes = ___

Page ___ of ___



WELL DEVELOPMENT/PURGING FORM

Project Name: Cosial Canyon 14

Well ID: *22106*

Project Number: 029/4018

Developer's Initials: *LM*

Purging Method: *Pump*

Date	Time	Initial Water Depth (ft)	Total Depth (ft)	pH	Temp (C)	S.C. (u-S)	Dissolved Oxygen (mg/L)	Volume Removed (gallons)	Casing Volumes Removed
9/13	14:23	58.25	64.11	7.80	22.5	22017	1.60	0.96	1
	14:27			7.33	21.9	21963	1.95	1.92	2
	14:30			7.25	21.7	22030	2.09	2.87	3

Casing Volume = 0.163 (for 2" diameter wells) x (Total Depth of Well from measuring point - Initial Water Depth) =
(Use 0.653 for 4" diameter wells or 1.469 for 6" diameter wells or 0.041 for 1" diameter wells)

MWO6

Pump**Bailer****Other****Comments****(Color, Turbidity, Odor, NAPL)**

Tan/Br, Hi/Med, NO, NO

Tan/Br, Med/Low, NO, NO

Tan/Br, Med/Low, NO, NO

___ x 3 well volumes = ___



Analytical Report 611648

for
LT Environmental, Inc.

Project Manager: Adrian Baker

Corral Canyon Federal 001H

22-JAN-19

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)



22-JAN-19

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

Reference: XENCO Report No(s): **611648**
Corral Canyon Federal 001H
Project Address: Delaware Basin

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 611648. 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. 611648 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

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Sample Cross Reference 611648



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 001H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	01-15-19 13:35	0.5 ft	611648-001
SS02	S	01-15-19 13:40	0.5 ft	611648-002
SS03	S	01-15-19 13:45	0.5 ft	611648-003
SS04	S	01-15-19 13:50	0.5 ft	611648-004



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *Corral Canyon Federal 001H*

Project ID:
Work Order Number(s): 611648

Report Date: 22-JAN-19
Date Received: 01/17/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3076530 BTEX by EPA 8021B

Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected;

Samples affected are: 611648-003,611648-004.

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



Certificate of Analysis Summary 611648

LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon Federal 001H



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

Date Received in Lab: Thu Jan-17-19 12:05 pm
Report Date: 22-JAN-19
Project Manager: Jessica Kramer

Analysis Requested		Lab Id:	Field Id:	Depth:	Matrix:	Sampled:	611648-001	611648-002	611648-003	611648-004	
BTEX by EPA 8021B		Extracted:	Jan-21-19 14:30	SS01	0.5- ft	SOIL	Jan-15-19 13:35	Jan-21-19 14:30	Jan-21-19 14:30	Jan-21-19 14:30	
		Analyzed:	Jan-22-19 05:18	SS02	0.5- ft	SOIL	Jan-15-19 13:40	Jan-22-19 05:37	Jan-22-19 06:53	Jan-22-19 07:12	
		Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	
Benzene			<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	0.572	0.0201	0.0844
Toluene			<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	15.4 D	0.199	1.76
Ethylbenzene			<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	15.5 D	0.199	2.30
m,p-Xylenes			0.00577	0.00403	0.00834	0.00399	0.00834	0.00399	61.3 D	0.398	7.91
o-Xylene			<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	3.53	0.0201	1.88
Total Xylenes			0.00577	0.00202	0.00834	0.00200	0.00834	0.00200	64.8	0.0201	9.79
Total BTEX			0.00577	0.00202	0.00834	0.00200	0.00834	0.00200	96.3	0.0201	13.9
Inorganic Anions by EPA 300		Extracted:	Jan-21-19 16:00	Jan-21-19 16:00	Jan-21-19 16:00	Jan-21-19 16:00	Jan-21-19 16:00	Jan-21-19 16:00	Jan-21-19 16:00	Jan-21-19 16:00	
		Analyzed:	Jan-21-19 21:41	Jan-21-19 21:41	Jan-21-19 21:47	Jan-21-19 21:47	Jan-21-19 21:47	Jan-21-19 21:53	Jan-21-19 21:53	Jan-21-19 21:59	
		Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	
Chloride			121	4.96	262	4.99	262	4.99	6290	50.0	201
TPH by SW8015 Mod		Extracted:	Jan-21-19 14:00	Jan-21-19 14:00	Jan-21-19 14:00	Jan-21-19 14:00	Jan-21-19 14:00	Jan-21-19 14:00	Jan-21-19 14:00	Jan-21-19 14:00	
		Analyzed:	Jan-21-19 23:43	Jan-21-19 23:43	Jan-22-19 00:03	Jan-22-19 00:03	Jan-22-19 00:03	Jan-22-19 00:23	Jan-22-19 00:23	Jan-22-19 00:43	
		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	1700	15.0	355
Diesel Range Organics (DRO)			90.2	15.0	27.9	15.0	27.9	15.0	3950	15.0	996
Motor Oil Range Hydrocarbons (MRO)			<15.0	15.0	<15.0	15.0	<15.0	15.0	450	15.0	116
Total TPH			90.2	15.0	27.9	15.0	27.9	15.0	6100	15.0	1470

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

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

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analytical Results 611648



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 001H

Sample Id: **SS01**
Lab Sample Id: 611648-001

Matrix: Soil
Date Collected: 01.15.19 13.35

Date Received: 01.17.19 12.05
Sample Depth: 0.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3076513

Date Prep: 01.21.19 16.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	121	4.96	mg/kg	01.21.19 21.41		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3076559

Date Prep: 01.21.19 14.00

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	01.21.19 23.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	90.2	15.0	mg/kg	01.21.19 23.43		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.21.19 23.43	U	1
Total TPH	PHC635	90.2	15.0	mg/kg	01.21.19 23.43		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	01.21.19 23.43	
o-Terphenyl	84-15-1	98	%	70-135	01.21.19 23.43	



Certificate of Analytical Results 611648



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 001H

Sample Id: **SS01**
Lab Sample Id: 611648-001

Matrix: Soil
Date Collected: 01.15.19 13.35

Date Received: 01.17.19 12.05
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3076530

Date Prep: 01.21.19 14.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.22.19 05.18	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.22.19 05.18	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.22.19 05.18	U	1
m,p-Xylenes	179601-23-1	0.00577	0.00403	mg/kg	01.22.19 05.18		1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.22.19 05.18	U	1
Total Xylenes	1330-20-7	0.00577	0.00202	mg/kg	01.22.19 05.18		1
Total BTEX		0.00577	0.00202	mg/kg	01.22.19 05.18		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	107	%	70-130	01.22.19 05.18		
4-Bromofluorobenzene	460-00-4	116	%	70-130	01.22.19 05.18		



Certificate of Analytical Results 611648



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 001H

Sample Id: SS02
Lab Sample Id: 611648-002

Matrix: Soil
Date Collected: 01.15.19 13.40

Date Received: 01.17.19 12.05
Sample Depth: 0.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3076513

Date Prep: 01.21.19 16.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	262	4.99	mg/kg	01.21.19 21.47		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3076559

Date Prep: 01.21.19 14.00

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	01.22.19 00.03	U	1
Diesel Range Organics (DRO)	C10C28DRO	27.9	15.0	mg/kg	01.22.19 00.03		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.22.19 00.03	U	1
Total TPH	PHC635	27.9	15.0	mg/kg	01.22.19 00.03		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	01.22.19 00.03	
o-Terphenyl	84-15-1	98	%	70-135	01.22.19 00.03	



Certificate of Analytical Results 611648



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 001H

Sample Id: SS02
Lab Sample Id: 611648-002

Matrix: Soil
Date Collected: 01.15.19 13.40

Date Received: 01.17.19 12.05
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3076530

Prep Method: SW5030B

% Moisture:

Date Prep: 01.21.19 14.30

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.22.19 05.37	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.22.19 05.37	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.22.19 05.37	U	1
m,p-Xylenes	179601-23-1	0.00834	0.00399	mg/kg	01.22.19 05.37		1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.22.19 05.37	U	1
Total Xylenes	1330-20-7	0.00834	0.00200	mg/kg	01.22.19 05.37		1
Total BTEX		0.00834	0.00200	mg/kg	01.22.19 05.37		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	119		%	70-130	01.22.19 05.37	
1,4-Difluorobenzene	540-36-3	109		%	70-130	01.22.19 05.37	



Certificate of Analytical Results 611648



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 001H

Sample Id: SS03
Lab Sample Id: 611648-003

Matrix: Soil
Date Collected: 01.15.19 13.45

Date Received: 01.17.19 12.05
Sample Depth: 0.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3076513

Date Prep: 01.21.19 16.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6290	50.0	mg/kg	01.21.19 21.53		10

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3076559

Date Prep: 01.21.19 14.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	1700	15.0	mg/kg	01.22.19 00.23		1
Diesel Range Organics (DRO)	C10C28DRO	3950	15.0	mg/kg	01.22.19 00.23		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	450	15.0	mg/kg	01.22.19 00.23		1
Total TPH	PHC635	6100	15.0	mg/kg	01.22.19 00.23		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	01.22.19 00.23	
o-Terphenyl	84-15-1	83	%	70-135	01.22.19 00.23	



Certificate of Analytical Results 611648



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 001H

Sample Id: SS03
Lab Sample Id: 611648-003

Matrix: Soil
Date Collected: 01.15.19 13.45

Date Received: 01.17.19 12.05
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 01.21.19 14.30

Basis: Wet Weight

Seq Number: 3076530

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.572	0.0201	mg/kg	01.22.19 06.53		10
Toluene	108-88-3	15.4	0.199	mg/kg	01.22.19 11.42	D	100
Ethylbenzene	100-41-4	15.5	0.199	mg/kg	01.22.19 11.42	D	100
m,p-Xylenes	179601-23-1	61.3	0.398	mg/kg	01.22.19 11.42	D	100
o-Xylene	95-47-6	3.53	0.0201	mg/kg	01.22.19 06.53		10
Total Xylenes	1330-20-7	64.8	0.0201	mg/kg	01.22.19 11.42		100
Total BTEX		96.3	0.0201	mg/kg	01.22.19 11.42		100
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	125	%	70-130	01.22.19 06.53		
4-Bromofluorobenzene	460-00-4	697	%	70-130	01.22.19 06.53	**	



Certificate of Analytical Results 611648



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 001H

Sample Id: **SS04**
Lab Sample Id: 611648-004

Matrix: Soil
Date Collected: 01.15.19 13.50

Date Received: 01.17.19 12.05
Sample Depth: 0.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3076513

Date Prep: 01.21.19 16.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	201	5.00	mg/kg	01.21.19 21.59		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3076559

Date Prep: 01.21.19 14.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	355	15.0	mg/kg	01.22.19 00.43		1
Diesel Range Organics (DRO)	C10C28DRO	996	15.0	mg/kg	01.22.19 00.43		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	116	15.0	mg/kg	01.22.19 00.43		1
Total TPH	PHC635	1470	15.0	mg/kg	01.22.19 00.43		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	121	%	70-135	01.22.19 00.43	
o-Terphenyl	84-15-1	117	%	70-135	01.22.19 00.43	



Certificate of Analytical Results 611648



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 001H

Sample Id: **SS04**
Lab Sample Id: 611648-004

Matrix: Soil
Date Collected: 01.15.19 13.50

Date Received: 01.17.19 12.05
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 01.21.19 14.30

Basis: Wet Weight

Seq Number: 3076530

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.0844	0.0199	mg/kg	01.22.19 07.12		10
Toluene	108-88-3	1.76	0.0199	mg/kg	01.22.19 07.12		10
Ethylbenzene	100-41-4	2.30	0.0199	mg/kg	01.22.19 07.12		10
m,p-Xylenes	179601-23-1	7.91	0.0398	mg/kg	01.22.19 07.12		10
o-Xylene	95-47-6	1.88	0.0199	mg/kg	01.22.19 07.12		10
Total Xylenes	1330-20-7	9.79	0.0199	mg/kg	01.22.19 07.12		10
Total BTEX		13.9	0.0199	mg/kg	01.22.19 07.12		10
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	284	%	70-130	01.22.19 07.12	**	
1,4-Difluorobenzene	540-36-3	123	%	70-130	01.22.19 07.12		

- 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 611648

LT Environmental, Inc.
Corral Canyon Federal 001H

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3076513

MB Sample Id: 7670156-1-BLK

Matrix: Solid

LCS Sample Id: 7670156-1-BKS

Prep Method: E300P

Date Prep: 01.21.19

LCSD Sample Id: 7670156-1-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	248	99	236	94	90-110	5	20	mg/kg	01.21.19 18:54	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3076513

Parent Sample Id: 611651-022

Matrix: Soil

MS Sample Id: 611651-022 S

Prep Method: E300P

Date Prep: 01.21.19

MSD Sample Id: 611651-022 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	122	249	378	103	344	89	90-110	9	20	mg/kg	01.21.19 19:12	X

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3076513

Parent Sample Id: 611651-024

Matrix: Soil

MS Sample Id: 611651-024 S

Prep Method: E300P

Date Prep: 01.21.19

MSD Sample Id: 611651-024 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	109	250	332	89	327	87	90-110	2	20	mg/kg	01.21.19 20:42	X

Analytical Method: TPH by SW8015 Mod

Seq Number: 3076559

MB Sample Id: 7670205-1-BLK

Matrix: Solid

LCS Sample Id: 7670205-1-BKS

Prep Method: TX1005P

Date Prep: 01.21.19

LCSD Sample Id: 7670205-1-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	949	95	954	95	70-135	1	20	mg/kg	01.21.19 20:25	
Diesel Range Organics (DRO)	<8.13	1000	1080	108	1070	107	70-135	1	20	mg/kg	01.21.19 20:25	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	90		123		122		70-135	%	01.21.19 20:25
o-Terphenyl	90		96		96		70-135	%	01.21.19 20:25

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 611648

LT Environmental, Inc.
Corral Canyon Federal 001H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3076559

Parent Sample Id: 611647-007

Matrix: Soil

MS Sample Id: 611647-007 S

Prep Method: TX1005P

Date Prep: 01.21.19

MSD Sample Id: 611647-007 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	916	92	920	92	70-135	0	20	mg/kg	01.21.19 21:25	
Diesel Range Organics (DRO)	51.3	999	1090	104	1110	106	70-135	2	20	mg/kg	01.21.19 21:25	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	129		121		70-135	%	01.21.19 21:25
o-Terphenyl	112		110		70-135	%	01.21.19 21:25

Analytical Method: BTEX by EPA 8021B

Seq Number: 3076530

MB Sample Id: 7670183-1-BLK

Matrix: Solid

LCS Sample Id: 7670183-1-BKS

Prep Method: SW5030B

Date Prep: 01.21.19

LCSD Sample Id: 7670183-1-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	0.121	121	0.126	126	70-130	4	35	mg/kg	01.21.19 22:42	
Toluene	<0.000456	0.100	0.107	107	0.111	111	70-130	4	35	mg/kg	01.21.19 22:42	
Ethylbenzene	<0.000565	0.100	0.102	102	0.105	105	70-130	3	35	mg/kg	01.21.19 22:42	
m,p-Xylenes	<0.00101	0.200	0.198	99	0.205	102	70-130	3	35	mg/kg	01.21.19 22:42	
o-Xylene	<0.000344	0.100	0.0985	99	0.102	102	70-130	3	35	mg/kg	01.21.19 22:42	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		105		105		70-130	%	01.21.19 22:42
4-Bromofluorobenzene	94		101		102		70-130	%	01.21.19 22:42

Analytical Method: BTEX by EPA 8021B

Seq Number: 3076530

Parent Sample Id: 611647-001

Matrix: Soil

MS Sample Id: 611647-001 S

Prep Method: SW5030B

Date Prep: 01.21.19

MSD Sample Id: 611647-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	0.000450	0.100	0.0965	96	0.109	109	70-130	12	35	mg/kg	01.21.19 23:20	
Toluene	<0.000457	0.100	0.0953	95	0.0979	98	70-130	3	35	mg/kg	01.21.19 23:20	
Ethylbenzene	<0.000566	0.100	0.0908	91	0.0924	93	70-130	2	35	mg/kg	01.21.19 23:20	
m,p-Xylenes	<0.00102	0.200	0.183	92	0.181	91	70-130	1	35	mg/kg	01.21.19 23:20	
o-Xylene	0.000430	0.100	0.0914	91	0.0899	90	70-130	2	35	mg/kg	01.21.19 23:20	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		104		70-130	%	01.21.19 23:20
4-Bromofluorobenzene	113		106		70-130	%	01.21.19 23:20

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:

611648

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

www.xenco.com Page 1 of 1

Project Manager:	Adrian Baker	Bill to: (if different)	Kyle Little
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	
Phone:	432.704.5178	Email:	abaker@xenco.com & abakers@xenco.com

Project Name:	Corral Canyon Federal OILH	Turn Around	
Project Number:		Routine	☒
P.O. Number:		Rush:	
Sampler's Name:	Anna Byers	Due Date:	

SAMPLE RECEIPT		Temp Blank:	Yes ☒ No ☐	Wet Ice:	Yes ☒ No ☐
Temperature (°C):	0.5/0.5	Thermometer ID:	123		
Received intact:	Yes ☒ No ☐	Correction Factor:	-0.1		
Cooler Custody Seals:	Yes ☒ No ☐ N/A	Total Containers:			
Sample Custody Seals:	Yes ☒ No ☐ N/A				

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers			ANALYSIS REQUEST										Work Order Notes	
					TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)												
SSO1	S	1/15/19	1335	0.5'	☒	☒	☒												
SSO2	S	1/15/19	1340	0.5'	☒	☒	☒												
SSO3	S	1/15/19	1345	0.5'	☒	☒	☒												
SSO4	S	1/15/19	1350	0.5'	☒	☒	☒												
01/16/2019																			

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 Anna Byers	1/16/19	06:30	2 [Signature]	1/16/19	11:55
3 [Signature]	1/17/19	1205	4 [Signature]		
5 [Signature]			6 [Signature]		



XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

Date/ Time Received: 01/17/2019 12:05:00 PM

Work Order #: 611648

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist

Comments

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

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Brianna Teel

Brianna Teel

Date: 01/17/2019

Checklist reviewed by:

Jessica Kramer

Jessica Kramer

Date: 01/18/2019

Analytical Report 620419

for
LT Environmental, Inc.

Project Manager: Adrian Baker
Corral Canyon Federal 1H Flowline

10-APR-19

Collected By: Client



1089 N Canal Street
Carlsbad, NM 88220

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)
Xenco-Lakeland: Florida (E84098)



10-APR-19

Project Manager: **Adrian Baker**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **620419**

Corral Canyon Federal 1H Flowline

Project Address: ---

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 620419. 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. 620419 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 'Kalei Stout'. The signature is written in a cursive, flowing style.

Kalei Stout

Carlsbad Laboratory Director

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

Certified and approved by numerous States and Agencies.

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



Sample Cross Reference 620419

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 1H Flowline

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH01	S	04-05-19 11:00	0.5 ft	620419-001
BH01A	S	04-05-19 11:05	4.5 ft	620419-002
BH02	S	04-05-19 11:10	0.5 ft	620419-003
BH02A	S	04-05-19 11:15	4.5 ft	620419-004
BH03	S	04-05-19 11:20	0.5 ft	620419-005
BH03A	S	04-05-19 11:25	4.5 ft	620419-006
BH05	S	04-05-19 12:00	0.5 ft	620419-007
BH05A	S	04-05-19 12:05	4.5 ft	620419-008
BH04	S	04-05-19 10:10	0.5 ft	620419-009
BH04A	S	04-05-19 10:15	4.5 ft	620419-010
SW01	S	04-05-19 13:10	0 - 6 ft	620419-011
SW02	S	04-05-19 13:15	0 - 6 ft	620419-012
SW03	S	04-05-19 13:20	0 - 6 ft	620419-013
SW04	S	04-05-19 13:25	0 - 6 ft	620419-014
SW05	S	04-05-19 13:35	0 - 6 ft	620419-015
SW06	S	04-05-19 13:40	0 - 6 ft	620419-016
FS01	S	04-05-19 11:35	6 ft	620419-017
FS02	S	04-05-19 11:40	6 ft	620419-018
FS03	S	04-05-19 11:45	6 ft	620419-019
FS04	S	04-05-19 11:50	6 ft	620419-020



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Corral Canyon Federal 1H Flowline

Project ID: ---
Work Order Number(s): 620419

Report Date: 10-APR-19
Date Received: 04/09/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3085161 Inorganic Anions by EPA 300

Lab Sample ID 620419-010 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: 620419-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013, -014, -015, -016, -017, -018, -019, -020.

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

Chloride Relative Percent Difference (RPD) between matrix spike and duplicate was above quality control limits.

Samples in the analytical batch are: 620419-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013, -014, -015, -016, -017, -018, -019, -020

Batch: LBA-3085167 BTEX by EPA 8021B

Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.

Samples affected are: 620419-006, 620419-012, 620419-017, 620419-015, 620419-014.

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

Lab Sample ID 620419-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene 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: 620419-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013, -014, -015, -016, -017, -018, -019, -020.

The Laboratory Control Sample for Toluene, Benzene, m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.



Certificate of Analysis Summary 620419

LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon Federal 1H Flowline

Project Id: ---

Contact: Adrian Baker

Project Location: ---

Date Received in Lab: Tue Apr-09-19 07:40 am

Report Date: 10-APR-19

Project Manager: Kalei Stout

Analysis Requested	Lab Id:	620419-001	620419-002	620419-003	620419-004	620419-005	620419-006
	Field Id:	BH01	BH01A	BH02	BH02A	BH03	BH03A
	Depth:	0.5- ft	4.5- ft	0.5- ft	4.5- ft	0.5- ft	4.5- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Apr-05-19 11:00	Apr-05-19 11:05	Apr-05-19 11:10	Apr-05-19 11:15	Apr-05-19 11:20	Apr-05-19 11:25
BTEX by EPA 8021B SUB: T104704400-18-16	Extracted:	Apr-09-19 09:00	Apr-09-19 09:00	Apr-09-19 09:00	Apr-09-19 09:00	Apr-09-19 09:00	Apr-09-19 09:00
	Analyzed:	Apr-09-19 15:26	Apr-09-19 15:45	Apr-09-19 16:04	Apr-09-19 16:23	Apr-09-19 16:42	Apr-09-19 17:01
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
		<0.00199 0.00199	<0.00202 0.00202	<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200
		<0.00199 0.00199	<0.00202 0.00202	<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200
		<0.00199 0.00199	<0.00202 0.00202	<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200
Inorganic Anions by EPA 300 SUB: T104704400-18-16	Extracted:	Apr-09-19 16:15	Apr-09-19 16:15	Apr-09-19 16:15	Apr-09-19 16:15	Apr-09-19 16:15	Apr-09-19 16:15
	Analyzed:	Apr-10-19 07:45	Apr-10-19 08:05	Apr-10-19 08:12	Apr-10-19 08:19	Apr-10-19 08:25	Apr-10-19 08:46
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
		35.0 5.04	215 4.98	299 4.95	120 5.02	12.4 5.00	106 5.04
		Apr-09-19 10:00	Apr-09-19 10:00	Apr-09-19 10:00	Apr-09-19 10:00	Apr-09-19 10:00	Apr-09-19 10:00
		Apr-09-19 12:20	Apr-09-19 13:15	Apr-09-19 13:34	Apr-09-19 13:53	Apr-09-19 14:12	Apr-09-19 14:31
TPH by SW8015 Mod SUB: T104704400-18-16	Extracted:	Apr-09-19 10:00	Apr-09-19 10:00	Apr-09-19 10:00	Apr-09-19 10:00	Apr-09-19 10:00	Apr-09-19 10:00
	Analyzed:	Apr-09-19 12:20	Apr-09-19 13:15	Apr-09-19 13:34	Apr-09-19 13:53	Apr-09-19 14:12	Apr-09-19 14:31
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
		<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0
		<15.0 15.0	<15.0 15.0	39.9 15.0	19.2 14.9	<15.0 15.0	<15.0 15.0
		<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0
		<15.0 15.0	<15.0 15.0	39.9 15.0	19.2 14.9	<15.0 15.0	<15.0 15.0
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0	<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	<14.9 14.9	<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	<14.9 14.9	<15.0 15.0	<15.0 15.0
		<15.0 15.0	<15.0 15.0	39.9 15.0	19.2 14.9	<15.0 15.0	<15.0 15.0
Total TPH		<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0
		<15.0 15.0	<15.0 15.0	39.9 15.0	19.2 14.9	<15.0 15.0	<15.0 15.0
Total GRO-DRO		<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0
		<15.0 15.0	<15.0 15.0	39.9 15.0	19.2 14.9	<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

Kalei Stout
Carlsbad Laboratory Director



Certificate of Analysis Summary 620419

LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon Federal 1H Flowline

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

Date Received in Lab: Tue Apr-09-19 07:40 am
Report Date: 10-APR-19
Project Manager: Kalei Stout

Analysis Requested	Lab Id:	620419-007	620419-008	620419-009	620419-010	620419-011	620419-012
	Field Id:	BH05	BH05A	BH04	BH04A	SW01	SW02
	Depth:	0.5- ft	4.5- ft	0.5- ft	4.5- ft	0-6 ft	0-6 ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Apr-05-19 12:00	Apr-05-19 12:05	Apr-05-19 10:10	Apr-05-19 10:15	Apr-05-19 13:10	Apr-05-19 13:15
BTEX by EPA 8021B SUB: T104704400-18-16	Extracted:	Apr-09-19 09:00	Apr-09-19 09:00	Apr-09-19 09:00	Apr-09-19 09:00	Apr-09-19 09:00	Apr-09-19 09:00
	Analyzed:	Apr-09-19 17:20	Apr-09-19 17:39	Apr-09-19 17:58	Apr-09-19 18:17	Apr-09-19 19:31	Apr-09-19 19:50
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
		<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199	<0.00202 0.00202	<0.00199 0.00199
		<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199	<0.00202 0.00202	<0.00199 0.00199
		<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199	<0.00202 0.00202	<0.00199 0.00199
		<0.00404 0.00404	<0.00400 0.00400	<0.00402 0.00402	<0.00398 0.00398	<0.00403 0.00403	<0.00398 0.00398
Inorganic Anions by EPA 300 SUB: T104704400-18-16	Extracted:	Apr-09-19 16:15	Apr-09-19 16:15	Apr-09-19 16:15	Apr-09-19 16:15	Apr-09-19 16:15	Apr-09-19 16:15
	Analyzed:	Apr-10-19 08:53	Apr-10-19 09:46	Apr-10-19 09:53	Apr-10-19 10:07	Apr-10-19 10:00	Apr-10-19 10:27
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
		121 4.97	100 4.99	26.0 4.97	40.1 4.95	703 5.01	447 4.99
		Apr-09-19 10:00	Apr-09-19 10:00	Apr-09-19 10:00	Apr-09-19 10:00	Apr-09-19 10:00	Apr-09-19 10:00
		Apr-09-19 14:50	Apr-09-19 15:08	Apr-09-19 15:28	Apr-09-19 15:47	Apr-09-19 16:44	Apr-09-19 17:03
		mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
TPH by SW8015 Mod SUB: T104704400-18-16	Extracted:	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0
	Analyzed:	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0
	Units/RL:	<15.0 15.0	<15.0 15.0	<15.0 15.0	<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	<14.9 14.9	<15.0 15.0
		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0
Gasoline Range Hydrocarbons (GRO)	Extracted:	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0
	Analyzed:	<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)	Extracted:	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0
	Analyzed:	<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)	Extracted:	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0
	Analyzed:	<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	Extracted:	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0
	Analyzed:	<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	Extracted:	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0
	Analyzed:	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<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

Kalei Stout
Carlsbad Laboratory Director



Certificate of Analysis Summary 620419
LT Environmental, Inc., Arvada, CO
Project Name: Corral Canyon Federal 1H Flowline

Project Id: ---

Contact: Adrian Baker

Project Location: ---

Date Received in Lab: Tue Apr-09-19 07:40 am

Report Date: 10-APR-19

Project Manager: Kalei Stout

Analysis Requested	Lab Id:	620419-013	620419-014	620419-015	620419-016	620419-017	620419-018
	Field Id:	SW03	SW04	SW05	SW06	FS01	FS02
	Depth:	0-6 ft	0-6 ft	0-6 ft	0-6 ft	6- ft	6- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Apr-05-19 13:20	Apr-05-19 13:25	Apr-05-19 13:35	Apr-05-19 13:40	Apr-05-19 11:35	Apr-05-19 11:40
BTEX by EPA 8021B SUB: T104704400-18-16	Extracted:	Apr-09-19 09:00	Apr-09-19 09:00	Apr-09-19 09:00	Apr-09-19 09:00	Apr-09-19 09:00	Apr-09-19 09:00
	Analyzed:	Apr-09-19 20:09	Apr-09-19 20:28	Apr-09-19 20:47	Apr-09-19 21:06	Apr-09-19 21:25	Apr-09-19 21:44
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
		<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199
		<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199
		<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199
Inorganic Anions by EPA 300 SUB: T104704400-18-16	Extracted:	Apr-09-19 16:15	Apr-09-19 16:15	Apr-09-19 16:15	Apr-09-19 16:15	Apr-09-19 16:15	Apr-09-19 16:15
	Analyzed:	Apr-10-19 10:34	Apr-10-19 11:08	Apr-10-19 11:15	Apr-10-19 11:56	Apr-10-19 12:16	Apr-10-19 12:23
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
		988 25.2	804 24.9	537 4.95	315 5.04	676 5.04	714 25.2
		Apr-09-19 10:00	Apr-09-19 10:00	Apr-09-19 10:00	Apr-09-19 10:00	Apr-09-19 10:00	Apr-09-19 10:00
		Apr-09-19 17:22	Apr-09-19 17:42	Apr-09-19 18:00	Apr-09-19 18:19	Apr-09-19 18:38	Apr-09-19 18:57
TPH by SW8015 Mod SUB: T104704400-18-16	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
		19.7 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0
		424 15.0	193 15.0	<15.0 15.0	20.3 15.0	<14.9 14.9	<15.0 15.0
		62.9 15.0	28.1 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0
		507 15.0	221 15.0	<15.0 15.0	20.3 15.0	<14.9 14.9	<15.0 15.0
Total GRO-DRO		444 15.0	193 15.0	<15.0 15.0	20.3 15.0	<14.9 14.9	<15.0 15.0

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Kalei Stout
Carlsbad Laboratory Director



Certificate of Analysis Summary 620419

LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon Federal 1H Flowline

Project Id: ---

Contact: Adrian Baker

Project Location: ---

Date Received in Lab: Tue Apr-09-19 07:40 am

Report Date: 10-APR-19

Project Manager: Kalei Stout

Analysis Requested		Lab Id:	620419-019		620419-020			
		Field Id:	FS03	FS04				
		Depth:	6- ft	6- ft				
		Matrix:	SOIL	SOIL				
		Sampled:	Apr-05-19 11:45	Apr-05-19 11:50				
BTEX by EPA 8021B SUB: T104704400-18-16		Extracted:	Apr-09-19 09:00	Apr-09-19 09:00				
		Analyzed:	Apr-09-19 22:03	Apr-09-19 22:22				
	Benzene	Units/RL:	mg/kg RL <0.00202 0.00202	mg/kg RL <0.00199 0.00199				
	Toluene		<0.00202 0.00202	<0.00199 0.00199				
	Ethylbenzene		<0.00202 0.00202	<0.00199 0.00199				
	m,p-Xylenes		<0.00403 0.00403	<0.00398 0.00398				
Inorganic Anions by EPA 300 SUB: T104704400-18-16	o-Xylene		<0.00202 0.00202	<0.00199 0.00199				
	Total Xylenes		<0.00202 0.00202	<0.00199 0.00199				
	Total BTEX		<0.00202 0.00202	<0.00199 0.00199				
		Extracted:	Apr-09-19 16:15	Apr-09-19 16:15				
TPH by SW8015 Mod SUB: T104704400-18-16		Analyzed:	Apr-10-19 12:30	Apr-10-19 12:37				
	Chloride	Units/RL:	mg/kg RL 877 4.98	mg/kg RL 875 4.98				
		Extracted:	Apr-09-19 10:00	Apr-09-19 10:00				
		Analyzed:	Apr-09-19 19:16	Apr-09-19 19:35				
Gasoline Range Hydrocarbons (GRO)		Units/RL:	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0				
	Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0				
	Motor Oil Range Hydrocarbons (MIRO)		<15.0 15.0	<15.0 15.0				
	Total TPH		<15.0 15.0	<15.0 15.0				
Total GRO-DRO			<15.0 15.0	<15.0 15.0				

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Kalei Stout
Carlsbad Laboratory Director



Certificate of Analytical Results 620419

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 1H Flowline

Sample Id: **BH01**
Lab Sample Id: 620419-001

Matrix: Soil
Date Collected: 04.05.19 11.00

Date Received: 04.09.19 07.40
Sample Depth: 0.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3085161

Date Prep: 04.09.19 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	35.0	5.04	mg/kg	04.10.19 07.45		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085149

Date Prep: 04.09.19 10.00

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	04.09.19 12.20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.09.19 12.20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.09.19 12.20	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.09.19 12.20	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.09.19 12.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	04.09.19 12.20	
o-Terphenyl	84-15-1	93	%	70-135	04.09.19 12.20	



Certificate of Analytical Results 620419

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 1H Flowline

Sample Id: **BH01**
Lab Sample Id: 620419-001

Matrix: Soil
Date Collected: 04.05.19 11.00

Date Received: 04.09.19 07.40
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3085167

Prep Method: SW5030B

% Moisture:

Date Prep: 04.09.19 09.00

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	04.09.19 15.26	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.09.19 15.26	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.09.19 15.26	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.09.19 15.26	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.09.19 15.26	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.09.19 15.26	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.09.19 15.26	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	123	%	70-130	04.09.19 15.26		
1,4-Difluorobenzene	540-36-3	103	%	70-130	04.09.19 15.26		



Certificate of Analytical Results 620419

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 1H Flowline

Sample Id: **BH01A**
Lab Sample Id: 620419-002

Matrix: Soil
Date Collected: 04.05.19 11.05

Date Received: 04.09.19 07.40
Sample Depth: 4.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3085161

Date Prep: 04.09.19 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	215	4.98	mg/kg	04.10.19 08.05		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085149

Date Prep: 04.09.19 10.00

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	04.09.19 13.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.09.19 13.15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.09.19 13.15	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.09.19 13.15	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.09.19 13.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	04.09.19 13.15	
o-Terphenyl	84-15-1	95	%	70-135	04.09.19 13.15	



Certificate of Analytical Results 620419

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 1H Flowline

Sample Id: **BH01A**
Lab Sample Id: 620419-002

Matrix: Soil
Date Collected: 04.05.19 11.05

Date Received: 04.09.19 07.40
Sample Depth: 4.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3085167

Prep Method: SW5030B

% Moisture:

Date Prep: 04.09.19 09.00

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	04.09.19 15.45	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	04.09.19 15.45	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	04.09.19 15.45	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	04.09.19 15.45	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	04.09.19 15.45	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	04.09.19 15.45	U	1
Total BTEX		<0.00202	0.00202	mg/kg	04.09.19 15.45	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	118	%	70-130	04.09.19 15.45		
1,4-Difluorobenzene	540-36-3	97	%	70-130	04.09.19 15.45		



Certificate of Analytical Results 620419

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 1H Flowline

Sample Id: **BH02** Matrix: Soil Date Received: 04.09.19 07.40
Lab Sample Id: 620419-003 Date Collected: 04.05.19 11.10 Sample Depth: 0.5 ft
Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
Tech: CHE % Moisture:
Analyst: CHE Date Prep: 04.09.19 16.15 Basis: Wet Weight
Seq Number: 3085161 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	299	4.95	mg/kg	04.10.19 08.12		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: ARM % Moisture:
Analyst: ARM Date Prep: 04.09.19 10.00 Basis: Wet Weight
Seq Number: 3085149 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.09.19 13.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	39.9	15.0	mg/kg	04.09.19 13.34		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.09.19 13.34	U	1
Total TPH	PHC635	39.9	15.0	mg/kg	04.09.19 13.34		1
Total GRO-DRO	PHC628	39.9	15.0	mg/kg	04.09.19 13.34		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	04.09.19 13.34	
o-Terphenyl	84-15-1	98	%	70-135	04.09.19 13.34	



Certificate of Analytical Results 620419

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 1H Flowline

Sample Id: **BH02**
Lab Sample Id: 620419-003

Matrix: Soil
Date Collected: 04.05.19 11.10

Date Received: 04.09.19 07.40
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3085167

Prep Method: SW5030B

% Moisture:

Date Prep: 04.09.19 09.00

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	04.09.19 16.04	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.09.19 16.04	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.09.19 16.04	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.09.19 16.04	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.09.19 16.04	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.09.19 16.04	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.09.19 16.04	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	106	%	70-130	04.09.19 16.04		
4-Bromofluorobenzene	460-00-4	121	%	70-130	04.09.19 16.04		



Certificate of Analytical Results 620419

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 1H Flowline

Sample Id: **BH02A**
Lab Sample Id: 620419-004

Matrix: Soil
Date Collected: 04.05.19 11.15

Date Received: 04.09.19 07.40
Sample Depth: 4.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3085161

Date Prep: 04.09.19 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	120	5.02	mg/kg	04.10.19 08.19		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085149

Date Prep: 04.09.19 10.00

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	<14.9	14.9	mg/kg	04.09.19 13.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	19.2	14.9	mg/kg	04.09.19 13.53		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	04.09.19 13.53	U	1
Total TPH	PHC635	19.2	14.9	mg/kg	04.09.19 13.53		1
Total GRO-DRO	PHC628	19.2	14.9	mg/kg	04.09.19 13.53		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	04.09.19 13.53	
o-Terphenyl	84-15-1	94	%	70-135	04.09.19 13.53	



Certificate of Analytical Results 620419

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 1H Flowline

Sample Id: **BH02A**
Lab Sample Id: 620419-004

Matrix: Soil
Date Collected: 04.05.19 11.15

Date Received: 04.09.19 07.40
Sample Depth: 4.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3085167

Prep Method: SW5030B

% Moisture:

Date Prep: 04.09.19 09.00

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	04.09.19 16.23	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.09.19 16.23	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.09.19 16.23	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.09.19 16.23	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.09.19 16.23	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.09.19 16.23	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.09.19 16.23	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	96	%	70-130	04.09.19 16.23		
4-Bromofluorobenzene	460-00-4	130	%	70-130	04.09.19 16.23		



Certificate of Analytical Results 620419

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 1H Flowline

Sample Id: **BH03**
Lab Sample Id: 620419-005

Matrix: Soil
Date Collected: 04.05.19 11.20

Date Received: 04.09.19 07.40
Sample Depth: 0.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3085161

Date Prep: 04.09.19 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	12.4	5.00	mg/kg	04.10.19 08.25		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085149

Date Prep: 04.09.19 10.00

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	04.09.19 14.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.09.19 14.12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.09.19 14.12	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.09.19 14.12	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.09.19 14.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	04.09.19 14.12	
o-Terphenyl	84-15-1	94	%	70-135	04.09.19 14.12	



Certificate of Analytical Results 620419

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 1H Flowline

Sample Id: **BH03**
Lab Sample Id: 620419-005

Matrix: Soil
Date Collected: 04.05.19 11.20

Date Received: 04.09.19 07.40
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3085167

Prep Method: SW5030B

% Moisture:

Date Prep: 04.09.19 09.00

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.09.19 16.42	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.09.19 16.42	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.09.19 16.42	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.09.19 16.42	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.09.19 16.42	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.09.19 16.42	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.09.19 16.42	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	96	%	70-130	04.09.19 16.42		
4-Bromofluorobenzene	460-00-4	118	%	70-130	04.09.19 16.42		



Certificate of Analytical Results 620419

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 1H Flowline

Sample Id: **BH03A**
Lab Sample Id: 620419-006

Matrix: Soil
Date Collected: 04.05.19 11.25

Date Received: 04.09.19 07.40
Sample Depth: 4.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3085161

Date Prep: 04.09.19 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	106	5.04	mg/kg	04.10.19 08.46		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085149

Date Prep: 04.09.19 10.00

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	04.09.19 14.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.09.19 14.31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.09.19 14.31	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.09.19 14.31	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.09.19 14.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	04.09.19 14.31	
o-Terphenyl	84-15-1	92	%	70-135	04.09.19 14.31	



Certificate of Analytical Results 620419

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 1H Flowline

Sample Id: **BH03A**
Lab Sample Id: 620419-006

Matrix: Soil
Date Collected: 04.05.19 11.25

Date Received: 04.09.19 07.40
Sample Depth: 4.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3085167

Prep Method: SW5030B

% Moisture:

Date Prep: 04.09.19 09.00

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	04.09.19 17.01	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.09.19 17.01	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.09.19 17.01	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	04.09.19 17.01	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.09.19 17.01	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.09.19 17.01	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.09.19 17.01	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	140	%	70-130	04.09.19 17.01	**	
1,4-Difluorobenzene	540-36-3	102	%	70-130	04.09.19 17.01		



Certificate of Analytical Results 620419

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 1H Flowline

Sample Id: **BH05**
Lab Sample Id: 620419-007

Matrix: Soil
Date Collected: 04.05.19 12.00

Date Received: 04.09.19 07.40
Sample Depth: 0.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3085161

Date Prep: 04.09.19 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	121	4.97	mg/kg	04.10.19 08.53		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085149

Date Prep: 04.09.19 10.00

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	04.09.19 14.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.09.19 14.50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.09.19 14.50	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.09.19 14.50	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.09.19 14.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	04.09.19 14.50	
o-Terphenyl	84-15-1	92	%	70-135	04.09.19 14.50	



Certificate of Analytical Results 620419

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 1H Flowline

Sample Id: **BH05**
Lab Sample Id: 620419-007

Matrix: Soil
Date Collected: 04.05.19 12.00

Date Received: 04.09.19 07.40
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3085167

Prep Method: SW5030B

% Moisture:

Date Prep: 04.09.19 09.00

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	04.09.19 17.20	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	04.09.19 17.20	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	04.09.19 17.20	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	04.09.19 17.20	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	04.09.19 17.20	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	04.09.19 17.20	U	1
Total BTEX		<0.00202	0.00202	mg/kg	04.09.19 17.20	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	127	%	70-130	04.09.19 17.20		
1,4-Difluorobenzene	540-36-3	96	%	70-130	04.09.19 17.20		



Certificate of Analytical Results 620419

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 1H Flowline

Sample Id: **BH05A**
Lab Sample Id: 620419-008

Matrix: Soil
Date Collected: 04.05.19 12.05

Date Received: 04.09.19 07.40
Sample Depth: 4.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3085161

Date Prep: 04.09.19 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	100	4.99	mg/kg	04.10.19 09.46		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085149

Date Prep: 04.09.19 10.00

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	04.09.19 15.08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.09.19 15.08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.09.19 15.08	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.09.19 15.08	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.09.19 15.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	04.09.19 15.08	
o-Terphenyl	84-15-1	89	%	70-135	04.09.19 15.08	



Certificate of Analytical Results 620419

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 1H Flowline

Sample Id: **BH05A**
Lab Sample Id: 620419-008

Matrix: Soil
Date Collected: 04.05.19 12.05

Date Received: 04.09.19 07.40
Sample Depth: 4.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3085167

Prep Method: SW5030B

% Moisture:

Date Prep: 04.09.19 09.00

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	04.09.19 17.39	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.09.19 17.39	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.09.19 17.39	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	04.09.19 17.39	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.09.19 17.39	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.09.19 17.39	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.09.19 17.39	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	129	%	70-130	04.09.19 17.39		
1,4-Difluorobenzene	540-36-3	96	%	70-130	04.09.19 17.39		



Certificate of Analytical Results 620419

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 1H Flowline

Sample Id: **BH04**
Lab Sample Id: 620419-009

Matrix: Soil
Date Collected: 04.05.19 10.10

Date Received: 04.09.19 07.40
Sample Depth: 0.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3085161

Date Prep: 04.09.19 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	26.0	4.97	mg/kg	04.10.19 09.53		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085149

Date Prep: 04.09.19 10.00

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	04.09.19 15.28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.09.19 15.28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.09.19 15.28	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.09.19 15.28	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.09.19 15.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	04.09.19 15.28	
o-Terphenyl	84-15-1	90	%	70-135	04.09.19 15.28	



Certificate of Analytical Results 620419

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 1H Flowline

Sample Id: **BH04**
Lab Sample Id: 620419-009

Matrix: Soil
Date Collected: 04.05.19 10.10

Date Received: 04.09.19 07.40
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3085167

Prep Method: SW5030B

% Moisture:

Date Prep: 04.09.19 09.00

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.09.19 17.58	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.09.19 17.58	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.09.19 17.58	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.09.19 17.58	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.09.19 17.58	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.09.19 17.58	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.09.19 17.58	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	127	%	70-130	04.09.19 17.58		
1,4-Difluorobenzene	540-36-3	104	%	70-130	04.09.19 17.58		



Certificate of Analytical Results 620419

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 1H Flowline

Sample Id: **BH04A**
Lab Sample Id: 620419-010

Matrix: Soil
Date Collected: 04.05.19 10.15

Date Received: 04.09.19 07.40
Sample Depth: 4.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3085161

Date Prep: 04.09.19 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	40.1	4.95	mg/kg	04.10.19 10.07		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085149

Date Prep: 04.09.19 10.00

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	04.09.19 15.47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.09.19 15.47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.09.19 15.47	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.09.19 15.47	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.09.19 15.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	04.09.19 15.47	
o-Terphenyl	84-15-1	100	%	70-135	04.09.19 15.47	



Certificate of Analytical Results 620419

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 1H Flowline

Sample Id: **BH04A**
Lab Sample Id: 620419-010

Matrix: Soil
Date Collected: 04.05.19 10.15

Date Received: 04.09.19 07.40
Sample Depth: 4.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3085167

Prep Method: SW5030B

% Moisture:

Date Prep: 04.09.19 09.00

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	04.09.19 18.17	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.09.19 18.17	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.09.19 18.17	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.09.19 18.17	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.09.19 18.17	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.09.19 18.17	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.09.19 18.17	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	129	%	70-130	04.09.19 18.17		
1,4-Difluorobenzene	540-36-3	104	%	70-130	04.09.19 18.17		



Certificate of Analytical Results 620419

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 1H Flowline

Sample Id: **SW01**
Lab Sample Id: 620419-011

Matrix: Soil
Date Collected: 04.05.19 13.10

Date Received: 04.09.19 07.40
Sample Depth: 0 - 6 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3085161

Date Prep: 04.09.19 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	703	5.01	mg/kg	04.10.19 10.00		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085149

Date Prep: 04.09.19 10.00

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	<14.9	14.9	mg/kg	04.09.19 16.44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	04.09.19 16.44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	04.09.19 16.44	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	04.09.19 16.44	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	04.09.19 16.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	04.09.19 16.44	
o-Terphenyl	84-15-1	97	%	70-135	04.09.19 16.44	



Certificate of Analytical Results 620419

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 1H Flowline

Sample Id: **SW01**
Lab Sample Id: 620419-011

Matrix: Soil
Date Collected: 04.05.19 13.10

Date Received: 04.09.19 07.40
Sample Depth: 0 - 6 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3085167

Prep Method: SW5030B

% Moisture:

Date Prep: 04.09.19 09.00

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	04.09.19 19.31	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	04.09.19 19.31	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	04.09.19 19.31	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	04.09.19 19.31	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	04.09.19 19.31	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	04.09.19 19.31	U	1
Total BTEX		<0.00202	0.00202	mg/kg	04.09.19 19.31	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	130	%	70-130	04.09.19 19.31		
1,4-Difluorobenzene	540-36-3	99	%	70-130	04.09.19 19.31		



Certificate of Analytical Results 620419

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 1H Flowline

Sample Id: **SW02**
Lab Sample Id: 620419-012

Matrix: Soil
Date Collected: 04.05.19 13.15

Date Received: 04.09.19 07.40
Sample Depth: 0 - 6 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3085161

Date Prep: 04.09.19 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	447	4.99	mg/kg	04.10.19 10.27		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085149

Date Prep: 04.09.19 10.00

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	04.09.19 17.03	U	1
Diesel Range Organics (DRO)	C10C28DRO	18.3	15.0	mg/kg	04.09.19 17.03		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.09.19 17.03	U	1
Total TPH	PHC635	18.3	15.0	mg/kg	04.09.19 17.03		1
Total GRO-DRO	PHC628	18.3	15.0	mg/kg	04.09.19 17.03		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	04.09.19 17.03	
o-Terphenyl	84-15-1	89	%	70-135	04.09.19 17.03	



Certificate of Analytical Results 620419

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 1H Flowline

Sample Id: **SW02**
Lab Sample Id: 620419-012

Matrix: Soil
Date Collected: 04.05.19 13.15

Date Received: 04.09.19 07.40
Sample Depth: 0 - 6 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3085167

Prep Method: SW5030B

% Moisture:

Date Prep: 04.09.19 09.00

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	04.09.19 19.50	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.09.19 19.50	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.09.19 19.50	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.09.19 19.50	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.09.19 19.50	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.09.19 19.50	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.09.19 19.50	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	134	%	70-130	04.09.19 19.50	**	
1,4-Difluorobenzene	540-36-3	99	%	70-130	04.09.19 19.50		



Certificate of Analytical Results 620419

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 1H Flowline

Sample Id: **SW03**
Lab Sample Id: 620419-013

Matrix: Soil
Date Collected: 04.05.19 13.20

Date Received: 04.09.19 07.40
Sample Depth: 0 - 6 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3085161

Date Prep: 04.09.19 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	988	25.2	mg/kg	04.10.19 10.34		5

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085149

Date Prep: 04.09.19 10.00

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	19.7	15.0	mg/kg	04.09.19 17.22		1
Diesel Range Organics (DRO)	C10C28DRO	424	15.0	mg/kg	04.09.19 17.22		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	62.9	15.0	mg/kg	04.09.19 17.22		1
Total TPH	PHC635	507	15.0	mg/kg	04.09.19 17.22		1
Total GRO-DRO	PHC628	444	15.0	mg/kg	04.09.19 17.22		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	04.09.19 17.22	
o-Terphenyl	84-15-1	110	%	70-135	04.09.19 17.22	



Certificate of Analytical Results 620419

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 1H Flowline

Sample Id: **SW03**
Lab Sample Id: 620419-013

Matrix: Soil
Date Collected: 04.05.19 13.20

Date Received: 04.09.19 07.40
Sample Depth: 0 - 6 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3085167

Prep Method: SW5030B

% Moisture:

Date Prep: 04.09.19 09.00

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	04.09.19 20.09	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.09.19 20.09	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.09.19 20.09	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	04.09.19 20.09	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.09.19 20.09	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.09.19 20.09	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.09.19 20.09	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	119	%	70-130	04.09.19 20.09		
1,4-Difluorobenzene	540-36-3	104	%	70-130	04.09.19 20.09		



Certificate of Analytical Results 620419

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 1H Flowline

Sample Id: **SW04**
Lab Sample Id: 620419-014

Matrix: Soil
Date Collected: 04.05.19 13.25

Date Received: 04.09.19 07.40
Sample Depth: 0 - 6 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3085161

Date Prep: 04.09.19 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	804	24.9	mg/kg	04.10.19 11.08		5

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085149

Date Prep: 04.09.19 10.00

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	04.09.19 17.42	U	1
Diesel Range Organics (DRO)	C10C28DRO	193	15.0	mg/kg	04.09.19 17.42		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	28.1	15.0	mg/kg	04.09.19 17.42		1
Total TPH	PHC635	221	15.0	mg/kg	04.09.19 17.42		1
Total GRO-DRO	PHC628	193	15.0	mg/kg	04.09.19 17.42		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	04.09.19 17.42	
o-Terphenyl	84-15-1	99	%	70-135	04.09.19 17.42	



Certificate of Analytical Results 620419

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 1H Flowline

Sample Id: **SW04**
 Lab Sample Id: 620419-014

Matrix: Soil
 Date Collected: 04.05.19 13.25

Date Received: 04.09.19 07.40
 Sample Depth: 0 - 6 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3085167

Prep Method: SW5030B

% Moisture:

Date Prep: 04.09.19 09.00

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	04.09.19 20.28	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	04.09.19 20.28	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	04.09.19 20.28	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	04.09.19 20.28	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	04.09.19 20.28	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	04.09.19 20.28	U	1
Total BTEX		<0.00198	0.00198	mg/kg	04.09.19 20.28	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	97	%	70-130	04.09.19 20.28		
4-Bromofluorobenzene	460-00-4	133	%	70-130	04.09.19 20.28	**	



Certificate of Analytical Results 620419

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 1H Flowline

Sample Id: **SW05**
Lab Sample Id: 620419-015

Matrix: Soil
Date Collected: 04.05.19 13.35

Date Received: 04.09.19 07.40
Sample Depth: 0 - 6 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3085161

Date Prep: 04.09.19 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	537	4.95	mg/kg	04.10.19 11.15		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085149

Date Prep: 04.09.19 10.00

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	04.09.19 18.00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.09.19 18.00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.09.19 18.00	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.09.19 18.00	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.09.19 18.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	04.09.19 18.00	
o-Terphenyl	84-15-1	100	%	70-135	04.09.19 18.00	



Certificate of Analytical Results 620419

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 1H Flowline

Sample Id: **SW05**
 Lab Sample Id: 620419-015

Matrix: Soil
 Date Collected: 04.05.19 13.35

Date Received: 04.09.19 07.40
 Sample Depth: 0 - 6 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3085167

Prep Method: SW5030B

% Moisture:

Date Prep: 04.09.19 09.00

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	04.09.19 20.47	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.09.19 20.47	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.09.19 20.47	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	04.09.19 20.47	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.09.19 20.47	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.09.19 20.47	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.09.19 20.47	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	100	%	70-130	04.09.19 20.47		
4-Bromofluorobenzene	460-00-4	134	%	70-130	04.09.19 20.47	**	



Certificate of Analytical Results 620419

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 1H Flowline

Sample Id: **SW06**
Lab Sample Id: 620419-016

Matrix: Soil
Date Collected: 04.05.19 13.40

Date Received: 04.09.19 07.40
Sample Depth: 0 - 6 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3085161

Date Prep: 04.09.19 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	315	5.04	mg/kg	04.10.19 11.56		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085149

Date Prep: 04.09.19 10.00

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	04.09.19 18.19	U	1
Diesel Range Organics (DRO)	C10C28DRO	20.3	15.0	mg/kg	04.09.19 18.19		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.09.19 18.19	U	1
Total TPH	PHC635	20.3	15.0	mg/kg	04.09.19 18.19		1
Total GRO-DRO	PHC628	20.3	15.0	mg/kg	04.09.19 18.19		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	04.09.19 18.19	
o-Terphenyl	84-15-1	93	%	70-135	04.09.19 18.19	



Certificate of Analytical Results 620419

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 1H Flowline

Sample Id: **SW06**
Lab Sample Id: 620419-016

Matrix: Soil
Date Collected: 04.05.19 13.40

Date Received: 04.09.19 07.40
Sample Depth: 0 - 6 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3085167

Prep Method: SW5030B

% Moisture:

Date Prep: 04.09.19 09.00

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	04.09.19 21.06	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.09.19 21.06	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.09.19 21.06	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	04.09.19 21.06	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.09.19 21.06	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.09.19 21.06	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.09.19 21.06	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	106	%	70-130	04.09.19 21.06		
4-Bromofluorobenzene	460-00-4	115	%	70-130	04.09.19 21.06		



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LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 1H Flowline

Sample Id: **FS01**
Lab Sample Id: 620419-017

Matrix: Soil
Date Collected: 04.05.19 11.35

Date Received: 04.09.19 07.40
Sample Depth: 6 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3085161

Date Prep: 04.09.19 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	676	5.04	mg/kg	04.10.19 12.16		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085149

Date Prep: 04.09.19 10.00

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	<14.9	14.9	mg/kg	04.09.19 18.38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	04.09.19 18.38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	04.09.19 18.38	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	04.09.19 18.38	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	04.09.19 18.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	04.09.19 18.38	
o-Terphenyl	84-15-1	92	%	70-135	04.09.19 18.38	



Certificate of Analytical Results 620419

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 1H Flowline

Sample Id: **FS01**
Lab Sample Id: 620419-017

Matrix: Soil
Date Collected: 04.05.19 11.35

Date Received: 04.09.19 07.40
Sample Depth: 6 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3085167

Prep Method: SW5030B

% Moisture:

Date Prep: 04.09.19 09.00

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.09.19 21.25	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.09.19 21.25	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.09.19 21.25	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.09.19 21.25	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.09.19 21.25	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.09.19 21.25	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.09.19 21.25	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	133	%	70-130	04.09.19 21.25	**	
1,4-Difluorobenzene	540-36-3	102	%	70-130	04.09.19 21.25		



Certificate of Analytical Results 620419

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 1H Flowline

Sample Id: **FS02**
Lab Sample Id: 620419-018

Matrix: Soil
Date Collected: 04.05.19 11.40

Date Received: 04.09.19 07.40
Sample Depth: 6 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3085161

Date Prep: 04.09.19 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	714	25.2	mg/kg	04.10.19 12.23		5

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085149

Date Prep: 04.09.19 10.00

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	04.09.19 18.57	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.09.19 18.57	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.09.19 18.57	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.09.19 18.57	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.09.19 18.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	04.09.19 18.57	
o-Terphenyl	84-15-1	92	%	70-135	04.09.19 18.57	



Certificate of Analytical Results 620419

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 1H Flowline

Sample Id: **FS02**
Lab Sample Id: 620419-018

Matrix: Soil
Date Collected: 04.05.19 11.40

Date Received: 04.09.19 07.40
Sample Depth: 6 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3085167

Prep Method: SW5030B

% Moisture:

Date Prep: 04.09.19 09.00

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	04.09.19 21.44	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.09.19 21.44	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.09.19 21.44	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.09.19 21.44	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.09.19 21.44	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.09.19 21.44	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.09.19 21.44	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	100	%	70-130	04.09.19 21.44		
4-Bromofluorobenzene	460-00-4	120	%	70-130	04.09.19 21.44		



Certificate of Analytical Results 620419

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 1H Flowline

Sample Id: **FS03**
Lab Sample Id: 620419-019

Matrix: Soil
Date Collected: 04.05.19 11.45

Date Received: 04.09.19 07.40
Sample Depth: 6 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3085161

Date Prep: 04.09.19 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	877	4.98	mg/kg	04.10.19 12.30		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085149

Date Prep: 04.09.19 10.00

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	04.09.19 19.16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.09.19 19.16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.09.19 19.16	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.09.19 19.16	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.09.19 19.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	04.09.19 19.16	
o-Terphenyl	84-15-1	91	%	70-135	04.09.19 19.16	



Certificate of Analytical Results 620419

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 1H Flowline

Sample Id: **FS03**
Lab Sample Id: 620419-019

Matrix: Soil
Date Collected: 04.05.19 11.45

Date Received: 04.09.19 07.40
Sample Depth: 6 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3085167

Prep Method: SW5030B

% Moisture:

Date Prep: 04.09.19 09.00

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	04.09.19 22.03	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	04.09.19 22.03	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	04.09.19 22.03	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	04.09.19 22.03	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	04.09.19 22.03	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	04.09.19 22.03	U	1
Total BTEX		<0.00202	0.00202	mg/kg	04.09.19 22.03	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	106	%	70-130	04.09.19 22.03		
4-Bromofluorobenzene	460-00-4	113	%	70-130	04.09.19 22.03		



Certificate of Analytical Results 620419

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 1H Flowline

Sample Id: **FS04**
Lab Sample Id: 620419-020

Matrix: Soil
Date Collected: 04.05.19 11.50

Date Received: 04.09.19 07.40
Sample Depth: 6 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3085161

Date Prep: 04.09.19 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	875	4.98	mg/kg	04.10.19 12.37		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085149

Date Prep: 04.09.19 10.00

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	04.09.19 19.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.09.19 19.35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.09.19 19.35	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.09.19 19.35	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.09.19 19.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	04.09.19 19.35	
o-Terphenyl	84-15-1	91	%	70-135	04.09.19 19.35	



Certificate of Analytical Results 620419

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 1H Flowline

Sample Id: **FS04**
Lab Sample Id: 620419-020

Matrix: Soil
Date Collected: 04.05.19 11.50

Date Received: 04.09.19 07.40
Sample Depth: 6 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3085167

Prep Method: SW5030B

% Moisture:

Date Prep: 04.09.19 09.00

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	04.09.19 22.22	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.09.19 22.22	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.09.19 22.22	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.09.19 22.22	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.09.19 22.22	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.09.19 22.22	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.09.19 22.22	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	107	%	70-130	04.09.19 22.22		
4-Bromofluorobenzene	460-00-4	113	%	70-130	04.09.19 22.22		

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 620419

LT Environmental, Inc. Corral Canyon Federal 1H Flowline

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3085161

MB Sample Id: 7675405-1-BLK

Matrix: Solid

LCS Sample Id: 7675405-1-BKS

Prep Method: E300P

Date Prep: 04.09.19

LCSD Sample Id: 7675405-1-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	249	100	249	100	90-110	0	20	mg/kg	04.10.19 07:31	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3085161

Parent Sample Id: 620419-001

Matrix: Soil

MS Sample Id: 620419-001 S

Prep Method: E300P

Date Prep: 04.09.19

MSD Sample Id: 620419-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	35.0	252	224	75	289	101	90-110	25	20	mg/kg	04.10.19 07:51	XF

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3085161

Parent Sample Id: 620419-010

Matrix: Soil

MS Sample Id: 620419-010 S

Prep Method: E300P

Date Prep: 04.09.19

MSD Sample Id: 620419-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	40.1	248	203	66	222	73	90-110	9	20	mg/kg	04.10.19 10:54	X

Analytical Method: TPH by SW8015 Mod

Seq Number: 3085149

MB Sample Id: 7675423-1-BLK

Matrix: Solid

LCS Sample Id: 7675423-1-BKS

Prep Method: TX1005P

Date Prep: 04.09.19

LCSD Sample Id: 7675423-1-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	1070	107	1010	101	70-135	6	20	mg/kg	04.09.19 11:25	
Diesel Range Organics (DRO)	<8.13	1000	1090	109	1030	103	70-135	6	20	mg/kg	04.09.19 11:25	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	113		125		121		70-135	%	04.09.19 11:25
o-Terphenyl	114		117		105		70-135	%	04.09.19 11:25

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 620419

LT Environmental, Inc. Corral Canyon Federal 1H Flowline

Analytical Method: TPH by SW8015 Mod

Seq Number: 3085149

Parent Sample Id: 620419-001

Matrix: Soil

MS Sample Id: 620419-001 S

Prep Method: TX1005P

Date Prep: 04.09.19

MSD Sample Id: 620419-001 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)	8.76	999	992	98	1020	101	70-135	3	20	mg/kg	04.09.19 12:38	
Diesel Range Organics (DRO)	8.44	999	1010	100	1030	102	70-135	2	20	mg/kg	04.09.19 12:38	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	119		112		70-135	%	04.09.19 12:38
o-Terphenyl	98		100		70-135	%	04.09.19 12:38

Analytical Method: BTEX by EPA 8021B

Seq Number: 3085167

MB Sample Id: 7675445-1-BLK

Matrix: Solid

LCS Sample Id: 7675445-1-BKS

Prep Method: SW5030B

Date Prep: 04.09.19

LCSD Sample Id: 7675445-1-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	0.0998	0.0785	79	0.0773	77	70-130	2	35	mg/kg	04.09.19 13:34	
Toluene	<0.00200	0.0998	0.0806	81	0.0791	79	70-130	2	35	mg/kg	04.09.19 13:34	
Ethylbenzene	<0.00200	0.0998	0.0817	82	0.0799	80	70-130	2	35	mg/kg	04.09.19 13:34	
m,p-Xylenes	<0.00399	0.200	0.165	83	0.160	80	70-130	3	35	mg/kg	04.09.19 13:34	
o-Xylene	<0.00200	0.0998	0.0839	84	0.0820	82	70-130	2	35	mg/kg	04.09.19 13:34	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		98		99		70-130	%	04.09.19 13:34
4-Bromofluorobenzene	100		100		99		70-130	%	04.09.19 13:34

Analytical Method: BTEX by EPA 8021B

Seq Number: 3085167

Parent Sample Id: 620419-001

Matrix: Soil

MS Sample Id: 620419-001 S

Prep Method: SW5030B

Date Prep: 04.09.19

MSD Sample Id: 620419-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00198	0.0992	0.0583	59	0.0612	61	70-130	5	35	mg/kg	04.09.19 14:12	X
Toluene	<0.000452	0.0992	0.0585	59	0.0607	61	70-130	4	35	mg/kg	04.09.19 14:12	X
Ethylbenzene	<0.000560	0.0992	0.0542	55	0.0564	56	70-130	4	35	mg/kg	04.09.19 14:12	X
m,p-Xylenes	0.00207	0.198	0.110	55	0.114	56	70-130	4	35	mg/kg	04.09.19 14:12	X
o-Xylene	0.000696	0.0992	0.0577	57	0.0598	59	70-130	4	35	mg/kg	04.09.19 14:12	X

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		101		70-130	%	04.09.19 14:12
4-Bromofluorobenzene	104		104		70-130	%	04.09.19 14:12

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:

10204119

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

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Page 1 of 2

Project Manager:	Adrian Baker	Bill to: (if different)	Kyle Linnell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTB Energy
Address:	3300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.704.5178	Email:	abaker@ltenv.com

Project Name:	Level Canyon Federal H Flowline	Turn Around	
Project Number:		Rush: ☐	
P.O. Number:	288-5201	Due Date:	Same day
Sampler's Name:	Anna Byers		

SAMPLE RECEIPT	Temp Blank:	Yes ☐ No ☒	Wet Ice:	Yes ☐ No ☒
Temperature (°C):	4.2	Thermometer ID		
Received Inact:	Yes ☒ No ☐	Correction Factor:	-0.2	
Cooler Custody Seals:	Yes ☒ No ☐	Total Containers:	20	
Sample Custody Seals:	Yes ☒ No ☐			

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)	ANALYSIS REQUEST	Work Order Notes
BHD1	S	4/8/19	1100	0.5'	1					
BHD1A	S		1105	4.5'	1					
BHD2	S		1110	0.5'	1					
BHD2A	S		1115	4.5'	1					
BHD3	S		1120	0.5'	1					
BHD3A	S		1125	4.5'	1					
BHD5	S		1200	0.5'	1					
BHD5A	S		1205	4.5'	1					
BHD4	S		1010	0.5'	1					
BHD4A	S		1015	4.5'	1					

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 A/ 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 \$8 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
Anna Byers	Carol J	4/8/19 08:12	Carol J	FEBCX	4/8/19 13:00
				Paul	4/9/19 07:40



Chain of Custody

Work Order No:

620419

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

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Page 2 of 2

Project Manager:	Adrian Baker	Bill to: (if different)	Kyle Linnell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XED Energy
Address:	3300 North A Street	Address:	3101 E - Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.704.5178	Email:	abaker@ltenv.com

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

Project Name:	Carlsbad Refinery 14 Flaring	Turn Around	
Project Number:		Routine ☐	
P.O. Number:	220-5301	Rush: same day	
Sampler's Name:	Anna Byers	Due Date:	
SAMPLE RECEIPT			
Temp Blank:	Yes ☒ No ☐	Wet Ice:	Yes ☐ No ☒
Temperature (°C):	4.2	Thermometer ID	T-NM-007
Received Inlet:	Yes ☒ No ☐	Correction Factor:	-0.2
Cooler Custody Seals:	Yes ☐ No ☒	Total Containers:	20
Sample Custody Seals:	Yes ☐ No ☒		
Sample Identification			
Matrix	Date Sampled	Time Sampled	Depth
SW01	5/15/19	1310	0-6'
SW02	5/15/19	1315	0-6'
SW03	5/15/19	1320	0-6'
SW04	5/15/19	1325	0-6'
SW05	5/15/19	1335	0-6'
SW06	5/15/19	1340	0-6'
ES01	5/15/19	1135	6'
ES02	5/15/19	1140	6'
ES03	5/15/19	1145	6'
ES04	5/15/19	1150	6'
ANALYSIS REQUEST			
Number of Containers			
TPH (EPA 8015)			
BTEX (EPA 8021)			
Chloride (EPA 300.0)			
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
Anna Byers	Carlsbad	4/8/19 0820	Carlsbad	Carlsbad	4/8/19 13:00
					4/9/19 0900

IOS Number 126188

Date/Time: 04/09/19 07:59

Created by: Brianna Teel

Please send report to: Kalei Stout

Lab# From: Carlsbad

Delivery Priority:

Address: 1089 N Canal Street

Lab# To: Midland

Air Bill No.:

E-Mail: kalei.stout@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
620419-001	S	BH01	04/05/19 11:00	SW8021B	BTEX by EPA 8021B	04/10/19	04/19/19	KLS	BR4FBZ BZ BZME EBZ X	
620419-001	S	BH01	04/05/19 11:00	SW8015MOD_NM	TPH by SW8015 Mod	04/10/19	04/19/19	KLS	GRO-DRO PHCC10C28 Pf	
620419-001	S	BH01	04/05/19 11:00	E300	Inorganic Anions by EPA 300	04/10/19	05/03/19	KLS	CL	
620419-002	S	BH01A	04/05/19 11:05	E300	Inorganic Anions by EPA 300	04/10/19	05/03/19	KLS	CL	
620419-002	S	BH01A	04/05/19 11:05	SW8015MOD_NM	TPH by SW8015 Mod	04/10/19	04/19/19	KLS	GRO-DRO PHCC10C28 Pf	
620419-002	S	BH01A	04/05/19 11:05	SW8021B	BTEX by EPA 8021B	04/10/19	04/19/19	KLS	BR4FBZ BZ BZME EBZ X	
620419-003	S	BH02	04/05/19 11:10	E300	Inorganic Anions by EPA 300	04/10/19	05/03/19	KLS	CL	
620419-003	S	BH02	04/05/19 11:10	SW8015MOD_NM	TPH by SW8015 Mod	04/10/19	04/19/19	KLS	GRO-DRO PHCC10C28 Pf	
620419-003	S	BH02	04/05/19 11:10	SW8021B	BTEX by EPA 8021B	04/10/19	04/19/19	KLS	BR4FBZ BZ BZME EBZ X	
620419-004	S	BH02A	04/05/19 11:15	E300	Inorganic Anions by EPA 300	04/10/19	05/03/19	KLS	CL	
620419-004	S	BH02A	04/05/19 11:15	SW8021B	BTEX by EPA 8021B	04/10/19	04/19/19	KLS	BR4FBZ BZ BZME EBZ X	
620419-004	S	BH02A	04/05/19 11:15	SW8015MOD_NM	TPH by SW8015 Mod	04/10/19	04/19/19	KLS	GRO-DRO PHCC10C28 Pf	
620419-005	S	BH03	04/05/19 11:20	SW8015MOD_NM	TPH by SW8015 Mod	04/10/19	04/19/19	KLS	GRO-DRO PHCC10C28 Pf	
620419-005	S	BH03	04/05/19 11:20	E300	Inorganic Anions by EPA 300	04/10/19	05/03/19	KLS	CL	
620419-005	S	BH03	04/05/19 11:20	SW8021B	BTEX by EPA 8021B	04/10/19	04/19/19	KLS	BR4FBZ BZ BZME EBZ X	
620419-006	S	BH03A	04/05/19 11:25	SW8021B	BTEX by EPA 8021B	04/10/19	04/19/19	KLS	BR4FBZ BZ BZME EBZ X	
620419-006	S	BH03A	04/05/19 11:25	E300	Inorganic Anions by EPA 300	04/10/19	05/03/19	KLS	CL	
620419-006	S	BH03A	04/05/19 11:25	SW8015MOD_NM	TPH by SW8015 Mod	04/10/19	04/19/19	KLS	GRO-DRO PHCC10C28 Pf	
620419-007	S	BH05	04/05/19 12:00	SW8021B	BTEX by EPA 8021B	04/10/19	04/19/19	KLS	BR4FBZ BZ BZME EBZ X	
620419-007	S	BH05	04/05/19 12:00	SW8015MOD_NM	TPH by SW8015 Mod	04/10/19	04/19/19	KLS	GRO-DRO PHCC10C28 Pf	
620419-007	S	BH05	04/05/19 12:00	E300	Inorganic Anions by EPA 300	04/10/19	05/03/19	KLS	CL	
620419-008	S	BH05A	04/05/19 12:05	SW8021B	BTEX by EPA 8021B	04/10/19	04/19/19	KLS	BR4FBZ BZ BZME EBZ X	
620419-008	S	BH05A	04/05/19 12:05	E300	Inorganic Anions by EPA 300	04/10/19	05/03/19	KLS	CL	
620419-008	S	BH05A	04/05/19 12:05	SW8015MOD_NM	TPH by SW8015 Mod	04/10/19	04/19/19	KLS	GRO-DRO PHCC10C28 Pf	
620419-009	S	BH04	04/05/19 10:10	SW8015MOD_NM	TPH by SW8015 Mod	04/10/19	04/19/19	KLS	GRO-DRO PHCC10C28 Pf	



Inter-Office Shipment

IOS Number **126188**

Date/Time: 04/09/19 07:59

Created by: Brianna Teel

Please send report to: Kalei Stout

Lab# From: **Carlsbad**

Delivery Priority:

Address: 1089 N Canal Street

Lab# To: **Midland**

Air Bill No.:

E-Mail: kalei.stout@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
620419-009	S	BH04	04/05/19 10:10	SW8021B	BTEX by EPA 8021B	04/10/19	04/19/19	KLS	BR4FBZ BZ BZME EBZ X	
620419-009	S	BH04	04/05/19 10:10	E300	Inorganic Anions by EPA 300	04/10/19	05/03/19	KLS	CL	
620419-010	S	BH04A	04/05/19 10:15	SW8015MOD_NM	TPH by SW8015 Mod	04/10/19	04/19/19	KLS	GRO-DRO PHCC10C28 Pf	
620419-010	S	BH04A	04/05/19 10:15	E300	Inorganic Anions by EPA 300	04/10/19	05/03/19	KLS	CL	
620419-010	S	BH04A	04/05/19 10:15	SW8021B	BTEX by EPA 8021B	04/10/19	04/19/19	KLS	BR4FBZ BZ BZME EBZ X	
620419-011	S	SW01	04/05/19 13:10	SW8015MOD_NM	TPH by SW8015 Mod	04/10/19	04/19/19	KLS	GRO-DRO PHCC10C28 Pf	
620419-011	S	SW01	04/05/19 13:10	SW8021B	BTEX by EPA 8021B	04/10/19	04/19/19	KLS	BR4FBZ BZ BZME EBZ X	
620419-011	S	SW01	04/05/19 13:10	E300	Inorganic Anions by EPA 300	04/10/19	05/03/19	KLS	CL	
620419-012	S	SW02	04/05/19 13:15	SW8021B	BTEX by EPA 8021B	04/10/19	04/19/19	KLS	BR4FBZ BZ BZME EBZ X	
620419-012	S	SW02	04/05/19 13:15	SW8015MOD_NM	TPH by SW8015 Mod	04/10/19	04/19/19	KLS	GRO-DRO PHCC10C28 Pf	
620419-012	S	SW02	04/05/19 13:15	E300	Inorganic Anions by EPA 300	04/10/19	05/03/19	KLS	CL	
620419-013	S	SW03	04/05/19 13:20	E300	Inorganic Anions by EPA 300	04/10/19	05/03/19	KLS	CL	
620419-013	S	SW03	04/05/19 13:20	SW8015MOD_NM	TPH by SW8015 Mod	04/10/19	04/19/19	KLS	GRO-DRO PHCC10C28 Pf	
620419-013	S	SW03	04/05/19 13:20	SW8021B	BTEX by EPA 8021B	04/10/19	04/19/19	KLS	BR4FBZ BZ BZME EBZ X	
620419-014	S	SW04	04/05/19 13:25	SW8015MOD_NM	TPH by SW8015 Mod	04/10/19	04/19/19	KLS	GRO-DRO PHCC10C28 Pf	
620419-014	S	SW04	04/05/19 13:25	E300	Inorganic Anions by EPA 300	04/10/19	05/03/19	KLS	CL	
620419-014	S	SW04	04/05/19 13:25	SW8021B	BTEX by EPA 8021B	04/10/19	04/19/19	KLS	BR4FBZ BZ BZME EBZ X	
620419-015	S	SW05	04/05/19 13:35	E300	Inorganic Anions by EPA 300	04/10/19	05/03/19	KLS	CL	
620419-015	S	SW05	04/05/19 13:35	SW8015MOD_NM	TPH by SW8015 Mod	04/10/19	04/19/19	KLS	GRO-DRO PHCC10C28 Pf	
620419-015	S	SW05	04/05/19 13:35	SW8021B	BTEX by EPA 8021B	04/10/19	04/19/19	KLS	BR4FBZ BZ BZME EBZ X	
620419-016	S	SW06	04/05/19 13:40	E300	Inorganic Anions by EPA 300	04/10/19	05/03/19	KLS	CL	
620419-016	S	SW06	04/05/19 13:40	SW8021B	BTEX by EPA 8021B	04/10/19	04/19/19	KLS	BR4FBZ BZ BZME EBZ X	
620419-016	S	SW06	04/05/19 13:40	SW8015MOD_NM	TPH by SW8015 Mod	04/10/19	04/19/19	KLS	GRO-DRO PHCC10C28 Pf	
620419-017	S	FS01	04/05/19 11:35	E300	Inorganic Anions by EPA 300	04/10/19	05/03/19	KLS	CL	
620419-017	S	FS01	04/05/19 11:35	SW8021B	BTEX by EPA 8021B	04/10/19	04/19/19	KLS	BR4FBZ BZ BZME EBZ X	

Inter Office Shipment or Sample Comments:



Inter-Office Shipment

IOS Number **126188**

Date/Time: 04/09/19 07:59

Created by: Brianna Teel

Please send report to: Kalei Stout

Lab# From: **Carlsbad**

Delivery Priority:

Address: 1089 N Canal Street

Lab# To: **Midland**

Air Bill No.:

E-Mail: kalei.stout@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
620419-017	S	FS01	04/05/19 11:35	SW8015MOD_NM	TPH by SW8015 Mod	04/10/19	04/19/19	KLS	GRO-DRO PHCC10C28 PI	
620419-018	S	FS02	04/05/19 11:40	SW8015MOD_NM	TPH by SW8015 Mod	04/10/19	04/19/19	KLS	GRO-DRO PHCC10C28 PI	
620419-018	S	FS02	04/05/19 11:40	E300	Inorganic Anions by EPA 300	04/10/19	05/03/19	KLS	CL	
620419-018	S	FS02	04/05/19 11:40	SW8021B	BTEX by EPA 8021B	04/10/19	04/19/19	KLS	BR4FBZ BZ BZME EBZ X	
620419-019	S	FS03	04/05/19 11:45	E300	Inorganic Anions by EPA 300	04/10/19	05/03/19	KLS	CL	
620419-019	S	FS03	04/05/19 11:45	SW8021B	BTEX by EPA 8021B	04/10/19	04/19/19	KLS	BR4FBZ BZ BZME EBZ X	
620419-019	S	FS03	04/05/19 11:45	SW8015MOD_NM	TPH by SW8015 Mod	04/10/19	04/19/19	KLS	GRO-DRO PHCC10C28 PI	
620419-020	S	FS04	04/05/19 11:50	SW8021B	BTEX by EPA 8021B	04/10/19	04/19/19	KLS	BR4FBZ BZ BZME EBZ X	
620419-020	S	FS04	04/05/19 11:50	SW8015MOD_NM	TPH by SW8015 Mod	04/10/19	04/19/19	KLS	GRO-DRO PHCC10C28 PI	
620419-020	S	FS04	04/05/19 11:50	E300	Inorganic Anions by EPA 300	04/10/19	05/03/19	KLS	CL	

Inter Office Shipment or Sample Comments:

Relinquished By:

Brianna Teel

Received By:

Brianna Teel

Date Relinquished:

04/09/2019

Date Received:

Cooler Temperature:



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

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

Work Order #: 620419

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	4.2
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	Yes Xenco Midland
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Brianna Teel

Brianna Teel

Date: 04/09/2019

Checklist reviewed by:

Kalei Stout

Kalei Stout

Date: 04/09/2019

Analytical Report 625373

for
LT Environmental, Inc.

Project Manager: Ashley Ager

Corral Canyon Fed #1H

2RP-5201

03-JUN-19

Collected By: Client



**1211 W. Florida Ave
Midland TX 79701**

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)



03-JUN-19

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

Reference: XENCO Report No(s): **625373**
Corral Canyon Fed #1H
Project Address: Delaware Basin

Ashley Ager:

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) 625373. 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. 625373 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 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH06	S	05-19-19 10:10	6	625373-001
BH06A	S	05-19-19 10:30	23	625373-002
BH06B	S	05-19-19 11:20	48	625373-003
BH06C	S	05-19-19 12:30	63	625373-004
BH06D	S	05-19-19 13:00	70	625373-005
BH07	S	05-19-19 13:45	1	625373-006
BH07A	S	05-19-19 13:50	3	625373-007
BH07B	S	05-19-19 14:40	20	625373-008
BH08	S	05-19-19 16:40	1	625373-009
BH08A	S	05-19-19 16:50	3	625373-010
BH08B	S	05-19-19 16:55	6	625373-011
BH08C	S	05-19-19 17:15	20	625373-012
BH08D	S	05-19-19 17:30	25	625373-013
BH09	S	05-19-19 15:00	1	625373-014
BH09A	S	05-19-19 15:05	3	625373-015
BH09B	S	05-19-19 15:10	6	625373-016
BH09C	S	05-19-19 15:20	15	625373-017
BH09D	S	05-19-19 15:35	19	625373-018
BH10	S	05-19-19 15:45	1	625373-019
BH10A	S	05-19-19 15:50	3	625373-020
BH10B	S	05-19-19 15:55	8	625373-021
BH10C	S	05-19-19 16:00	20	625373-022
BH10D	S	05-19-19 16:10	22	625373-023
BH10E	S	05-19-19 16:15	25	625373-024
BH11	S	05-20-19 09:35	1	625373-025
BH11A	S	05-20-19 09:45	3	625373-026
BH11B	S	05-20-19 10:00	20	625373-027
BH11C	S	05-20-19 10:20	30	625373-028
BH11D	S	05-20-19 10:30	37	625373-029



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Corral Canyon Fed #1H

Project ID: 2RP-5201
Work Order Number(s): 625373

Report Date: 03-JUN-19
Date Received: 05/23/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3090215 Chloride by EPA 300

Lab Sample ID 625373-025 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: 625373-016, -017, -018, -019, -020, -021, -022, -023, -024, -025, -026, -027, -028, -029.

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

Batch: LBA-3090876 BTEX by EPA 8021B

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

Batch: LBA-3090878 BTEX by EPA 8021B

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

Surrogate 4-Bromofluorobenzene recovered below QC limits. Matrix interferences is suspected.

Samples affected are: 625373-015, 625373-004.

Batch: LBA-3090879 BTEX by EPA 8021B

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

Surrogate 4-Bromofluorobenzene recovered below QC limits. Matrix interferences is suspected.

Samples affected are: 625373-025.

Lab Sample ID 625373-023 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Toluene recovered below QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 625373-023, -024, -025, -026, -027, -028, -029.

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



Certificate of Analysis Summary 625373

LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon Fed #1H



Project Id: 2RP-5201
Contact: Ashley Ager
Project Location: Delaware Basin

Date Received in Lab: Thu May-23-19 11:15 am
Report Date: 03-JUN-19
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	625373-001	625373-002	625373-003	625373-004	625373-005	625373-006
	Field Id:	BH06	BH06A	BH06B	BH06C	BH06D	BH07
	Depth:	6-	23-	48-	63-	70-	1-
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	May-19-19 10:10	May-19-19 10:30	May-19-19 11:20	May-19-19 12:30	May-19-19 13:00	May-19-19 13:45
BTEx by EPA 8021B	Extracted:	May-31-19 13:45	May-31-19 13:45	May-31-19 14:00	May-31-19 14:00	May-31-19 14:00	May-31-19 14:00
	Analyzed:	May-31-19 22:56	May-31-19 23:15	Jun-01-19 02:41	Jun-01-19 03:00	Jun-01-19 03:19	Jun-01-19 03:38
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200
		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200
		<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	Extracted:	May-24-19 14:50	May-24-19 14:50	May-24-19 14:50	May-24-19 14:50	May-24-19 14:50	May-24-19 14:50
	Analyzed:	May-24-19 21:03	May-24-19 21:08	May-24-19 21:13	May-25-19 18:34	May-25-19 18:39	May-24-19 21:28
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
		850 4.99	1550 24.8	830 5.04	1580 24.8	1610 25.1	166 5.03
		<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	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
TPH by SW8015 Mod	Extracted:	May-26-19 12:00	May-26-19 12:00	May-26-19 12:00	May-26-19 12:00	May-26-19 12:00	May-26-19 12:00
	Analyzed:	May-27-19 13:20	May-27-19 14:20	May-27-19 14:40	May-27-19 14:59	May-27-19 15:19	May-27-19 15:39
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
		<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	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
		<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
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
		<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
		<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	<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	<15.0 15.0	<15.0 15.0	<15.0 15.0
		<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 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	<14.9 14.9	<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

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 625373

LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon Fed #1H



Project Id: 2RP-5201
Contact: Ashley Ager
Project Location: Delaware Basin

Date Received in Lab: Thu May-23-19 11:15 am
Report Date: 03-JUN-19
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	625373-007	625373-008	625373-009	625373-010	625373-011	625373-012
	Field Id:	BH07A	BH07B	BH08	BH08A	BH08B	BH08C
	Depth:	3-	20-	1-	3-	6-	20-
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	May-19-19 13:50	May-19-19 14:40	May-19-19 16:40	May-19-19 16:50	May-19-19 16:55	May-19-19 17:15
BTEX by EPA 8021B	Extracted:	May-31-19 14:00	May-31-19 14:00	May-31-19 14:00	May-31-19 14:00	May-31-19 14:00	May-31-19 14:00
	Analyzed:	Jun-01-19 03:57	Jun-01-19 04:16	Jun-01-19 04:35	Jun-01-19 04:54	Jun-01-19 05:13	Jun-01-19 05:32
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
		<0.00201 0.00201	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202	<0.00198 0.00198
		<0.00201 0.00201	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202	<0.00198 0.00198
		<0.00201 0.00201	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202	<0.00198 0.00198
		<0.00402 0.00402	<0.00403 0.00403	<0.00400 0.00400	<0.00398 0.00398	<0.00404 0.00404	<0.00397 0.00397
Chloride by EPA 300	Extracted:	May-24-19 14:50	May-24-19 14:50	May-24-19 14:50	May-24-19 14:50	May-24-19 14:50	May-24-19 14:50
	Analyzed:	May-24-19 21:44	May-24-19 21:49	May-24-19 22:04	May-24-19 22:09	May-24-19 22:15	May-24-19 22:20
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
		874 5.02	1330 5.00	406 5.04	1260 5.02	455 4.99	1200 5.01
TPH by SW8015 Mod	Extracted:	May-26-19 12:00	May-26-19 12:00	May-26-19 12:00	May-26-19 12:00	May-26-19 12:00	May-26-19 12:00
	Analyzed:	May-27-19 15:59	May-27-19 16:19	May-27-19 16:38	May-27-19 16:58	May-27-19 17:37	May-27-19 17:57
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
		<15.0 15.0	<15.0 15.0	<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	<14.9 14.9	<15.0 15.0	<15.0 15.0
Total GRO-DRO		<15.0 15.0	<15.0 15.0	<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	<14.9 14.9	<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 625373

LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon Fed #1H



Project Id: 2RP-5201
Contact: Ashley Ager
Project Location: Delaware Basin

Date Received in Lab: Thu May-23-19 11:15 am
Report Date: 03-JUN-19
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	625373-013	625373-014	625373-015	625373-016	625373-017	625373-018
	Field Id:	BH08D	BH09	BH09A	BH09B	BH09C	BH09D
	Depth:	25-	1-	3-	6-	15-	19-
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	May-19-19 17:30	May-19-19 15:00	May-19-19 15:05	May-19-19 15:10	May-19-19 15:20	May-19-19 15:35
BTEX by EPA 8021B	Extracted:	May-31-19 14:00	May-31-19 14:00	May-31-19 14:00	May-31-19 14:00	May-31-19 14:00	May-31-19 14:00
	Analyzed:	Jun-01-19 06:46	Jun-01-19 07:05	Jun-01-19 07:25	Jun-01-19 07:44	Jun-01-19 08:03	Jun-01-19 08:22
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
		<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00202 0.00202	<0.00200 0.00200
		<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00202 0.00202	<0.00200 0.00200
		<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00202 0.00202	<0.00200 0.00200
		<0.00402 0.00402	<0.00401 0.00401	<0.00398 0.00398	<0.00398 0.00398	<0.00403 0.00403	<0.00399 0.00399
Chloride by EPA 300	Extracted:	May-24-19 14:50	May-24-19 14:50	May-24-19 14:50	May-24-19 12:46	May-24-19 12:46	May-24-19 12:46
	Analyzed:	May-24-19 22:25	May-24-19 22:30	May-24-19 22:35	May-24-19 19:40	May-24-19 20:02	May-24-19 20:10
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
		1180 4.97	297 5.03	59.0 5.04	405 4.99	1290 5.04	1760 25.0
		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
TPH by SW8015 Mod	Extracted:	May-26-19 12:00	May-26-19 12:00	May-26-19 12:00	May-26-19 12:00	May-26-19 12:00	May-26-19 12:00
	Analyzed:	May-27-19 18:17	May-27-19 18:36	May-27-19 18:56	May-27-19 19:15	May-27-19 19:35	May-27-19 19:55
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Gasoline Range Hydrocarbons (GRO)	Extracted:	May-26-19 12:00	May-26-19 12:00	May-26-19 12:00	May-26-19 12:00	May-26-19 12:00	May-26-19 12:00
	Analyzed:	May-27-19 18:17	May-27-19 18:36	May-27-19 18:56	May-27-19 19:15	May-27-19 19:35	May-27-19 19:55
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Diesel Range Organics (DRO)	Extracted:	May-26-19 12:00	May-26-19 12:00	May-26-19 12:00	May-26-19 12:00	May-26-19 12:00	May-26-19 12:00
	Analyzed:	May-27-19 18:17	May-27-19 18:36	May-27-19 18:56	May-27-19 19:15	May-27-19 19:35	May-27-19 19:55
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Motor Oil Range Hydrocarbons (MRO)	Extracted:	May-26-19 12:00	May-26-19 12:00	May-26-19 12:00	May-26-19 12:00	May-26-19 12:00	May-26-19 12:00
	Analyzed:	May-27-19 18:17	May-27-19 18:36	May-27-19 18:56	May-27-19 19:15	May-27-19 19:35	May-27-19 19:55
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Total TPH	Extracted:	May-26-19 12:00	May-26-19 12:00	May-26-19 12:00	May-26-19 12:00	May-26-19 12:00	May-26-19 12:00
	Analyzed:	May-27-19 18:17	May-27-19 18:36	May-27-19 18:56	May-27-19 19:15	May-27-19 19:35	May-27-19 19:55
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Total GRO-DRO	Extracted:	May-26-19 12:00	May-26-19 12:00	May-26-19 12:00	May-26-19 12:00	May-26-19 12:00	May-26-19 12:00
	Analyzed:	May-27-19 18:17	May-27-19 18:36	May-27-19 18:56	May-27-19 19:15	May-27-19 19:35	May-27-19 19:55
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL

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Jessica Kramer

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

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 625373

LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon Fed #1H



Project Id: 2RP-5201
Contact: Ashley Ager
Project Location: Delaware Basin

Date Received in Lab: Thu May-23-19 11:15 am
Report Date: 03-JUN-19
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	625373-019	625373-020	625373-021	625373-022	625373-023	625373-024
	Field Id:	BH10	BH10A	BH10B	BH10C	BH10D	BH10E
	Depth:	1-	3-	8-	20-	22-	25-
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	May-19-19 15:45	May-19-19 15:50	May-19-19 15:55	May-19-19 16:00	May-19-19 16:10	May-19-19 16:15
BTEX by EPA 8021B	Extracted:	May-31-19 14:00	May-31-19 14:00	May-31-19 14:00	May-31-19 14:00	May-31-19 14:15	May-31-19 14:15
	Analyzed:	Jun-01-19 08:41	Jun-01-19 09:00	Jun-01-19 09:19	Jun-01-19 09:38	Jun-01-19 12:26	Jun-01-19 12:45
	Units/RL:	mg/kg RL <0.00201 0.00201	mg/kg RL <0.00199 0.00199	mg/kg RL <0.00200 0.00200	mg/kg RL <0.00200 0.00200	mg/kg RL <0.00199 0.00199	mg/kg RL <0.00202 0.00202
	Benzene						
	Toluene						
	Ethylbenzene						
	m,p-Xylenes						
Chloride by EPA 300	o-Xylene						
	Total Xylenes						
	Total BTEX						
	Extracted:	May-24-19 12:46	May-24-19 12:46	May-24-19 12:46	May-24-19 12:46	May-24-19 12:46	May-24-19 12:46
	Analyzed:	May-24-19 20:17	May-24-19 20:24	May-24-19 20:46	May-24-19 20:53	May-24-19 21:00	May-24-19 21:08
	Units/RL:	mg/kg RL 81.7 5.04	mg/kg RL 6.23 4.98	mg/kg RL 476 4.97	mg/kg RL 980 4.96	mg/kg RL 1220 5.03	mg/kg RL 1090 25.2
	Chloride						
TPH by SW8015 Mod	Extracted:	May-26-19 12:00	May-26-19 12:00	May-26-19 13:00	May-26-19 13:00	May-26-19 13:00	May-26-19 13:00
	Analyzed:	May-27-19 20:15	May-27-19 20:34	May-27-19 22:12	May-27-19 23:12	May-27-19 23:31	May-27-19 23:51
	Units/RL:	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0
	Gasoline Range Hydrocarbons (GRO)						
	Diesel Range Organics (DRO)						
	Motor Oil Range Hydrocarbons (MRO)						
	Total TPH						
Total GRO-DRO							

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 625373

LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon Fed #1H



Project Id: 2RP-5201
Contact: Ashley Ager
Project Location: Delaware Basin

Date Received in Lab: Thu May-23-19 11:15 am
Report Date: 03-JUN-19
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	625373-025	625373-026	625373-027	625373-028	625373-029
	Field Id:	BH11	BH11A	BH11B	BH11C	BH11D
	Depth:	1-	3-	20-	30-	37-
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	May-20-19 09:35	May-20-19 09:45	May-20-19 10:00	May-20-19 10:20	May-20-19 10:30
BTEx by EPA 8021B	Extracted:	May-31-19 14:15	May-31-19 14:15	May-31-19 14:15	May-31-19 14:15	May-31-19 14:15
	Analyzed:	Jun-01-19 13:04	Jun-01-19 13:23	Jun-01-19 13:43	Jun-01-19 14:02	Jun-01-19 14:21
	Units/RL:	mg/kg RL <0.00198 0.00198	mg/kg RL <0.00200 0.00200	mg/kg RL <0.00199 0.00199	mg/kg RL <0.00200 0.00200	mg/kg RL <0.00200 0.00200
	Benzene					
	Toluene					
	Ethylbenzene					
Chloride by EPA 300	m,p-Xylenes	<0.00397 0.00397	<0.00401 0.00401	<0.00398 0.00398	<0.00400 0.00400	<0.00399 0.00399
	o-Xylene	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200
	Total Xylenes	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200
	Total BTEx	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200
TPH by SW8015 Mod	Extracted:	May-24-19 12:46	May-24-19 12:46	May-24-19 12:46	May-24-19 12:46	May-24-19 12:46
	Analyzed:	May-24-19 21:22	May-24-19 21:15	May-24-19 21:44	May-24-19 21:51	May-24-19 22:13
	Units/RL:	mg/kg RL 696 4.99	mg/kg RL 1160 25.1	mg/kg RL 1120 25.0	mg/kg RL 2620 49.6	mg/kg RL 1740 24.8
Gasoline Range Hydrocarbons (GRO)	Extracted:	May-26-19 13:00	May-26-19 13:00	May-26-19 13:00	May-26-19 13:00	May-26-19 13:00
	Analyzed:	May-28-19 00:11	May-28-19 00:30	May-28-19 00:50	May-28-19 01:10	May-28-19 01:30
	Units/RL:	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <14.9 14.9	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0
	Diesel Range Organics (DRO)					
	Motor Oil Range Hydrocarbons (MRO)					
Total GRO-DRO	Total TPH	<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0
	Total GRO-DRO	<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH06**
Lab Sample Id: 625373-001

Matrix: Soil
Date Collected: 05.19.19 10.10

Date Received: 05.23.19 11.15
Sample Depth: 6

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090214

Date Prep: 05.24.19 14.50

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	850	4.99	mg/kg	05.24.19 21.03		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090435

Date Prep: 05.26.19 12.00

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	05.27.19 13.20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.27.19 13.20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.27.19 13.20	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.27.19 13.20	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.27.19 13.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	05.27.19 13.20	
o-Terphenyl	84-15-1	90	%	70-135	05.27.19 13.20	



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH06**
Lab Sample Id: 625373-001

Matrix: Soil
Date Collected: 05.19.19 10.10

Date Received: 05.23.19 11.15
Sample Depth: 6

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3090876

Date Prep: 05.31.19 13.45

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	05.31.19 22.56	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.31.19 22.56	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.31.19 22.56	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	05.31.19 22.56	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.31.19 22.56	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.31.19 22.56	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.31.19 22.56	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	103	%	70-130	05.31.19 22.56		
1,4-Difluorobenzene	540-36-3	107	%	70-130	05.31.19 22.56		



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH06A**
Lab Sample Id: 625373-002

Matrix: Soil
Date Collected: 05.19.19 10.30

Date Received: 05.23.19 11.15
Sample Depth: 23

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090214

Date Prep: 05.24.19 14.50

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1550	24.8	mg/kg	05.24.19 21.08		5

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090435

Date Prep: 05.26.19 12.00

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	05.27.19 14.20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	05.27.19 14.20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	05.27.19 14.20	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	05.27.19 14.20	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	05.27.19 14.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	05.27.19 14.20	
o-Terphenyl	84-15-1	91	%	70-135	05.27.19 14.20	



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH06A**
Lab Sample Id: 625373-002

Matrix: Soil
Date Collected: 05.19.19 10.30

Date Received: 05.23.19 11.15
Sample Depth: 23

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3090876

Date Prep: 05.31.19 13.45

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	05.31.19 23.15	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.31.19 23.15	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.31.19 23.15	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	05.31.19 23.15	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.31.19 23.15	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.31.19 23.15	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.31.19 23.15	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	101	%	70-130	05.31.19 23.15		
1,4-Difluorobenzene	540-36-3	107	%	70-130	05.31.19 23.15		



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH06B**
Lab Sample Id: 625373-003

Matrix: Soil
Date Collected: 05.19.19 11.20

Date Received: 05.23.19 11.15
Sample Depth: 48

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090214

Date Prep: 05.24.19 14.50

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	830	5.04	mg/kg	05.24.19 21.13		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090435

Date Prep: 05.26.19 12.00

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	05.27.19 14.40	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.27.19 14.40	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.27.19 14.40	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.27.19 14.40	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.27.19 14.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	05.27.19 14.40	
o-Terphenyl	84-15-1	92	%	70-135	05.27.19 14.40	



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH06B**
Lab Sample Id: 625373-003

Matrix: Soil
Date Collected: 05.19.19 11.20

Date Received: 05.23.19 11.15
Sample Depth: 48

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3090878

Date Prep: 05.31.19 14.00

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	06.01.19 02.41	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.01.19 02.41	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.01.19 02.41	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	06.01.19 02.41	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.01.19 02.41	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.01.19 02.41	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.01.19 02.41	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	88	%	70-130	06.01.19 02.41		
1,4-Difluorobenzene	540-36-3	90	%	70-130	06.01.19 02.41		



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH06C**
Lab Sample Id: 625373-004

Matrix: Soil
Date Collected: 05.19.19 12.30

Date Received: 05.23.19 11.15
Sample Depth: 63

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090214

Date Prep: 05.24.19 14.50

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1580	24.8	mg/kg	05.25.19 18.34		5

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090435

Date Prep: 05.26.19 12.00

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	05.27.19 14.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.27.19 14.59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.27.19 14.59	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.27.19 14.59	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.27.19 14.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	05.27.19 14.59	
o-Terphenyl	84-15-1	96	%	70-135	05.27.19 14.59	



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH06C**
Lab Sample Id: 625373-004

Matrix: Soil
Date Collected: 05.19.19 12.30

Date Received: 05.23.19 11.15
Sample Depth: 63

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3090878

Prep Method: SW5030B

% Moisture:

Date Prep: 05.31.19 14.00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	06.01.19 03.00	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	06.01.19 03.00	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	06.01.19 03.00	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	06.01.19 03.00	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	06.01.19 03.00	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	06.01.19 03.00	U	1
Total BTEX		<0.00199	0.00199	mg/kg	06.01.19 03.00	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	66	%	70-130	06.01.19 03.00	**	
1,4-Difluorobenzene	540-36-3	97	%	70-130	06.01.19 03.00		



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH06D**
Lab Sample Id: 625373-005

Matrix: Soil
Date Collected: 05.19.19 13.00

Date Received: 05.23.19 11.15
Sample Depth: 70

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090214

Date Prep: 05.24.19 14.50

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1610	25.1	mg/kg	05.25.19 18.39		5

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090435

Date Prep: 05.26.19 12.00

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	05.27.19 15.19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.27.19 15.19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.27.19 15.19	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.27.19 15.19	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.27.19 15.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	05.27.19 15.19	
o-Terphenyl	84-15-1	94	%	70-135	05.27.19 15.19	



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH06D**
Lab Sample Id: 625373-005

Matrix: Soil
Date Collected: 05.19.19 13.00

Date Received: 05.23.19 11.15
Sample Depth: 70

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3090878

Prep Method: SW5030B

% Moisture:

Date Prep: 05.31.19 14.00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	06.01.19 03.19	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	06.01.19 03.19	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	06.01.19 03.19	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	06.01.19 03.19	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	06.01.19 03.19	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	06.01.19 03.19	U	1
Total BTEX		<0.00201	0.00201	mg/kg	06.01.19 03.19	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	119	%	70-130	06.01.19 03.19		
4-Bromofluorobenzene	460-00-4	79	%	70-130	06.01.19 03.19		



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH07**
Lab Sample Id: 625373-006

Matrix: Soil
Date Collected: 05.19.19 13.45

Date Received: 05.23.19 11.15
Sample Depth: 1

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090214

Date Prep: 05.24.19 14.50

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	166	5.03	mg/kg	05.24.19 21.28		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090435

Date Prep: 05.26.19 12.00

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	05.27.19 15.39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.27.19 15.39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.27.19 15.39	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.27.19 15.39	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.27.19 15.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	05.27.19 15.39	
o-Terphenyl	84-15-1	92	%	70-135	05.27.19 15.39	



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH07**
Lab Sample Id: 625373-006

Matrix: Soil
Date Collected: 05.19.19 13.45

Date Received: 05.23.19 11.15
Sample Depth: 1

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3090878

Date Prep: 05.31.19 14.00

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	06.01.19 03.38	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.01.19 03.38	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.01.19 03.38	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	06.01.19 03.38	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.01.19 03.38	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.01.19 03.38	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.01.19 03.38	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	71	%	70-130	06.01.19 03.38		
1,4-Difluorobenzene	540-36-3	112	%	70-130	06.01.19 03.38		



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH07A**
Lab Sample Id: 625373-007

Matrix: Soil
Date Collected: 05.19.19 13.50

Date Received: 05.23.19 11.15
Sample Depth: 3

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090214

Date Prep: 05.24.19 14.50

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	874	5.02	mg/kg	05.24.19 21.44		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090435

Date Prep: 05.26.19 12.00

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	05.27.19 15.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.27.19 15.59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.27.19 15.59	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.27.19 15.59	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.27.19 15.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	05.27.19 15.59	
o-Terphenyl	84-15-1	92	%	70-135	05.27.19 15.59	



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH07A**
Lab Sample Id: 625373-007

Matrix: Soil
Date Collected: 05.19.19 13.50

Date Received: 05.23.19 11.15
Sample Depth: 3

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3090878

Prep Method: SW5030B

% Moisture:

Date Prep: 05.31.19 14.00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	06.01.19 03.57	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	06.01.19 03.57	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	06.01.19 03.57	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	06.01.19 03.57	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	06.01.19 03.57	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	06.01.19 03.57	U	1
Total BTEX		<0.00201	0.00201	mg/kg	06.01.19 03.57	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	102	%	70-130	06.01.19 03.57		
4-Bromofluorobenzene	460-00-4	99	%	70-130	06.01.19 03.57		



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH07B**
Lab Sample Id: 625373-008

Matrix: Soil
Date Collected: 05.19.19 14.40

Date Received: 05.23.19 11.15
Sample Depth: 20

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090214

Date Prep: 05.24.19 14.50

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1330	5.00	mg/kg	05.24.19 21.49		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090435

Date Prep: 05.26.19 12.00

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	05.27.19 16.19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.27.19 16.19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.27.19 16.19	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.27.19 16.19	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.27.19 16.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	05.27.19 16.19	
o-Terphenyl	84-15-1	93	%	70-135	05.27.19 16.19	



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH07B**
Lab Sample Id: 625373-008

Matrix: Soil
Date Collected: 05.19.19 14.40

Date Received: 05.23.19 11.15
Sample Depth: 20

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3090878

Date Prep: 05.31.19 14.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	06.01.19 04.16	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	06.01.19 04.16	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	06.01.19 04.16	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	06.01.19 04.16	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	06.01.19 04.16	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	06.01.19 04.16	U	1
Total BTEX		<0.00202	0.00202	mg/kg	06.01.19 04.16	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	89	%	70-130	06.01.19 04.16		
1,4-Difluorobenzene	540-36-3	112	%	70-130	06.01.19 04.16		



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH08**
Lab Sample Id: 625373-009

Matrix: Soil
Date Collected: 05.19.19 16.40

Date Received: 05.23.19 11.15
Sample Depth: 1

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090214

Date Prep: 05.24.19 14.50

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	406	5.04	mg/kg	05.24.19 22.04		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090435

Date Prep: 05.26.19 12.00

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	05.27.19 16.38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.27.19 16.38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.27.19 16.38	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.27.19 16.38	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.27.19 16.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	05.27.19 16.38	
o-Terphenyl	84-15-1	92	%	70-135	05.27.19 16.38	



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH08**
Lab Sample Id: 625373-009

Matrix: Soil
Date Collected: 05.19.19 16.40

Date Received: 05.23.19 11.15
Sample Depth: 1

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3090878

Prep Method: SW5030B

% Moisture:

Date Prep: 05.31.19 14.00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.01.19 04.35	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.01.19 04.35	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.01.19 04.35	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	06.01.19 04.35	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.01.19 04.35	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.01.19 04.35	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.01.19 04.35	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	78	%	70-130	06.01.19 04.35		
1,4-Difluorobenzene	540-36-3	111	%	70-130	06.01.19 04.35		



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH08A**
Lab Sample Id: 625373-010

Matrix: Soil
Date Collected: 05.19.19 16.50

Date Received: 05.23.19 11.15
Sample Depth: 3

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090214

Date Prep: 05.24.19 14.50

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1260	5.02	mg/kg	05.24.19 22.09		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090435

Date Prep: 05.26.19 12.00

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	05.27.19 16.58	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	05.27.19 16.58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	05.27.19 16.58	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	05.27.19 16.58	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	05.27.19 16.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	05.27.19 16.58	
o-Terphenyl	84-15-1	93	%	70-135	05.27.19 16.58	



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH08A**
Lab Sample Id: 625373-010

Matrix: Soil
Date Collected: 05.19.19 16.50

Date Received: 05.23.19 11.15
Sample Depth: 3

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3090878

Date Prep: 05.31.19 14.00

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	06.01.19 04.54	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	06.01.19 04.54	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	06.01.19 04.54	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	06.01.19 04.54	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	06.01.19 04.54	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	06.01.19 04.54	U	1
Total BTEX		<0.00199	0.00199	mg/kg	06.01.19 04.54	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	110	%	70-130	06.01.19 04.54		
4-Bromofluorobenzene	460-00-4	96	%	70-130	06.01.19 04.54		



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH08B**
Lab Sample Id: 625373-011

Matrix: Soil
Date Collected: 05.19.19 16.55

Date Received: 05.23.19 11.15
Sample Depth: 6

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090214

Date Prep: 05.24.19 14.50

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	455	4.99	mg/kg	05.24.19 22.15		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090435

Date Prep: 05.26.19 12.00

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	05.27.19 17.37	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.27.19 17.37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.27.19 17.37	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.27.19 17.37	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.27.19 17.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	05.27.19 17.37	
o-Terphenyl	84-15-1	89	%	70-135	05.27.19 17.37	



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH08B**
Lab Sample Id: 625373-011

Matrix: Soil
Date Collected: 05.19.19 16.55

Date Received: 05.23.19 11.15
Sample Depth: 6

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3090878

Date Prep: 05.31.19 14.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	06.01.19 05.13	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	06.01.19 05.13	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	06.01.19 05.13	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	06.01.19 05.13	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	06.01.19 05.13	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	06.01.19 05.13	U	1
Total BTEX		<0.00202	0.00202	mg/kg	06.01.19 05.13	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	108	%	70-130	06.01.19 05.13		
4-Bromofluorobenzene	460-00-4	94	%	70-130	06.01.19 05.13		



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH08C**
Lab Sample Id: 625373-012

Matrix: Soil
Date Collected: 05.19.19 17.15

Date Received: 05.23.19 11.15
Sample Depth: 20

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090214

Date Prep: 05.24.19 14.50

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1200	5.01	mg/kg	05.24.19 22.20		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090435

Date Prep: 05.26.19 12.00

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	05.27.19 17.57	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.27.19 17.57	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.27.19 17.57	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.27.19 17.57	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.27.19 17.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	05.27.19 17.57	
o-Terphenyl	84-15-1	93	%	70-135	05.27.19 17.57	



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH08C**
Lab Sample Id: 625373-012

Matrix: Soil
Date Collected: 05.19.19 17.15

Date Received: 05.23.19 11.15
Sample Depth: 20

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3090878

Prep Method: SW5030B

% Moisture:

Date Prep: 05.31.19 14.00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	06.01.19 05.32	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	06.01.19 05.32	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	06.01.19 05.32	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	06.01.19 05.32	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	06.01.19 05.32	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	06.01.19 05.32	U	1
Total BTEX		<0.00198	0.00198	mg/kg	06.01.19 05.32	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	99	%	70-130	06.01.19 05.32		
1,4-Difluorobenzene	540-36-3	109	%	70-130	06.01.19 05.32		



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH08D**
Lab Sample Id: 625373-013

Matrix: Soil
Date Collected: 05.19.19 17.30

Date Received: 05.23.19 11.15
Sample Depth: 25

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090214

Date Prep: 05.24.19 14.50

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1180	4.97	mg/kg	05.24.19 22.25		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090435

Date Prep: 05.26.19 12.00

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	05.27.19 18.17	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.27.19 18.17	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.27.19 18.17	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.27.19 18.17	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.27.19 18.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	05.27.19 18.17	
o-Terphenyl	84-15-1	94	%	70-135	05.27.19 18.17	



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH08D**
Lab Sample Id: 625373-013

Matrix: Soil
Date Collected: 05.19.19 17.30

Date Received: 05.23.19 11.15
Sample Depth: 25

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3090878

Prep Method: SW5030B

% Moisture:

Date Prep: 05.31.19 14.00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	06.01.19 06.46	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	06.01.19 06.46	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	06.01.19 06.46	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	06.01.19 06.46	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	06.01.19 06.46	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	06.01.19 06.46	U	1
Total BTEX		<0.00201	0.00201	mg/kg	06.01.19 06.46	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	99	%	70-130	06.01.19 06.46		
1,4-Difluorobenzene	540-36-3	101	%	70-130	06.01.19 06.46		



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH09**
Lab Sample Id: 625373-014

Matrix: Soil
Date Collected: 05.19.19 15.00

Date Received: 05.23.19 11.15
Sample Depth: 1

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090214

Date Prep: 05.24.19 14.50

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	297	5.03	mg/kg	05.24.19 22.30		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090435

Date Prep: 05.26.19 12.00

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	05.27.19 18.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.27.19 18.36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.27.19 18.36	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.27.19 18.36	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.27.19 18.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	05.27.19 18.36	
o-Terphenyl	84-15-1	91	%	70-135	05.27.19 18.36	



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH09**
Lab Sample Id: 625373-014

Matrix: Soil
Date Collected: 05.19.19 15.00

Date Received: 05.23.19 11.15
Sample Depth: 1

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3090878

Prep Method: SW5030B

% Moisture:

Date Prep: 05.31.19 14.00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.01.19 07.05	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.01.19 07.05	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.01.19 07.05	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	06.01.19 07.05	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.01.19 07.05	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.01.19 07.05	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.01.19 07.05	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	85	%	70-130	06.01.19 07.05		
1,4-Difluorobenzene	540-36-3	107	%	70-130	06.01.19 07.05		



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH09A**
Lab Sample Id: 625373-015

Matrix: Soil
Date Collected: 05.19.19 15.05

Date Received: 05.23.19 11.15
Sample Depth: 3

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090214

Date Prep: 05.24.19 14.50

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	59.0	5.04	mg/kg	05.24.19 22.35		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090435

Date Prep: 05.26.19 12.00

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	05.27.19 18.56	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.27.19 18.56	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.27.19 18.56	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.27.19 18.56	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.27.19 18.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	05.27.19 18.56	
o-Terphenyl	84-15-1	94	%	70-135	05.27.19 18.56	



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH09A**
Lab Sample Id: 625373-015

Matrix: Soil
Date Collected: 05.19.19 15.05

Date Received: 05.23.19 11.15
Sample Depth: 3

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3090878

Prep Method: SW5030B

% Moisture:

Date Prep: 05.31.19 14.00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	06.01.19 07.25	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	06.01.19 07.25	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	06.01.19 07.25	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	06.01.19 07.25	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	06.01.19 07.25	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	06.01.19 07.25	U	1
Total BTEX		<0.00199	0.00199	mg/kg	06.01.19 07.25	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	115	%	70-130	06.01.19 07.25		
4-Bromofluorobenzene	460-00-4	62	%	70-130	06.01.19 07.25	**	



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH09B**
Lab Sample Id: 625373-016

Matrix: Soil
Date Collected: 05.19.19 15.10

Date Received: 05.23.19 11.15
Sample Depth: 6

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090215

Date Prep: 05.24.19 12.46

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	405	4.99	mg/kg	05.24.19 19.40		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090435

Date Prep: 05.26.19 12.00

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	05.27.19 19.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.27.19 19.15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.27.19 19.15	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.27.19 19.15	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.27.19 19.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	05.27.19 19.15	
o-Terphenyl	84-15-1	91	%	70-135	05.27.19 19.15	



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH09B**
Lab Sample Id: 625373-016

Matrix: Soil
Date Collected: 05.19.19 15.10

Date Received: 05.23.19 11.15
Sample Depth: 6

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3090878

Prep Method: SW5030B

% Moisture:

Date Prep: 05.31.19 14.00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	06.01.19 07.44	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	06.01.19 07.44	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	06.01.19 07.44	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	06.01.19 07.44	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	06.01.19 07.44	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	06.01.19 07.44	U	1
Total BTEX		<0.00199	0.00199	mg/kg	06.01.19 07.44	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	96	%	70-130	06.01.19 07.44		
1,4-Difluorobenzene	540-36-3	110	%	70-130	06.01.19 07.44		



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH09C**
Lab Sample Id: 625373-017

Matrix: Soil
Date Collected: 05.19.19 15.20

Date Received: 05.23.19 11.15
Sample Depth: 15

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090215

Date Prep: 05.24.19 12.46

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1290	5.04	mg/kg	05.24.19 20.02		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090435

Date Prep: 05.26.19 12.00

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	05.27.19 19.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.27.19 19.35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.27.19 19.35	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.27.19 19.35	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.27.19 19.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	05.27.19 19.35	
o-Terphenyl	84-15-1	92	%	70-135	05.27.19 19.35	



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH09C**
Lab Sample Id: 625373-017

Matrix: Soil
Date Collected: 05.19.19 15.20

Date Received: 05.23.19 11.15
Sample Depth: 15

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3090878

Prep Method: SW5030B

% Moisture:

Date Prep: 05.31.19 14.00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	06.01.19 08.03	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	06.01.19 08.03	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	06.01.19 08.03	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	06.01.19 08.03	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	06.01.19 08.03	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	06.01.19 08.03	U	1
Total BTEX		<0.00202	0.00202	mg/kg	06.01.19 08.03	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	96	%	70-130	06.01.19 08.03		
1,4-Difluorobenzene	540-36-3	109	%	70-130	06.01.19 08.03		



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH09D**
Lab Sample Id: 625373-018

Matrix: Soil
Date Collected: 05.19.19 15.35

Date Received: 05.23.19 11.15
Sample Depth: 19

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090215

Date Prep: 05.24.19 12.46

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1760	25.0	mg/kg	05.24.19 20.10		5

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090435

Date Prep: 05.26.19 12.00

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	05.27.19 19.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.27.19 19.55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.27.19 19.55	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.27.19 19.55	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.27.19 19.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	05.27.19 19.55	
o-Terphenyl	84-15-1	92	%	70-135	05.27.19 19.55	



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH09D**
Lab Sample Id: 625373-018

Matrix: Soil
Date Collected: 05.19.19 15.35

Date Received: 05.23.19 11.15
Sample Depth: 19

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3090878

Prep Method: SW5030B

% Moisture:

Date Prep: 05.31.19 14.00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.01.19 08.22	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.01.19 08.22	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.01.19 08.22	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	06.01.19 08.22	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.01.19 08.22	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.01.19 08.22	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.01.19 08.22	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	100	%	70-130	06.01.19 08.22		
1,4-Difluorobenzene	540-36-3	111	%	70-130	06.01.19 08.22		



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH10**
Lab Sample Id: 625373-019

Matrix: Soil
Date Collected: 05.19.19 15.45

Date Received: 05.23.19 11.15
Sample Depth: 1

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090215

Date Prep: 05.24.19 12.46

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	81.7	5.04	mg/kg	05.24.19 20.17		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090435

Date Prep: 05.26.19 12.00

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	05.27.19 20.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	21.9	15.0	mg/kg	05.27.19 20.15		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.27.19 20.15	U	1
Total TPH	PHC635	21.9	15.0	mg/kg	05.27.19 20.15		1
Total GRO-DRO	PHC628	21.9	15.0	mg/kg	05.27.19 20.15		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	05.27.19 20.15	
o-Terphenyl	84-15-1	93	%	70-135	05.27.19 20.15	



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH10**
Lab Sample Id: 625373-019

Matrix: Soil
Date Collected: 05.19.19 15.45

Date Received: 05.23.19 11.15
Sample Depth: 1

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3090878

Prep Method: SW5030B

% Moisture:

Date Prep: 05.31.19 14.00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	06.01.19 08.41	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	06.01.19 08.41	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	06.01.19 08.41	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	06.01.19 08.41	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	06.01.19 08.41	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	06.01.19 08.41	U	1
Total BTEX		<0.00201	0.00201	mg/kg	06.01.19 08.41	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	95	%	70-130	06.01.19 08.41		
1,4-Difluorobenzene	540-36-3	110	%	70-130	06.01.19 08.41		



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH10A**
Lab Sample Id: 625373-020

Matrix: Soil
Date Collected: 05.19.19 15.50

Date Received: 05.23.19 11.15
Sample Depth: 3

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090215

Date Prep: 05.24.19 12.46

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6.23	4.98	mg/kg	05.24.19 20.24		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090435

Date Prep: 05.26.19 12.00

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	05.27.19 20.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.27.19 20.34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.27.19 20.34	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.27.19 20.34	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.27.19 20.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	05.27.19 20.34	
o-Terphenyl	84-15-1	92	%	70-135	05.27.19 20.34	



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH10A**
Lab Sample Id: 625373-020

Matrix: Soil
Date Collected: 05.19.19 15.50

Date Received: 05.23.19 11.15
Sample Depth: 3

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 05.31.19 14.00

Basis: Wet Weight

Seq Number: 3090878

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	06.01.19 09.00	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	06.01.19 09.00	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	06.01.19 09.00	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	06.01.19 09.00	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	06.01.19 09.00	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	06.01.19 09.00	U	1
Total BTEX		<0.00199	0.00199	mg/kg	06.01.19 09.00	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	85	%	70-130	06.01.19 09.00		
1,4-Difluorobenzene	540-36-3	110	%	70-130	06.01.19 09.00		



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH10B**
Lab Sample Id: 625373-021

Matrix: Soil
Date Collected: 05.19.19 15.55

Date Received: 05.23.19 11.15
Sample Depth: 8

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090215

Date Prep: 05.24.19 12.46

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	476	4.97	mg/kg	05.24.19 20.46		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090436

Date Prep: 05.26.19 13.00

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	05.27.19 22.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.27.19 22.12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.27.19 22.12	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.27.19 22.12	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.27.19 22.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	05.27.19 22.12	
o-Terphenyl	84-15-1	88	%	70-135	05.27.19 22.12	



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH10B**
Lab Sample Id: 625373-021

Matrix: Soil
Date Collected: 05.19.19 15.55

Date Received: 05.23.19 11.15
Sample Depth: 8

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3090878

Date Prep: 05.31.19 14.00

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	06.01.19 09.19	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.01.19 09.19	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.01.19 09.19	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	06.01.19 09.19	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.01.19 09.19	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.01.19 09.19	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.01.19 09.19	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	97	%	70-130	06.01.19 09.19		
1,4-Difluorobenzene	540-36-3	106	%	70-130	06.01.19 09.19		



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LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH10C**
Lab Sample Id: 625373-022

Matrix: Soil
Date Collected: 05.19.19 16.00

Date Received: 05.23.19 11.15
Sample Depth: 20

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090215

Date Prep: 05.24.19 12.46

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	980	4.96	mg/kg	05.24.19 20.53		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090436

Date Prep: 05.26.19 13.00

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	05.27.19 23.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.27.19 23.12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.27.19 23.12	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.27.19 23.12	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.27.19 23.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	05.27.19 23.12	
o-Terphenyl	84-15-1	88	%	70-135	05.27.19 23.12	



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LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH10C**
Lab Sample Id: 625373-022

Matrix: Soil
Date Collected: 05.19.19 16.00

Date Received: 05.23.19 11.15
Sample Depth: 20

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3090878

Prep Method: SW5030B

% Moisture:

Date Prep: 05.31.19 14.00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.01.19 09.38	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.01.19 09.38	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.01.19 09.38	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	06.01.19 09.38	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.01.19 09.38	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.01.19 09.38	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.01.19 09.38	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	110	%	70-130	06.01.19 09.38		
4-Bromofluorobenzene	460-00-4	98	%	70-130	06.01.19 09.38		



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH10D**
Lab Sample Id: 625373-023

Matrix: Soil
Date Collected: 05.19.19 16.10

Date Received: 05.23.19 11.15
Sample Depth: 22

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090215

Date Prep: 05.24.19 12.46

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1220	5.03	mg/kg	05.24.19 21.00		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090436

Date Prep: 05.26.19 13.00

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	05.27.19 23.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.27.19 23.31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.27.19 23.31	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.27.19 23.31	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.27.19 23.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	05.27.19 23.31	
o-Terphenyl	84-15-1	94	%	70-135	05.27.19 23.31	



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH10D**
Lab Sample Id: 625373-023

Matrix: Soil
Date Collected: 05.19.19 16.10

Date Received: 05.23.19 11.15
Sample Depth: 22

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3090879

Prep Method: SW5030B

% Moisture:

Date Prep: 05.31.19 14.15

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	06.01.19 12.26	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	06.01.19 12.26	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	06.01.19 12.26	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	06.01.19 12.26	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	06.01.19 12.26	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	06.01.19 12.26	U	1
Total BTEX		<0.00199	0.00199	mg/kg	06.01.19 12.26	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	99	%	70-130	06.01.19 12.26		
1,4-Difluorobenzene	540-36-3	99	%	70-130	06.01.19 12.26		



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH10E**
Lab Sample Id: 625373-024

Matrix: Soil
Date Collected: 05.19.19 16.15

Date Received: 05.23.19 11.15
Sample Depth: 25

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090215

Date Prep: 05.24.19 12.46

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1090	25.2	mg/kg	05.24.19 21.08		5

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090436

Date Prep: 05.26.19 13.00

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	05.27.19 23.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.27.19 23.51	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.27.19 23.51	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.27.19 23.51	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.27.19 23.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	05.27.19 23.51	
o-Terphenyl	84-15-1	94	%	70-135	05.27.19 23.51	



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH10E**
Lab Sample Id: 625373-024

Matrix: Soil
Date Collected: 05.19.19 16.15

Date Received: 05.23.19 11.15
Sample Depth: 25

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3090879

Prep Method: SW5030B

% Moisture:

Date Prep: 05.31.19 14.15

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	06.01.19 12.45	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	06.01.19 12.45	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	06.01.19 12.45	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	06.01.19 12.45	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	06.01.19 12.45	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	06.01.19 12.45	U	1
Total BTEX		<0.00202	0.00202	mg/kg	06.01.19 12.45	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	90	%	70-130	06.01.19 12.45		
1,4-Difluorobenzene	540-36-3	108	%	70-130	06.01.19 12.45		



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH11**
Lab Sample Id: 625373-025

Matrix: Soil
Date Collected: 05.20.19 09.35

Date Received: 05.23.19 11.15
Sample Depth: 1

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090215

Date Prep: 05.24.19 12.46

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	696	4.99	mg/kg	05.24.19 21.22		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090436

Date Prep: 05.26.19 13.00

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	05.28.19 00.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.28.19 00.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.28.19 00.11	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.28.19 00.11	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.28.19 00.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	05.28.19 00.11	
o-Terphenyl	84-15-1	96	%	70-135	05.28.19 00.11	



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH11**
Lab Sample Id: 625373-025

Matrix: Soil
Date Collected: 05.20.19 09.35

Date Received: 05.23.19 11.15
Sample Depth: 1

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3090879

Prep Method: SW5030B

% Moisture:

Date Prep: 05.31.19 14.15

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	06.01.19 13.04	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	06.01.19 13.04	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	06.01.19 13.04	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	06.01.19 13.04	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	06.01.19 13.04	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	06.01.19 13.04	U	1
Total BTEX		<0.00198	0.00198	mg/kg	06.01.19 13.04	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	61	%	70-130	06.01.19 13.04	**	
1,4-Difluorobenzene	540-36-3	113	%	70-130	06.01.19 13.04		



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH11A**
Lab Sample Id: 625373-026

Matrix: Soil
Date Collected: 05.20.19 09.45

Date Received: 05.23.19 11.15
Sample Depth: 3

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090215

Date Prep: 05.24.19 12.46

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1160	25.1	mg/kg	05.24.19 21.15		5

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090436

Date Prep: 05.26.19 13.00

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	05.28.19 00.30	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.28.19 00.30	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.28.19 00.30	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.28.19 00.30	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.28.19 00.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	05.28.19 00.30	
o-Terphenyl	84-15-1	93	%	70-135	05.28.19 00.30	



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH11A**
Lab Sample Id: 625373-026

Matrix: Soil
Date Collected: 05.20.19 09.45

Date Received: 05.23.19 11.15
Sample Depth: 3

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3090879

Date Prep: 05.31.19 14.15

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	06.01.19 13.23	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.01.19 13.23	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.01.19 13.23	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	06.01.19 13.23	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.01.19 13.23	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.01.19 13.23	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.01.19 13.23	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	95	%	70-130	06.01.19 13.23		
1,4-Difluorobenzene	540-36-3	111	%	70-130	06.01.19 13.23		



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH11B**
Lab Sample Id: 625373-027

Matrix: Soil
Date Collected: 05.20.19 10.00

Date Received: 05.23.19 11.15
Sample Depth: 20

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090215

Date Prep: 05.24.19 12.46

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1120	25.0	mg/kg	05.24.19 21.44		5

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090436

Date Prep: 05.26.19 13.00

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	05.28.19 00.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	05.28.19 00.50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	05.28.19 00.50	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	05.28.19 00.50	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	05.28.19 00.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	05.28.19 00.50	
o-Terphenyl	84-15-1	90	%	70-135	05.28.19 00.50	



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH11B**
Lab Sample Id: 625373-027

Matrix: Soil
Date Collected: 05.20.19 10.00

Date Received: 05.23.19 11.15
Sample Depth: 20

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3090879

Prep Method: SW5030B

% Moisture:

Date Prep: 05.31.19 14.15

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	06.01.19 13.43	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	06.01.19 13.43	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	06.01.19 13.43	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	06.01.19 13.43	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	06.01.19 13.43	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	06.01.19 13.43	U	1
Total BTEX		<0.00199	0.00199	mg/kg	06.01.19 13.43	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	96	%	70-130	06.01.19 13.43		
1,4-Difluorobenzene	540-36-3	109	%	70-130	06.01.19 13.43		



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH11C**
Lab Sample Id: 625373-028

Matrix: Soil
Date Collected: 05.20.19 10.20

Date Received: 05.23.19 11.15
Sample Depth: 30

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090215

Date Prep: 05.24.19 12.46

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2620	49.6	mg/kg	05.24.19 21.51		10

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090436

Date Prep: 05.26.19 13.00

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	05.28.19 01.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.28.19 01.10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.28.19 01.10	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.28.19 01.10	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.28.19 01.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	05.28.19 01.10	
o-Terphenyl	84-15-1	93	%	70-135	05.28.19 01.10	



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH11C**
Lab Sample Id: 625373-028

Matrix: Soil
Date Collected: 05.20.19 10.20

Date Received: 05.23.19 11.15
Sample Depth: 30

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3090879

Prep Method: SW5030B

% Moisture:

Date Prep: 05.31.19 14.15

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.01.19 14.02	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.01.19 14.02	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.01.19 14.02	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	06.01.19 14.02	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.01.19 14.02	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.01.19 14.02	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.01.19 14.02	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	80	%	70-130	06.01.19 14.02		
1,4-Difluorobenzene	540-36-3	115	%	70-130	06.01.19 14.02		



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH11D**
Lab Sample Id: 625373-029

Matrix: Soil
Date Collected: 05.20.19 10.30

Date Received: 05.23.19 11.15
Sample Depth: 37

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090215

Date Prep: 05.24.19 12.46

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1740	24.8	mg/kg	05.24.19 22.13		5

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090436

Date Prep: 05.26.19 13.00

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	05.28.19 01.30	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.28.19 01.30	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.28.19 01.30	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.28.19 01.30	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.28.19 01.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	05.28.19 01.30	
o-Terphenyl	84-15-1	91	%	70-135	05.28.19 01.30	



Certificate of Analytical Results 625373



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **BH11D**
Lab Sample Id: 625373-029

Matrix: Soil
Date Collected: 05.20.19 10.30

Date Received: 05.23.19 11.15
Sample Depth: 37

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3090879

Date Prep: 05.31.19 14.15

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	06.01.19 14.21	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.01.19 14.21	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.01.19 14.21	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	06.01.19 14.21	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.01.19 14.21	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.01.19 14.21	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.01.19 14.21	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	109	%	70-130	06.01.19 14.21		
4-Bromofluorobenzene	460-00-4	94	%	70-130	06.01.19 14.21		

- 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 625373

LT Environmental, Inc. Corral Canyon Fed #1H

Analytical Method: Chloride by EPA 300

Seq Number: 3090215

MB Sample Id: 7678582-1-BLK

Matrix: Solid

LCS Sample Id: 7678582-1-BKS

Prep Method: E300P

Date Prep: 05.24.19

LCSD Sample Id: 7678582-1-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	235	94	235	94	90-110	0	20	mg/kg	05.24.19 19:26	

Analytical Method: Chloride by EPA 300

Seq Number: 3090214

MB Sample Id: 7678581-1-BLK

Matrix: Solid

LCS Sample Id: 7678581-1-BKS

Prep Method: E300P

Date Prep: 05.24.19

LCSD Sample Id: 7678581-1-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	258	103	260	104	90-110	1	20	mg/kg	05.24.19 20:06	

Analytical Method: Chloride by EPA 300

Seq Number: 3090215

Parent Sample Id: 625373-016

Matrix: Soil

MS Sample Id: 625373-016 S

Prep Method: E300P

Date Prep: 05.24.19

MSD Sample Id: 625373-016 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	405	250	624	88	628	89	90-110	1	20	mg/kg	05.24.19 19:48	X

Analytical Method: Chloride by EPA 300

Seq Number: 3090215

Parent Sample Id: 625373-025

Matrix: Soil

MS Sample Id: 625373-025 S

Prep Method: E300P

Date Prep: 05.24.19

MSD Sample Id: 625373-025 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	696	250	904	83	914	87	90-110	1	20	mg/kg	05.24.19 21:29	X

Analytical Method: Chloride by EPA 300

Seq Number: 3090214

Parent Sample Id: 625369-005

Matrix: Soil

MS Sample Id: 625369-005 S

Prep Method: E300P

Date Prep: 05.24.19

MSD Sample Id: 625369-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	20.8	250	298	111	287	106	90-110	4	20	mg/kg	05.24.19 20:21	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 625373

LT Environmental, Inc. Corral Canyon Fed #1H

Analytical Method: Chloride by EPA 300

Seq Number: 3090214

Parent Sample Id: 625373-006

Matrix: Soil

MS Sample Id: 625373-006 S

Prep Method: E300P

Date Prep: 05.24.19

MSD Sample Id: 625373-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	166	252	432	106	431	105	90-110	0	20	mg/kg	05.24.19 21:33	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3090435

MB Sample Id: 7678727-1-BLK

Matrix: Solid

LCS Sample Id: 7678727-1-BKS

Prep Method: TX1005P

Date Prep: 05.26.19

LCSD Sample Id: 7678727-1-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	1150	115	1180	118	70-135	3	20	mg/kg	05.27.19 12:40	
Diesel Range Organics (DRO)	<8.13	1000	1100	110	1140	114	70-135	4	20	mg/kg	05.27.19 12:40	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	92		122		127		70-135	%	05.27.19 12:40
o-Terphenyl	92		115		109		70-135	%	05.27.19 12:40

Analytical Method: TPH by SW8015 Mod

Seq Number: 3090436

MB Sample Id: 7678728-1-BLK

Matrix: Solid

LCS Sample Id: 7678728-1-BKS

Prep Method: TX1005P

Date Prep: 05.26.19

LCSD Sample Id: 7678728-1-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	1200	120	1180	118	70-135	2	20	mg/kg	05.27.19 21:33	
Diesel Range Organics (DRO)	<8.13	1000	1150	115	1130	113	70-135	2	20	mg/kg	05.27.19 21:33	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	95		123		126		70-135	%	05.27.19 21:33
o-Terphenyl	94		112		118		70-135	%	05.27.19 21:33

Analytical Method: TPH by SW8015 Mod

Seq Number: 3090435

Parent Sample Id: 625373-001

Matrix: Soil

MS Sample Id: 625373-001 S

Prep Method: TX1005P

Date Prep: 05.26.19

MSD Sample Id: 625373-001 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)	11.6	997	1140	113	1170	116	70-135	3	20	mg/kg	05.27.19 13:40	
Diesel Range Organics (DRO)	8.64	997	1100	109	1130	112	70-135	3	20	mg/kg	05.27.19 13:40	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	124		126		70-135	%	05.27.19 13:40
o-Terphenyl	123		110		70-135	%	05.27.19 13:40

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

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

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 625373

LT Environmental, Inc. Corral Canyon Fed #1H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3090436

Parent Sample Id: 625373-021

Matrix: Soil

MS Sample Id: 625373-021 S

Prep Method: TX1005P

Date Prep: 05.26.19

MSD Sample Id: 625373-021 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	998	1100	109	1120	111	70-135	2	20	mg/kg	05.27.19 22:32	
Diesel Range Organics (DRO)	<8.11	998	1070	107	1100	110	70-135	3	20	mg/kg	05.27.19 22:32	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	121		121		70-135	%	05.27.19 22:32
o-Terphenyl	118		105		70-135	%	05.27.19 22:32

Analytical Method: BTEX by EPA 8021B

Seq Number: 3090876

MB Sample Id: 7679047-1-BLK

Matrix: Solid

LCS Sample Id: 7679047-1-BKS

Prep Method: SW5030B

Date Prep: 05.31.19

LCSD Sample Id: 7679047-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000387	0.101	0.111	110	0.120	121	70-130	8	35	mg/kg	05.31.19 15:00	
Toluene	<0.000458	0.101	0.105	104	0.113	114	70-130	7	35	mg/kg	05.31.19 15:00	
Ethylbenzene	<0.000568	0.101	0.114	113	0.122	123	70-130	7	35	mg/kg	05.31.19 15:00	
m,p-Xylenes	<0.00102	0.201	0.237	118	0.254	128	70-130	7	35	mg/kg	05.31.19 15:00	
o-Xylene	<0.000346	0.101	0.114	113	0.123	124	70-130	8	35	mg/kg	05.31.19 15:00	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	93		107		109		70-130	%	05.31.19 15:00
4-Bromofluorobenzene	84		95		97		70-130	%	05.31.19 15:00

Analytical Method: BTEX by EPA 8021B

Seq Number: 3090878

MB Sample Id: 7679048-1-BLK

Matrix: Solid

LCS Sample Id: 7679048-1-BKS

Prep Method: SW5030B

Date Prep: 05.31.19

LCSD Sample Id: 7679048-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000384	0.0998	0.105	105	0.113	112	70-130	7	35	mg/kg	06.01.19 00:49	
Toluene	<0.000455	0.0998	0.0974	98	0.105	104	70-130	8	35	mg/kg	06.01.19 00:49	
Ethylbenzene	<0.000564	0.0998	0.103	103	0.110	109	70-130	7	35	mg/kg	06.01.19 00:49	
m,p-Xylenes	<0.00101	0.200	0.212	106	0.227	112	70-130	7	35	mg/kg	06.01.19 00:49	
o-Xylene	<0.000344	0.0998	0.103	103	0.113	112	70-130	9	35	mg/kg	06.01.19 00:49	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	93		103		107		70-130	%	06.01.19 00:49
4-Bromofluorobenzene	82		91		98		70-130	%	06.01.19 00:49

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

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

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 625373

LT Environmental, Inc. Corral Canyon Fed #1H

Analytical Method: BTEX by EPA 8021B

Seq Number: 3090879

MB Sample Id: 7679049-1-BLK

Matrix: Solid

LCS Sample Id: 7679049-1-BKS

Prep Method: SW5030B

Date Prep: 05.31.19

LCSD Sample Id: 7679049-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000387	0.101	0.104	103	0.103	103	70-130	1	35	mg/kg	06.01.19 22:34	
Toluene	<0.000458	0.101	0.0966	96	0.0952	95	70-130	1	35	mg/kg	06.01.19 22:34	
Ethylbenzene	<0.000568	0.101	0.101	100	0.0998	100	70-130	1	35	mg/kg	06.01.19 22:34	
m,p-Xylenes	<0.00102	0.201	0.207	103	0.205	103	70-130	1	35	mg/kg	06.01.19 22:34	
o-Xylene	<0.000346	0.101	0.103	102	0.104	104	70-130	1	35	mg/kg	06.01.19 22:34	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	93		105		108		70-130	%	06.01.19 22:34
4-Bromofluorobenzene	78		93		97		70-130	%	06.01.19 22:34

Analytical Method: BTEX by EPA 8021B

Seq Number: 3090876

Parent Sample Id: 626056-001

Matrix: Soil

MS Sample Id: 626056-001 S

Prep Method: SW5030B

Date Prep: 05.31.19

MSD Sample Id: 626056-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	0.000661	0.101	0.0967	95	0.0918	92	70-130	5	35	mg/kg	05.31.19 15:39	
Toluene	0.000461	0.101	0.0902	89	0.0843	84	70-130	7	35	mg/kg	05.31.19 15:39	
Ethylbenzene	<0.000569	0.101	0.0955	95	0.0878	88	70-130	8	35	mg/kg	05.31.19 15:39	
m,p-Xylenes	<0.00102	0.202	0.197	98	0.180	90	70-130	9	35	mg/kg	05.31.19 15:39	
o-Xylene	0.000451	0.101	0.0948	93	0.0865	86	70-130	9	35	mg/kg	05.31.19 15:39	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	109		113		70-130	%	05.31.19 15:39
4-Bromofluorobenzene	100		93		70-130	%	05.31.19 15:39

Analytical Method: BTEX by EPA 8021B

Seq Number: 3090878

Parent Sample Id: 625373-003

Matrix: Soil

MS Sample Id: 625373-003 S

Prep Method: SW5030B

Date Prep: 05.31.19

MSD Sample Id: 625373-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	0.000641	0.0992	0.109	109	0.105	104	70-130	4	35	mg/kg	06.01.19 01:27	
Toluene	0.000681	0.0992	0.101	101	0.0984	98	70-130	3	35	mg/kg	06.01.19 01:27	
Ethylbenzene	0.000661	0.0992	0.107	107	0.103	102	70-130	4	35	mg/kg	06.01.19 01:27	
m,p-Xylenes	0.00195	0.198	0.220	110	0.213	106	70-130	3	35	mg/kg	06.01.19 01:27	
o-Xylene	0.00131	0.0992	0.109	109	0.106	105	70-130	3	35	mg/kg	06.01.19 01:27	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		109		70-130	%	06.01.19 01:27
4-Bromofluorobenzene	103		104		70-130	%	06.01.19 01:27

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 625373

LT Environmental, Inc. Corral Canyon Fed #1H

Analytical Method: BTEX by EPA 8021B

Seq Number: 3090879

Parent Sample Id: 625373-023

Matrix: Soil

MS Sample Id: 625373-023 S

Prep Method: SW5030B

Date Prep: 05.31.19

MSD Sample Id: 625373-023 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	0.000418	0.100	0.0722	72	0.0843	84	70-130	15	35	mg/kg	06.01.19 23:12	
Toluene	0.000488	0.100	0.0678	67	0.0778	77	70-130	14	35	mg/kg	06.01.19 23:12	X
Ethylbenzene	<0.000567	0.100	0.0728	73	0.0817	82	70-130	12	35	mg/kg	06.01.19 23:12	
m,p-Xylenes	<0.00102	0.201	0.151	75	0.167	84	70-130	10	35	mg/kg	06.01.19 23:12	
o-Xylene	0.000438	0.100	0.0762	76	0.0834	83	70-130	9	35	mg/kg	06.01.19 23:12	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	109		107		70-130	%	06.01.19 23:12
4-Bromofluorobenzene	100		99		70-130	%	06.01.19 23:12

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



105573

Page 1 of 3



Chain of Custody

Work Order No: 425873

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

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Page 2 of 3

Hobbs, NM (575) 392-7550 Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000

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:	bbeill@ltenv.com

Project Name:	Emil Canyon Fed #114	Turn Around	
Project Number:	28P-5201	Routine	☒
P.O. Number:		Rush:	
Sampler's Name:	Benjamin Beill	Due Date:	

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

Project Name:	Emil Canyon Fed #114	Turn Around	
Project Number:	28P-5201	Routine	☒
P.O. Number:		Rush:	
Sampler's Name:	Benjamin Beill	Due Date:	

Temp Blank:	Yes ☐ No ☒	Wet Ice:	Yes ☐ No ☒
Temperature (°C):	5.8/10.4	Thermometer:	110
Received Intact:	Yes ☒ No ☐	Correction Factor:	0.0
Cooler Custody Seals:	Yes ☒ No ☐ N/A	Total Containers:	
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
BH08 B	S	5/19/19	1655	6'	1	X	X	X		
BH08 C			1715	20'		X	X	X		
BH08 D			1730	25'		X	X	X		
BH09			1500	1'		X	X	X		
BH09 A			1505	3'		X	X	X		
BH09 B			1510	6'		X	X	X		
BH09 C			1520	15'		X	X	X		
BH09 D			1535	19'		X	X	X		
BH10			1545	1'		X	X	X		
BH10 A			1550	3'		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
		05-21-19 17:21			5/23/19
3			4		
5			6		

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334
Midland, TX (432-704-5440) EL Paso, TX (915)585-3443 Lubbock, TX (806)794-1296

Hobbs, NM (575-392-7550) Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813-620-2000)

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Page _____ of _____

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:	bbelill@ltenv.com

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

Project Name:	Corn Canyon Tel. #114	Turn Around
Project Number:	2RR-5201	Routine ☐
P.O. Number:		Rush:
Sampler's Name:	Benjamin Bellill	Due Date:
SAMPLE RECEIPT		
Temperature (°C):	0.864	Temp Blank: Yes No ☒ Wet Ice: Yes No ☒
Received Intact:	Yes No ☒	Thermometer ID: 70.2
Cooler Custody Seals:	Yes No N/A	Correction Factor:
Sample Custody Seals:	Yes No N/A	Total Containers:
Number of Containers		
EPA 8015)		
EPA 0=8021)		
le (EPA 300.0)		
TAT starts the day received by the lab, if received by 4:30pm		
		Work Order Notes

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number	TPH (E)	BTEX (C)	Chloride	Sample Comments
BH10 B	5	5/19/19	1555	8'	1	✓	✓	✓	
BH10 C	5		1600	20'		✓	✓	✓	
BH10 D			1610	22'		✓	✓	✓	
BH10 E			1615	25'		✓	✓	✓	
BH11		5/20/19	0935	1'		✓	✓	✓	
BH11 A			0945	3'		✓	✓	✓	
BH11 B			1000	20'		✓	✓	✓	
BH11 C			1020	30'		✓	✓	✓	
BH11 D			1030	37'		✓	✓	✓	

Total	200.7 / 6010	200.8 / 6020:	Circle Method(s) and Metals(s) to be analyzed																											
8RCRA	13PPM	Texas 11	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	SiO ₂	Na	Sr	Ti	Sn	U	V	Zn
TCLP / SPLP 6010:			8RCRA	Sb	As	Ba	Be	Cd	Cr	Co	Cu	Pb	Mn	Mo	Ni	Se	Ag	Ti	U											
			1631 / 245.1 / 7470 / 7471 : Hq																											

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
		05-21-17 17:21			5/23/19 11:15

ORIGIN ID: CA0A (281) 240-4200
 SAMPLE CUSTODY
 XENCO LABORATORIES NM
 1089 N CANAL ST
 CARLSBAD, NM 88220
 UNITED STATES US
TO SAMPLE RECEIVING

SHIP DATE: 22MAY19
 ACTWGT: 33.00 LB
 CAD: 114488676/MET4100
 DIMS: 13x9x9 IN
BILL SENDER

3600 S COUNTY ROAD 1276

MIDLAND TX 79706

REF: (432) 704-5440

INV:

PO:

DEPT:



J191019019701uv

565J1/D66C/23AD

TRK# 7752 8801 1800
 0201

41 MAFA

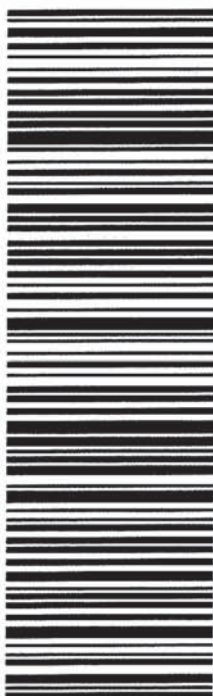
TX-US

LBB

79706

HLD

THU - 23 MAY HOLD
PRIORITY OVERNIGHT



After printing this label:

1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

Date/ Time Received: 05/23/2019 11:15:00 AM

Work Order #: 625373

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)?	.4
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	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)?	N/A
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Brianna Teel

Date: 05/23/2019

Checklist reviewed by:

Jessica Kramer

Date: 05/27/2019

Analytical Report 625609

for
LT Environmental, Inc.

Project Manager: Dan Moir

Corral Canyon Fed #1H

2RP-5201

06-JUN-19

Collected By: Client



**1211 W. Florida Ave
Midland TX 79701**

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)



06-JUN-19

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **625609**

Corral Canyon Fed #1H

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) 625609. 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. 625609 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.

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



Sample Cross Reference 625609



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
WS01	W	05-22-19 08:45	57 ft	625609-001



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Corral Canyon Fed #1H

Project ID: 2RP-5201
Work Order Number(s): 625609

Report Date: 06-JUN-19
Date Received: 05/28/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None



Certificate of Analysis Summary 625609

LT Environmental, Inc., Arvada, CO
Project Name: Corral Canyon Fed #1H



Project Id: 2RP-5201
Contact: Dan Moir
Project Location: Delaware Basin

Date Received in Lab: Tue May-28-19 07:36 am
Report Date: 06-JUN-19
Project Manager: Jessica Kramer

Analysis Requested		Lab Id:	625609-001				
		Field Id:	WS01				
		Depth:	57 ft				
		Matrix:	WATER				
		Sampled:	May-22-19 08:45				
BTEX by EPA 8021B SUB: T104704219-19-21		Extracted:	Jun-04-19 17:00				
		Analyzed:	Jun-05-19 00:50				
		Units/RL:	mg/L RL				
	Benzene		<0.00200 0.00200				
	Toluene		<0.00200 0.00200				
	Ethylbenzene		<0.00200 0.00200				
	m,p-Xylenes		<0.00400 0.00400				
o-Xylene			<0.00200 0.00200				
	Total Xylenes		<0.00200 0.00200				
	Total BTEX		<0.00200 0.00200				
Chloride by EPA 300		Extracted:	May-28-19 12:50				
		Analyzed:	May-28-19 21:57				
		Units/RL:	mg/L RL				
Chloride			8400 50.0				
TDS by SM2540C SUB: T104704215-19-29		Extracted:					
		Analyzed:	May-29-19 08:00				
		Units/RL:	mg/L RL				
Total Dissolved Solids			14200 5.00				

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%

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analytical Results 625609



LT Environmental, Inc., Arvada, CO

Corral Canyon Fed #1H

Sample Id: **WS01**
Lab Sample Id: 625609-001

Matrix: Water
Date Collected: 05.22.19 08.45

Date Received: 05.28.19 07.36
Sample Depth: 57 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090407

Date Prep: 05.28.19 12.50

Prep Method: E300P

% Moisture:

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8400	50.0	mg/L	05.28.19 21.57		100

Analytical Method: TDS by SM2540C

Tech: JCL

Analyst: JCL

Seq Number: 3090516

% Moisture:

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total Dissolved Solids	1642222	14200	5.00	mg/L	05.29.19 08.00		1

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091265

Date Prep: 06.04.19 17.00

Prep Method: SW5030B

% Moisture:

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	06.05.19 00.50	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	06.05.19 00.50	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	06.05.19 00.50	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/L	06.05.19 00.50	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	06.05.19 00.50	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	06.05.19 00.50	U	1
Total BTEX		<0.00200	0.00200	mg/L	06.05.19 00.50	U	1

Surrogate

1,4-Difluorobenzene
4-Bromofluorobenzene

Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
540-36-3	88	%	70-130	06.05.19 00.50	
460-00-4	85	%	70-130	06.05.19 00.50	

- 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 625609

LT Environmental, Inc. Corral Canyon Fed #1H

Analytical Method: Chloride by EPA 300

Seq Number: 3090407

MB Sample Id: 7678647-1-BLK

Matrix: Water

LCS Sample Id: 7678647-1-BKS

Prep Method: E300P

Date Prep: 05.28.19

LCSD Sample Id: 7678647-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.0858	25.0	24.0	96	24.0	96	90-110	0	20	mg/L	05.28.19 21:19	

Analytical Method: Chloride by EPA 300

Seq Number: 3090407

Parent Sample Id: 625628-001

Matrix: Drinking Water

MS Sample Id: 625628-001 S

Prep Method: E300P

Date Prep: 05.28.19

MSD Sample Id: 625628-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	4.71	25.0	28.4	95	28.4	95	90-110	0	20	mg/L	05.28.19 21:42	

Analytical Method: TDS by SM2540C

Seq Number: 3090516

MB Sample Id: 3090516-1-BLK

Matrix: Water

LCS Sample Id: 3090516-1-BKS

LCSD Sample Id: 3090516-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Total Dissolved Solids	<5.00	1000	995	100	999	100	80-120	0	10	mg/L	05.29.19 08:00	

Analytical Method: TDS by SM2540C

Seq Number: 3090516

Parent Sample Id: 625377-001

Matrix: Water

MD Sample Id: 625377-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Total Dissolved Solids	9910	9350	6	10	mg/L	05.29.19 08:00	

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 625609

LT Environmental, Inc. Corral Canyon Fed #1H

Analytical Method: BTEX by EPA 8021B

Seq Number: 3091265

MB Sample Id: 7679261-1-BLK

Matrix: Water

LCS Sample Id: 7679261-1-BKS

Prep Method: SW5030B

Date Prep: 06.04.19

LCSD Sample Id: 7679261-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000408	0.100	0.0864	86	0.0952	95	70-130	10	25	mg/L	06.04.19 22:54	
Toluene	<0.000367	0.100	0.0832	83	0.0895	90	70-130	7	25	mg/L	06.04.19 22:54	
Ethylbenzene	<0.000657	0.100	0.0900	90	0.0957	96	70-130	6	25	mg/L	06.04.19 22:54	
m,p-Xylenes	<0.000630	0.200	0.183	92	0.195	98	70-130	6	25	mg/L	06.04.19 22:54	
o-Xylene	<0.000642	0.100	0.0901	90	0.0977	98	70-130	8	25	mg/L	06.04.19 22:54	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	89		97		102		70-130	%	06.04.19 22:54
4-Bromofluorobenzene	83		96		106		70-130	%	06.04.19 22:54

Analytical Method: BTEX by EPA 8021B

Seq Number: 3091265

Parent Sample Id: 625609-001

Matrix: Water

MS Sample Id: 625609-001 S

Prep Method: SW5030B

Date Prep: 06.04.19

MSD Sample Id: 625609-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000408	0.100	0.0973	97	0.102	102	70-130	5	25	mg/L	06.04.19 23:33	
Toluene	0.000460	0.100	0.0918	91	0.0962	96	70-130	5	25	mg/L	06.04.19 23:33	
Ethylbenzene	<0.000657	0.100	0.0980	98	0.103	103	70-130	5	25	mg/L	06.04.19 23:33	
m,p-Xylenes	<0.000630	0.200	0.199	100	0.210	105	70-130	5	25	mg/L	06.04.19 23:33	
o-Xylene	<0.000642	0.100	0.0994	99	0.104	104	70-130	5	25	mg/L	06.04.19 23:33	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		105		70-130	%	06.04.19 23:33
4-Bromofluorobenzene	105		101		70-130	%	06.04.19 23:33

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

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

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

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

Page 1 of 1
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Inter-Office Shipment

IOS Number : 40012

Date/Time: 05.28.2019 09:14

Lab# From: Midland

Lab# To: Houston

Created by: Brianna Teel

Delivery Priority:

Air Bill No.: 775327839574

Please send report to: Jessica Kramer

Address: 1211 W. Florida Ave

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
625609-001	W	WS01	05.22.2019 08:45	SM2540C	TDS by SM2540C	06.03.2019	05.29.2019 08:45	JKR	TDS	

Inter Office Shipment or Sample Comments:

Relinquished By:

Brianna Teel

Date Relinquished: 05.28.2019

Received By:

Monica Shakhshir

Date Received: 05.29.2019 09:55

Cooler Temperature: 2.9



Inter-Office Shipment

IOS Number **40646**

Date/Time: 06/05/19 10:23

Lab# From: **Midland**

Lab# To: **Lubbock**

Created by: Jessica Kramer

Delivery Priority:

Air Bill No.:

Please send report to: Jessica Kramer

Address: 1211 W. Florida Ave

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
625609-001	W	WS01	05/22/19 08:45	SW8021B	BTEX by EPA 8021B	06/03/19	06/05/19 08:45	JKR	BR4FBZ BZ BZME EBZ X	

Inter Office Shipment or Sample Comments:

Relinquished By:

Jessica Kramer

Jessica Kramer

Received By:

Date Relinquished:

06/05/2019

Date Received:

Cooler Temperature:



XENCO Laboratories



Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 40012

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : HOU-068

Sent By: Brianna Teel

Date Sent: 05/28/2019 09:14 AM

Received By: Monica Shakhshir

Date Received: 05/29/2019 09:55 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	2.9
#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:

Monica Shakhshir

Date: 05/29/2019



XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

Date/ Time Received: 05/28/2019 07:36:00 AM

Work Order #: 625609

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

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

Analyst: BT

PH Device/Lot#: A032690

Checklist completed by:

Brianna Teel

Brianna Teel

Date: 05/28/2019

Checklist reviewed by:

Jessica Kramer

Jessica Kramer

Date: 05/28/2019

Analytical Report 631660

for
LT Environmental, Inc.

Project Manager: Dan Moir
Corral Canyon 1H (2RP-5201)

012919018

01-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)



01-AUG-19

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **631660**

Corral Canyon 1H (2RP-5201)

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) 631660. 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. 631660 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 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW03	S	07-19-19 13:00	1 ft	631660-001
MW03A	S	07-19-19 13:05	5 ft	631660-002
MW03B	S	07-19-19 13:10	15 ft	631660-003
MW03C	S	07-19-19 13:30	20 ft	631660-004
MW03D	S	07-19-19 13:45	30 ft	631660-005
MW03E	S	07-19-19 14:10	38 ft	631660-006
MW03F	S	07-19-19 14:15	45 ft	631660-007
MW03G	S	07-19-19 14:30	55 ft	631660-008
MW03H	S	07-19-19 14:45	65 ft	631660-009
MW03I	S	07-19-19 15:00	72 ft	631660-010
MW01	S	07-19-19 16:10	1 ft	631660-011
MW01A	S	07-19-19 16:15	5 ft	631660-012
MW01B	S	07-19-19 16:55	20 ft	631660-013
MW01C	S	07-19-19 17:05	30 ft	631660-014
MW01D	S	07-19-19 17:20	40 ft	631660-015
MW01E	S	07-19-19 17:30	50 ft	631660-016
MW01F	S	07-20-19 08:10	51 ft	631660-017
MW01G	S	07-20-19 08:30	55 ft	631660-018
MW01H	S	07-20-19 08:40	60 ft	631660-019
MW01I	S	07-20-19 08:45	65 ft	631660-020
MW05	S	07-20-19 10:10	1 ft	631660-021
MW05A	S	07-20-19 10:30	10 ft	631660-022
MW05B	S	07-20-19 10:37	20 ft	631660-023
MW05C	S	07-20-19 10:40	25 ft	631660-024
MW05D	S	07-20-19 11:00	35 ft	631660-025
MW05E	S	07-20-19 12:00	46 ft	631660-026
MW05F	S	07-20-19 12:30	55 ft	631660-027
MW05G	S	07-20-19 12:50	62 ft	631660-028
MW05H	S	07-20-19 12:55	67 ft	631660-029
MW04	S	07-20-19 14:00	1 ft	631660-030
MW04A	S	07-20-19 14:10	10 ft	631660-031
MW04B	S	07-20-19 14:20	15 ft	631660-032
MW04C	S	07-20-19 14:40	25 ft	631660-033
MW04D	S	07-20-19 15:00	35 ft	631660-034
MW04E	S	07-20-19 15:45	45 ft	631660-035
MW04F	S	07-20-19 16:25	55 ft	631660-036
MW04G	S	07-21-19 08:30	65 ft	631660-037
MW02	S	07-21-19 09:05	1 ft	631660-038
MW02A	S	07-21-19 09:15	10 ft	631660-039
MW02B	S	07-21-19 09:25	15 ft	631660-040
MW02C	S	07-21-19 10:00	24 ft	631660-041
MW02D	S	07-21-19 10:15	34 ft	631660-042
MW02E	S	07-21-19 10:50	44 ft	631660-043



Sample Cross Reference 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

MW02F	S	07-21-19 10:55	49 ft	631660-044
MW02G	S	07-21-19 12:10	60 ft	631660-045
MW02H	S	07-21-19 12:30	70 ft	631660-046



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *Corral Canyon 1H (2RP-5201)*

Project ID: 012919018
Work Order Number(s): 631660

Report Date: 01-AUG-19
Date Received: 07/22/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3096731 TPH by SW8015 Mod

Surrogate o-Terphenyl recovered below QC limits. Samples affected are: 7682996-1-BLK.

Batch: LBA-3096781 BTEX by EPA 8021B

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

Batch: LBA-3096809 TPH by SW8015 Mod

Surrogate o-Terphenyl recovered below QC limits. Samples affected are: 7682997-1-BLK, 631660-002, 631660-004, 631660-005, 631660-007, 631660-008, 631660-009, 631660-010, 631660-003, 631660-001, 631660-006.

Batch: LBA-3096811 TPH by SW8015 Mod

Surrogate o-Terphenyl recovered below QC limits. Matrix interferences is suspected

Samples affected are: 631660-011, 631660-025, 631660-013, 631660-014, 631660-015, 631660-016, 631660-017, 631660-018, 631660-019, 631660-020, 631660-023, 631660-026, 631660-027, 631660-028, 631660-029, 631660-030, 631660-021, 631660-022, 631660-024, 631660-012.

Batch: LBA-3096816 BTEX by EPA 8021B

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

Batch: LBA-3096818 BTEX by EPA 8021B

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



Certificate of Analysis Summary 631660
LT Environmental, Inc., Arvada, CO
Project Name: Corral Canyon 1H (2RP-5201)

Project Id: 012919018
Contact: Dan Moir
Project Location: Delaware Basin

Date Received in Lab: Mon Jul-22-19 09:25 am
Report Date: 01-AUG-19
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	631660-001	631660-002	631660-003	631660-004	631660-005	631660-006
	Field Id:	MW03	MW03A	MW03B	MW03C	MW03D	MW03E
	Depth:	1- ft	5- ft	15- ft	20- ft	30- ft	38- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Jul-19-19 13:00	Jul-19-19 13:05	Jul-19-19 13:10	Jul-19-19 13:30	Jul-19-19 13:45	Jul-19-19 14:10
BTEX by EPA 8021B SUB: T104704400-18-16	Extracted:	Jul-25-19 13:11	Jul-25-19 13:11	Jul-25-19 13:11	Jul-25-19 13:11	Jul-25-19 13:11	Jul-25-19 13:11
	Analyzed:	Jul-27-19 00:30	Jul-27-19 00:50	Jul-27-19 01:10	Jul-27-19 01:30	Jul-27-19 01:51	Jul-27-19 02:11
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
		<0.00213 0.00213	<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198	<0.00202 0.00202	<0.00201 0.00201
		<0.00213 0.00213	<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198	<0.00202 0.00202	<0.00201 0.00201
		<0.00213 0.00213	<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198	<0.00202 0.00202	<0.00201 0.00201
Chloride by EPA 300 SUB: T104704400-18-16	Extracted:	Jul-23-19 14:20	Jul-23-19 14:20	Jul-23-19 15:00	Jul-23-19 15:00	Jul-23-19 15:00	Jul-23-19 15:00
	Analyzed:	Jul-23-19 19:19	Jul-23-19 19:25	Jul-23-19 16:56	Jul-23-19 17:02	Jul-23-19 17:07	Jul-23-19 17:12
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
		581 4.95	886 4.95	1670 24.8	1970 25.1	1620 25.3	1150 5.05
		Jul-28-19 08:00	Jul-28-19 08:00	Jul-28-19 08:00	Jul-28-19 08:00	Jul-28-19 08:00	Jul-28-19 08:00
		Jul-28-19 16:12	Jul-28-19 16:36	Jul-29-19 13:44	Jul-28-19 17:24	Jul-28-19 17:48	Jul-28-19 18:12
TPH by SW8015 Mod SUB: T104704400-18-16	Extracted:	Jul-28-19 08:00	Jul-28-19 08:00	Jul-28-19 08:00	Jul-28-19 08:00	Jul-28-19 08:00	Jul-28-19 08:00
	Analyzed:	Jul-28-19 16:12	Jul-28-19 16:36	Jul-29-19 13:44	Jul-28-19 17:24	Jul-28-19 17:48	Jul-28-19 18:12
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
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
		<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	<15.0 15.0	<15.0 15.0
		<15.0 15.0	<15.0 15.0	<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	<15.0 15.0	<15.0 15.0
		<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	<15.0 15.0	<15.0 15.0
		<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 GRO-DRO		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
		<15.0 15.0	<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 631660
LT Environmental, Inc., Arvada, CO
Project Name: Corral Canyon 1H (2RP-5201)

Project Id: 012919018
Contact: Dan Moir
Project Location: Delaware Basin

Date Received in Lab: Mon Jul-22-19 09:25 am
Report Date: 01-AUG-19
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	631660-007	631660-008	631660-009	631660-010	631660-011	631660-012
	Field Id:	MW03F	MW03G	MW03H	MW03I	MW01	MW01A
	Depth:	45- ft	55- ft	65- ft	72- ft	1- ft	5- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Jul-19-19 14:15	Jul-19-19 14:30	Jul-19-19 14:45	Jul-19-19 15:00	Jul-19-19 16:10	Jul-19-19 16:15
BTEX by EPA 8021B SUB: T104704400-18-16	Extracted:	Jul-25-19 13:11	Jul-25-19 13:11	Jul-25-19 13:11	Jul-25-19 13:11	Jul-25-19 13:11	Jul-25-19 13:11
	Analyzed:	Jul-27-19 02:31	Jul-27-19 02:51	Jul-27-19 03:11	Jul-27-19 03:31	Jul-27-19 04:50	Jul-27-19 05:10
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
		<0.00200 0.00200	<0.00202 0.00202	<0.00198 0.00198	<0.00202 0.00202	<0.00202 0.00202	<0.00199 0.00199
		<0.00200 0.00200	<0.00202 0.00202	<0.00198 0.00198	<0.00202 0.00202	<0.00202 0.00202	<0.00199 0.00199
Chloride by EPA 300 SUB: T104704400-18-16	Extracted:	Jul-23-19 15:00	Jul-23-19 15:00	Jul-23-19 15:00	Jul-23-19 15:00	Jul-23-19 15:00	Jul-23-19 15:00
	Analyzed:	Jul-23-19 17:28	Jul-23-19 17:34	Jul-23-19 17:39	Jul-23-19 17:44	Jul-23-19 16:40	Jul-23-19 17:55
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
		1020 4.98	1350 25.0	24.6 5.00	1180 5.00	99.2 4.99	329 4.97
		Jul-28-19 08:00	Jul-28-19 08:00	Jul-28-19 08:00	Jul-28-19 08:00	Jul-28-19 10:00	Jul-28-19 10:00
TPH by SW8015 Mod SUB: T104704400-18-16	Extracted:	Jul-29-19 14:08	Jul-28-19 19:00	Jul-28-19 19:23	Jul-28-19 19:47	Jul-28-19 21:47	Jul-28-19 22:59
	Analyzed:						
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
		<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<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
Gasoline Range Hydrocarbons (GRO)	Extracted:						
	Analyzed:						
	Units/RL:						
		<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<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
Diesel Range Organics (DRO)	Extracted:						
	Analyzed:						
	Units/RL:						
		<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<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
Motor Oil Range Hydrocarbons (MRO)	Extracted:						
	Analyzed:						
	Units/RL:						
		<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<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	Extracted:						
	Analyzed:						
	Units/RL:						
		<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<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	Extracted:						
	Analyzed:						
	Units/RL:						
		<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<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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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 631660
LT Environmental, Inc., Arvada, CO
Project Name: Corral Canyon 1H (2RP-5201)

Project Id: 012919018
Contact: Dan Moir
Project Location: Delaware Basin

Date Received in Lab: Mon Jul-22-19 09:25 am
Report Date: 01-AUG-19
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	631660-013	631660-014	631660-015	631660-016	631660-017	631660-018
	Field Id:	MW01B	MW01C	MW01D	MW01E	MW01F	MW01G
	Depth:	20- ft	30- ft	40- ft	50- ft	51- ft	55- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Jul-19-19 16:55	Jul-19-19 17:05	Jul-19-19 17:20	Jul-19-19 17:30	Jul-20-19 08:10	Jul-20-19 08:30
BTEX by EPA 8021B SUB: T104704400-18-16	Extracted:	Jul-25-19 13:11	Jul-25-19 13:11	Jul-25-19 13:11	Jul-25-19 13:11	Jul-25-19 13:11	Jul-25-19 13:11
	Analyzed:	Jul-27-19 05:30	Jul-27-19 05:50	Jul-27-19 06:10	Jul-27-19 06:31	Jul-27-19 06:51	Jul-27-19 07:11
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
		<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202
		<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202
		<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202
Chloride by EPA 300 SUB: T104704400-18-16	Extracted:	Jul-23-19 15:00	Jul-23-19 15:00	Jul-23-19 15:00	Jul-23-19 15:00	Jul-23-19 15:00	Jul-23-19 15:00
	Analyzed:	Jul-23-19 17:50	Jul-23-19 18:11	Jul-23-19 18:16	Jul-23-19 18:32	Jul-23-19 18:38	Jul-23-19 18:43
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
		1240 5.02	1090 25.3	1610 25.3	1930 25.3	1730 25.0	1900 24.9
		Jul-28-19 10:00	Jul-28-19 10:00	Jul-28-19 10:00	Jul-28-19 10:00	Jul-28-19 10:00	Jul-28-19 10:00
		Jul-28-19 23:23	Jul-28-19 23:46	Jul-29-19 00:10	Jul-29-19 00:34	Jul-29-19 00:58	Jul-29-19 01:21
TPH by SW8015 Mod SUB: T104704400-18-16	Extracted:	Jul-28-19 10:00	Jul-28-19 10:00	Jul-28-19 10:00	Jul-28-19 10:00	Jul-28-19 10:00	Jul-28-19 10:00
	Analyzed:	Jul-28-19 23:23	Jul-28-19 23:46	Jul-29-19 00:10	Jul-29-19 00:34	Jul-29-19 00:58	Jul-29-19 01:21
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Gasoline Range Hydrocarbons (GRO)	Extracted:	Jul-28-19 10:00	Jul-28-19 10:00	Jul-28-19 10:00	Jul-28-19 10:00	Jul-28-19 10:00	Jul-28-19 10:00
	Analyzed:	Jul-28-19 23:23	Jul-28-19 23:46	Jul-29-19 00:10	Jul-29-19 00:34	Jul-29-19 00:58	Jul-29-19 01:21
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
		<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)	Extracted:	Jul-28-19 10:00	Jul-28-19 10:00	Jul-28-19 10:00	Jul-28-19 10:00	Jul-28-19 10:00	Jul-28-19 10:00
	Analyzed:	Jul-28-19 23:23	Jul-28-19 23:46	Jul-29-19 00:10	Jul-29-19 00:34	Jul-29-19 00:58	Jul-29-19 01:21
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Motor Oil Range Hydrocarbons (MRO)	Extracted:	Jul-28-19 10:00	Jul-28-19 10:00	Jul-28-19 10:00	Jul-28-19 10:00	Jul-28-19 10:00	Jul-28-19 10:00
	Analyzed:	Jul-28-19 23:23	Jul-28-19 23:46	Jul-29-19 00:10	Jul-29-19 00:34	Jul-29-19 00:58	Jul-29-19 01:21
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
		<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	Extracted:	Jul-28-19 10:00	Jul-28-19 10:00	Jul-28-19 10:00	Jul-28-19 10:00	Jul-28-19 10:00	Jul-28-19 10:00
	Analyzed:	Jul-28-19 23:23	Jul-28-19 23:46	Jul-29-19 00:10	Jul-29-19 00:34	Jul-29-19 00:58	Jul-29-19 01:21
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
		<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 GRO-DRO	Extracted:	Jul-28-19 10:00	Jul-28-19 10:00	Jul-28-19 10:00	Jul-28-19 10:00	Jul-28-19 10:00	Jul-28-19 10:00
	Analyzed:	Jul-28-19 23:23	Jul-28-19 23:46	Jul-29-19 00:10	Jul-29-19 00:34	Jul-29-19 00:58	Jul-29-19 01:21
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 631660
LT Environmental, Inc., Arvada, CO
Project Name: Corral Canyon 1H (2RP-5201)

Project Id: 012919018
Contact: Dan Moir
Project Location: Delaware Basin

Date Received in Lab: Mon Jul-22-19 09:25 am
Report Date: 01-AUG-19
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	631660-019	631660-020	631660-021	631660-022	631660-023	631660-024
	Field Id:	MW01H	MW01I	MW05	MW05A	MW05B	MW05C
	Depth:	60- ft	65- ft	1- ft	10- ft	20- ft	25- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Jul-20-19 08:40	Jul-20-19 08:45	Jul-20-19 10:10	Jul-20-19 10:30	Jul-20-19 10:37	Jul-20-19 10:40
BTEX by EPA 8021B SUB: T104704400-18-16	Extracted:	Jul-25-19 13:11	Jul-25-19 13:11	Jul-25-19 14:40	Jul-25-19 14:40	Jul-25-19 14:40	Jul-25-19 14:40
	Analyzed:	Jul-27-19 07:31	Jul-27-19 07:51	Jul-26-19 13:30	Jul-26-19 13:50	Jul-26-19 14:10	Jul-26-19 14:30
	Units/RL:	mg/kg RL <0.00198 0.00198	mg/kg RL <0.00202 0.00202	mg/kg RL <0.00198 0.00198	mg/kg RL <0.00199 0.00199	mg/kg RL <0.00199 0.00199	mg/kg RL <0.00199 0.00199
		<0.00198 0.00198	<0.00202 0.00202	<0.00198 0.00198	<0.00199 0.00199	<0.00199 0.00199	<0.00199 0.00199
		<0.00198 0.00198	<0.00202 0.00202	<0.00198 0.00198	<0.00199 0.00199	<0.00199 0.00199	<0.00199 0.00199
		<0.00396 0.00396	<0.00403 0.00403	<0.00397 0.00397	<0.00398 0.00398	<0.00398 0.00398	<0.00398 0.00398
Chloride by EPA 300 SUB: T104704400-18-16	Extracted:	Jul-23-19 15:00	Jul-23-19 15:00	Jul-23-19 15:00	Jul-23-19 15:00	Jul-23-19 16:00	Jul-23-19 16:00
	Analyzed:	Jul-23-19 18:48	Jul-23-19 18:54	Jul-23-19 18:59	Jul-23-19 19:05	Jul-23-19 21:45	Jul-23-19 21:51
	Units/RL:	mg/kg RL 1190 5.00	mg/kg RL 1420 4.98	mg/kg RL 285 5.01	mg/kg RL 703 4.95	mg/kg RL 1130 25.2	mg/kg RL 1210 4.99
		mg/kg RL 1190 5.00	mg/kg RL 1420 4.98	mg/kg RL 285 5.01	mg/kg RL 703 4.95	mg/kg RL 1130 25.2	mg/kg RL 1210 4.99
TPH by SW8015 Mod SUB: T104704400-18-16	Extracted:	Jul-28-19 10:00	Jul-28-19 10:00	Jul-28-19 10:00	Jul-28-19 10:00	Jul-28-19 10:00	Jul-28-19 10:00
	Analyzed:	Jul-29-19 01:45	Jul-29-19 02:09	Jul-29-19 14:32	Jul-29-19 14:55	Jul-29-19 08:23	Jul-29-19 15:20
	Units/RL:	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0
		mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0
		mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0
		mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0
Gasoline Range Hydrocarbons (GRO)		mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0
		mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0
Diesel Range Organics (DRO)		mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0
		mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0
Motor Oil Range Hydrocarbons (MRO)		mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0
		mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0
Total TPH		mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0
		mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0
Total GRO-DRO		mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0
		mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 631660
LT Environmental, Inc., Arvada, CO
Project Name: Corral Canyon 1H (2RP-5201)

Project Id: 012919018
Contact: Dan Moir
Project Location: Delaware Basin

Date Received in Lab: Mon Jul-22-19 09:25 am
Report Date: 01-AUG-19
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	631660-025	631660-026	631660-027	631660-028	631660-029	631660-030
	Field Id:	MW05D	MW05E	MW05F	MW05G	MW05H	MW04
	Depth:	35- ft	46- ft	55- ft	62- ft	67- ft	1- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Jul-20-19 11:00	Jul-20-19 12:00	Jul-20-19 12:30	Jul-20-19 12:50	Jul-20-19 12:55	Jul-20-19 14:00
BTEX by EPA 8021B SUB: T104704400-18-16	Extracted:	Jul-25-19 14:40	Jul-25-19 14:40	Jul-25-19 14:40	Jul-25-19 14:40	Jul-25-19 14:40	Jul-25-19 14:40
	Analyzed:	Jul-26-19 14:50	Jul-26-19 15:10	Jul-26-19 15:30	Jul-26-19 15:51	Jul-26-19 16:32	Jul-26-19 16:52
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
		<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199
		<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199
Chloride by EPA 300 SUB: T104704400-18-16	Extracted:	Jul-23-19 16:00	Jul-23-19 16:00	Jul-23-19 16:00	Jul-23-19 16:00	Jul-23-19 16:00	Jul-23-19 16:00
	Analyzed:	Jul-23-19 21:57	Jul-23-19 22:04	Jul-23-19 21:26	Jul-23-19 22:23	Jul-23-19 22:29	Jul-23-19 22:54
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
		1380 25.3	1060 4.95	397 4.96	1150 5.02	1390 5.00	33.1 4.95
		Jul-28-19 10:00	Jul-28-19 10:00	Jul-28-19 10:00	Jul-28-19 10:00	Jul-28-19 10:00	Jul-28-19 10:00
TPH by SW8015 Mod SUB: T104704400-18-16	Extracted:	Jul-29-19 16:07	Jul-29-19 10:31	Jul-29-19 10:56	Jul-29-19 11:20	Jul-29-19 11:44	Jul-29-19 12:08
	Analyzed:						
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
		<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<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
Gasoline Range Hydrocarbons (GRO)	Extracted:						
	Analyzed:						
	Units/RL:						
		<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<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
Diesel Range Organics (DRO)	Extracted:						
	Analyzed:						
	Units/RL:						
		<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<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
Motor Oil Range Hydrocarbons (MRO)	Extracted:						
	Analyzed:						
	Units/RL:						
		<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<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	Extracted:						
	Analyzed:						
	Units/RL:						
		<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<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	Extracted:						
	Analyzed:						
	Units/RL:						
		<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<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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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 631660
LT Environmental, Inc., Arvada, CO
Project Name: Corral Canyon 1H (2RP-5201)

Project Id: 012919018
Contact: Dan Moir
Project Location: Delaware Basin

Date Received in Lab: Mon Jul-22-19 09:25 am
Report Date: 01-AUG-19
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	631660-031	631660-032	631660-033	631660-034	631660-035	631660-036
	Field Id:	MW04A	MW04B	MW04C	MW04D	MW04E	MW04F
	Depth:	10- ft	15- ft	25- ft	35- ft	45- ft	55- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Jul-20-19 14:10	Jul-20-19 14:20	Jul-20-19 14:40	Jul-20-19 15:00	Jul-20-19 15:45	Jul-20-19 16:25
BTEX by EPA 8021B SUB: T104704400-18-16	Extracted:	Jul-25-19 14:40	Jul-25-19 14:40	Jul-25-19 14:40	Jul-25-19 14:40	Jul-25-19 14:40	Jul-25-19 14:40
	Analyzed:	Jul-26-19 18:10	Jul-26-19 18:30	Jul-26-19 18:51	Jul-26-19 19:11	Jul-26-19 19:31	Jul-26-19 19:51
	Units/RL:	mg/kg RL <0.00201 0.00201	mg/kg RL <0.00201 0.00201	mg/kg RL <0.00200 0.00200	mg/kg RL <0.00200 0.00200	mg/kg RL <0.00198 0.00198	mg/kg RL <0.00202 0.00202
		<0.00201 0.00201	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00202 0.00202
		<0.00201 0.00201	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00202 0.00202
		<0.00402 0.00402	<0.00402 0.00402	<0.00400 0.00400	<0.00400 0.00400	<0.00397 0.00397	<0.00403 0.00403
Benzene		<0.00201 0.00201	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00202 0.00202
Toluene		<0.00201 0.00201	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00202 0.00202
Ethylbenzene		<0.00201 0.00201	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00202 0.00202
m,p-Xylenes		<0.00402 0.00402	<0.00402 0.00402	<0.00400 0.00400	<0.00400 0.00400	<0.00397 0.00397	<0.00403 0.00403
o-Xylene		<0.00201 0.00201	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00202 0.00202
Total Xylenes		<0.00201 0.00201	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00202 0.00202
Total BTEX		<0.00201 0.00201	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00202 0.00202
Chloride by EPA 300 SUB: T104704400-18-16	Extracted:	Jul-23-19 16:00	Jul-23-19 16:00	Jul-23-19 16:00	Jul-23-19 16:00	Jul-23-19 16:00	Jul-23-19 16:00
	Analyzed:	Jul-23-19 22:35	Jul-23-19 22:42	Jul-23-19 22:48	Jul-23-19 23:13	Jul-23-19 23:20	Jul-23-19 23:39
	Units/RL:	mg/kg RL 1300 4.99	mg/kg RL 1550 25.1	mg/kg RL 664 24.9	mg/kg RL 1770 25.3	mg/kg RL 1440 25.0	mg/kg RL 902 5.04
Chloride		mg/kg RL 1300 4.99	mg/kg RL 1550 25.1	mg/kg RL 664 24.9	mg/kg RL 1770 25.3	mg/kg RL 1440 25.0	mg/kg RL 902 5.04
TPH by SW8015 Mod SUB: T104704400-18-16	Extracted:	Jul-31-19 16:00	Jul-31-19 16:00	Jul-31-19 16:00	Jul-31-19 16:00	Jul-31-19 16:00	Jul-31-19 16:00
	Analyzed:	Jul-31-19 22:38	Jul-31-19 23:01	Jul-31-19 23:24	Jul-31-19 23:47	Aug-01-19 00:10	Aug-01-19 00:33
	Units/RL:	mg/kg RL <15.0 15.0	mg/kg RL <14.9 14.9	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0
Gasoline Range Hydrocarbons (GRO)		mg/kg RL <15.0 15.0	mg/kg RL <14.9 14.9	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <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
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
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

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 631660
LT Environmental, Inc., Arvada, CO
Project Name: Corral Canyon 1H (2RP-5201)

Project Id: 012919018
Contact: Dan Moir
Project Location: Delaware Basin

Date Received in Lab: Mon Jul-22-19 09:25 am
Report Date: 01-AUG-19
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	631660-037	631660-038	631660-039	631660-040	631660-041	631660-042
	Field Id:	MW04G	MW02	MW02A	MW02B	MW02C	MW02D
	Depth:	65- ft	1- ft	10- ft	15- ft	24- ft	34- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Jul-21-19 08:30	Jul-21-19 09:05	Jul-21-19 09:15	Jul-21-19 09:25	Jul-21-19 10:00	Jul-21-19 10:15
BTEX by EPA 8021B SUB: T104704400-18-16	Extracted:	Jul-25-19 14:40	Jul-25-19 14:40	Jul-25-19 14:40	Jul-25-19 14:40	Jul-26-19 10:30	Jul-26-19 10:30
	Analyzed:	Jul-26-19 20:11	Jul-26-19 20:31	Jul-26-19 20:51	Jul-26-19 21:12	Jul-27-19 11:09	Jul-27-19 11:29
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00202 0.00202
		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00202 0.00202
		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00202 0.00202
Chloride by EPA 300 SUB: T104704400-18-16	Extracted:	Jul-23-19 16:00	Jul-23-19 16:00	Jul-23-19 16:00	Jul-23-19 16:00	Jul-23-19 16:00	Jul-23-19 16:00
	Analyzed:	Jul-23-19 23:45	Jul-23-19 23:51	Jul-23-19 23:57	Jul-24-19 00:04	Jul-24-19 00:10	Jul-24-19 00:16
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
		1670 25.0	384 5.02	532 5.02	955 4.98	1270 4.95	592 4.95
		Jul-31-19 16:00	Jul-31-19 16:00	Jul-31-19 16:00	Jul-31-19 16:00	Jul-31-19 16:00	Jul-31-19 16:00
		Aug-01-19 01:19	Aug-01-19 01:42	Aug-01-19 02:05	Aug-01-19 02:27	Aug-01-19 02:50	Aug-01-19 03:13
TPH by SW8015 Mod SUB: T104704400-18-16	Extracted:	Jul-31-19 16:00	Jul-31-19 16:00	Jul-31-19 16:00	Jul-31-19 16:00	Jul-31-19 16:00	Jul-31-19 16:00
	Analyzed:	Aug-01-19 01:19	Aug-01-19 01:42	Aug-01-19 02:05	Aug-01-19 02:27	Aug-01-19 02:50	Aug-01-19 03:13
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
		<15.0 15.0	<15.0 15.0	<15.0 15.0	<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	<14.9 14.9	<15.0 15.0
Gasoline Range Hydrocarbons (GRO)	Extracted:	Jul-31-19 16:00	Jul-31-19 16:00	Jul-31-19 16:00	Jul-31-19 16:00	Jul-31-19 16:00	Jul-31-19 16:00
	Analyzed:	Aug-01-19 01:19	Aug-01-19 01:42	Aug-01-19 02:05	Aug-01-19 02:27	Aug-01-19 02:50	Aug-01-19 03:13
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Diesel Range Organics (DRO)	Extracted:	Jul-31-19 16:00	Jul-31-19 16:00	Jul-31-19 16:00	Jul-31-19 16:00	Jul-31-19 16:00	Jul-31-19 16:00
	Analyzed:	Aug-01-19 01:19	Aug-01-19 01:42	Aug-01-19 02:05	Aug-01-19 02:27	Aug-01-19 02:50	Aug-01-19 03:13
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Motor Oil Range Hydrocarbons (MRO)	Extracted:	Jul-31-19 16:00	Jul-31-19 16:00	Jul-31-19 16:00	Jul-31-19 16:00	Jul-31-19 16:00	Jul-31-19 16:00
	Analyzed:	Aug-01-19 01:19	Aug-01-19 01:42	Aug-01-19 02:05	Aug-01-19 02:27	Aug-01-19 02:50	Aug-01-19 03:13
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Total TPH	Extracted:	Jul-31-19 16:00	Jul-31-19 16:00	Jul-31-19 16:00	Jul-31-19 16:00	Jul-31-19 16:00	Jul-31-19 16:00
	Analyzed:	Aug-01-19 01:19	Aug-01-19 01:42	Aug-01-19 02:05	Aug-01-19 02:27	Aug-01-19 02:50	Aug-01-19 03:13
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Total GRO-DRO	Extracted:	Jul-31-19 16:00	Jul-31-19 16:00	Jul-31-19 16:00	Jul-31-19 16:00	Jul-31-19 16:00	Jul-31-19 16:00
	Analyzed:	Aug-01-19 01:19	Aug-01-19 01:42	Aug-01-19 02:05	Aug-01-19 02:27	Aug-01-19 02:50	Aug-01-19 03:13
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 631660
LT Environmental, Inc., Arvada, CO
Project Name: Corral Canyon 1H (2RP-5201)

Project Id: 012919018
Contact: Dan Moir
Project Location: Delaware Basin

Date Received in Lab: Mon Jul-22-19 09:25 am
Report Date: 01-AUG-19
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	631660-043	631660-044	631660-045	631660-046	
	Field Id:	MW02E	MW02F	MW02G	MW02H	
	Depth:	44- ft	49- ft	60- ft	70- ft	
	Matrix:	SOIL	SOIL	SOIL	SOIL	
BTEX by EPA 8021B SUB: T104704400-18-16	Sampled:	Jul-21-19 10:50	Jul-21-19 10:55	Jul-21-19 12:10	Jul-21-19 12:30	
	Extracted:	Jul-26-19 10:30	Jul-26-19 10:30	Jul-26-19 10:30	Jul-26-19 10:30	
	Analyzed:	Jul-27-19 11:49	Jul-27-19 12:09	Jul-27-19 12:30	Jul-27-19 12:50	
	Units/RL:	mg/kg RL <0.00200 0.00200	mg/kg RL <0.00200 0.00200	mg/kg RL <0.00200 0.00202	mg/kg RL <0.00202 0.00202	
Benzene		<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00202 0.00202	
Toluene		<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00202 0.00202	
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00202 0.00202	
m,p-Xylenes		<0.00400 0.00400	<0.00400 0.00400	<0.00404 0.00404	<0.00403 0.00403	
o-Xylene		<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00202 0.00202	
Total Xylenes		<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00202 0.00202	
Total BTEX		<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00202 0.00202	
Chloride by EPA 300 SUB: T104704400-18-16	Extracted:	Jul-24-19 09:45	Jul-24-19 09:45	Jul-24-19 09:45	Jul-24-19 09:45	
	Analyzed:	Jul-24-19 11:25	Jul-24-19 11:50	Jul-24-19 11:31	Jul-24-19 11:37	
	Units/RL:	mg/kg RL 1420 5.02	mg/kg RL 166 5.05	mg/kg RL 2020 24.8	mg/kg RL 1680 24.9	
	Chloride					
TPH by SW8015 Mod SUB: T104704400-18-16	Extracted:	Jul-31-19 16:00	Jul-31-19 16:00	Jul-31-19 16:00	Jul-27-19 09:00	
	Analyzed:	Aug-01-19 03:36	Aug-01-19 03:59	Aug-01-19 04:22	Jul-28-19 07:20	
	Units/RL:	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	mg/kg RL <15.0 15.0	
	Gasoline Range Hydrocarbons (GRO)					
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	

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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 Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW03**
Lab Sample Id: 631660-001

Matrix: Soil
Date Collected: 07.19.19 13.00

Date Received: 07.22.19 09.25
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096273

Date Prep: 07.23.19 14.20

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	581	4.95	mg/kg	07.23.19 19.19		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3096809

Date Prep: 07.28.19 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	07.28.19 16.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.28.19 16.12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.28.19 16.12	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.28.19 16.12	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	07.28.19 16.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	71	%	70-135	07.28.19 16.12	
o-Terphenyl	84-15-1	66	%	70-135	07.28.19 16.12	**



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW03**
Lab Sample Id: 631660-001

Matrix: Soil
Date Collected: 07.19.19 13.00

Date Received: 07.22.19 09.25
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096816

Prep Method: SW5030B

% Moisture:

Date Prep: 07.25.19 13.11

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00213	0.00213	mg/kg	07.27.19 00.30	U	1
Toluene	108-88-3	<0.00213	0.00213	mg/kg	07.27.19 00.30	U	1
Ethylbenzene	100-41-4	<0.00213	0.00213	mg/kg	07.27.19 00.30	U	1
m,p-Xylenes	179601-23-1	<0.00426	0.00426	mg/kg	07.27.19 00.30	U	1
o-Xylene	95-47-6	<0.00213	0.00213	mg/kg	07.27.19 00.30	U	1
Total Xylenes	1330-20-7	<0.00213	0.00213	mg/kg	07.27.19 00.30	U	1
Total BTEX		<0.00213	0.00213	mg/kg	07.27.19 00.30	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	07.27.19 00.30		
4-Bromofluorobenzene	460-00-4	107	%	70-130	07.27.19 00.30		



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW03A**
Lab Sample Id: 631660-002

Matrix: Soil
Date Collected: 07.19.19 13.05

Date Received: 07.22.19 09.25
Sample Depth: 5 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096273

Date Prep: 07.23.19 14.20

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	886	4.95	mg/kg	07.23.19 19.25		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3096809

Date Prep: 07.28.19 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	07.28.19 16.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.28.19 16.36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.28.19 16.36	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.28.19 16.36	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	07.28.19 16.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	70	%	70-135	07.28.19 16.36	
o-Terphenyl	84-15-1	64	%	70-135	07.28.19 16.36	**



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW03A**
Lab Sample Id: 631660-002

Matrix: Soil
Date Collected: 07.19.19 13.05

Date Received: 07.22.19 09.25
Sample Depth: 5 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096816

Prep Method: SW5030B

% Moisture:

Date Prep: 07.25.19 13.11

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	07.27.19 00.50	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.27.19 00.50	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.27.19 00.50	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.27.19 00.50	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.27.19 00.50	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.27.19 00.50	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.27.19 00.50	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	106	%	70-130	07.27.19 00.50		
4-Bromofluorobenzene	460-00-4	118	%	70-130	07.27.19 00.50		



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW03B**
Lab Sample Id: 631660-003

Matrix: Soil
Date Collected: 07.19.19 13.10

Date Received: 07.22.19 09.25
Sample Depth: 15 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096278

Date Prep: 07.23.19 15.00

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	1670	24.8	mg/kg	07.23.19 16.56		5

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3096809

Date Prep: 07.28.19 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	07.29.19 13.44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.29.19 13.44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.29.19 13.44	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.29.19 13.44	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	07.29.19 13.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	74	%	70-135	07.29.19 13.44	
o-Terphenyl	84-15-1	69	%	70-135	07.29.19 13.44	**



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW03B**
Lab Sample Id: 631660-003

Matrix: Soil
Date Collected: 07.19.19 13.10

Date Received: 07.22.19 09.25
Sample Depth: 15 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096816

Prep Method: SW5030B

% Moisture:

Date Prep: 07.25.19 13.11

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	07.27.19 01.10	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.27.19 01.10	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.27.19 01.10	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.27.19 01.10	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.27.19 01.10	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.27.19 01.10	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.27.19 01.10	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	110	%	70-130	07.27.19 01.10		
1,4-Difluorobenzene	540-36-3	104	%	70-130	07.27.19 01.10		



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW03C**
Lab Sample Id: 631660-004

Matrix: Soil
Date Collected: 07.19.19 13.30

Date Received: 07.22.19 09.25
Sample Depth: 20 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096278

Date Prep: 07.23.19 15.00

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	1970	25.1	mg/kg	07.23.19 17.02		5

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3096809

Date Prep: 07.28.19 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	07.28.19 17.24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.28.19 17.24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.28.19 17.24	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.28.19 17.24	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	07.28.19 17.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	71	%	70-135	07.28.19 17.24	
o-Terphenyl	84-15-1	66	%	70-135	07.28.19 17.24	**



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW03C**
Lab Sample Id: 631660-004

Matrix: Soil
Date Collected: 07.19.19 13.30

Date Received: 07.22.19 09.25
Sample Depth: 20 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096816

Prep Method: SW5030B

% Moisture:

Date Prep: 07.25.19 13.11

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	07.27.19 01.30	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.27.19 01.30	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.27.19 01.30	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	07.27.19 01.30	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.27.19 01.30	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	07.27.19 01.30	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.27.19 01.30	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	108	%	70-130	07.27.19 01.30		
1,4-Difluorobenzene	540-36-3	103	%	70-130	07.27.19 01.30		



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW03D**
Lab Sample Id: 631660-005

Matrix: Soil
Date Collected: 07.19.19 13.45

Date Received: 07.22.19 09.25
Sample Depth: 30 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096278

Date Prep: 07.23.19 15.00

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	1620	25.3	mg/kg	07.23.19 17.07		5

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3096809

Date Prep: 07.28.19 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	07.28.19 17.48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.28.19 17.48	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.28.19 17.48	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.28.19 17.48	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	07.28.19 17.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	71	%	70-135	07.28.19 17.48	
o-Terphenyl	84-15-1	65	%	70-135	07.28.19 17.48	**



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW03D**
Lab Sample Id: 631660-005

Matrix: Soil
Date Collected: 07.19.19 13.45

Date Received: 07.22.19 09.25
Sample Depth: 30 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096816

Prep Method: SW5030B

% Moisture:

Date Prep: 07.25.19 13.11

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	07.27.19 01.51	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.27.19 01.51	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.27.19 01.51	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	07.27.19 01.51	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.27.19 01.51	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.27.19 01.51	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.27.19 01.51	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	105	%	70-130	07.27.19 01.51		
4-Bromofluorobenzene	460-00-4	114	%	70-130	07.27.19 01.51		



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW03E**
Lab Sample Id: 631660-006

Matrix: Soil
Date Collected: 07.19.19 14.10

Date Received: 07.22.19 09.25
Sample Depth: 38 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096278

Date Prep: 07.23.19 15.00

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	1150	5.05	mg/kg	07.23.19 17.12		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3096809

Date Prep: 07.28.19 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	07.28.19 18.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.28.19 18.12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.28.19 18.12	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.28.19 18.12	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	07.28.19 18.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	70	%	70-135	07.28.19 18.12	
o-Terphenyl	84-15-1	67	%	70-135	07.28.19 18.12	**



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW03E**
Lab Sample Id: 631660-006

Matrix: Soil
Date Collected: 07.19.19 14.10

Date Received: 07.22.19 09.25
Sample Depth: 38 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096816

Prep Method: SW5030B

% Moisture:

Date Prep: 07.25.19 13.11

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.27.19 02.11	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.27.19 02.11	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.27.19 02.11	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.27.19 02.11	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.27.19 02.11	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.27.19 02.11	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.27.19 02.11	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	115	%	70-130	07.27.19 02.11		
1,4-Difluorobenzene	540-36-3	104	%	70-130	07.27.19 02.11		



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW03F**
Lab Sample Id: 631660-007

Matrix: Soil
Date Collected: 07.19.19 14.15

Date Received: 07.22.19 09.25
Sample Depth: 45 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096278

Date Prep: 07.23.19 15.00

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	1020	4.98	mg/kg	07.23.19 17.28		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3096809

Date Prep: 07.28.19 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	<14.9	14.9	mg/kg	07.29.19 14.08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	07.29.19 14.08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	07.29.19 14.08	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	07.29.19 14.08	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	07.29.19 14.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	71	%	70-135	07.29.19 14.08	
o-Terphenyl	84-15-1	59	%	70-135	07.29.19 14.08	**



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW03F**
Lab Sample Id: 631660-007

Matrix: Soil
Date Collected: 07.19.19 14.15

Date Received: 07.22.19 09.25
Sample Depth: 45 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096816

Prep Method: SW5030B

% Moisture:

Date Prep: 07.25.19 13.11

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	07.27.19 02.31	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.27.19 02.31	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.27.19 02.31	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.27.19 02.31	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.27.19 02.31	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.27.19 02.31	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.27.19 02.31	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	105	%	70-130	07.27.19 02.31		
4-Bromofluorobenzene	460-00-4	109	%	70-130	07.27.19 02.31		



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW03G**
Lab Sample Id: 631660-008

Matrix: Soil
Date Collected: 07.19.19 14.30

Date Received: 07.22.19 09.25
Sample Depth: 55 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096278

Date Prep: 07.23.19 15.00

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	1350	25.0	mg/kg	07.23.19 17.34		5

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3096809

Date Prep: 07.28.19 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	07.28.19 19.00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.28.19 19.00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.28.19 19.00	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.28.19 19.00	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	07.28.19 19.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	72	%	70-135	07.28.19 19.00	
o-Terphenyl	84-15-1	68	%	70-135	07.28.19 19.00	**



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW03G**
Lab Sample Id: 631660-008

Matrix: Soil
Date Collected: 07.19.19 14.30

Date Received: 07.22.19 09.25
Sample Depth: 55 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096816

Prep Method: SW5030B

% Moisture:

Date Prep: 07.25.19 13.11

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	07.27.19 02.51	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.27.19 02.51	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.27.19 02.51	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	07.27.19 02.51	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.27.19 02.51	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.27.19 02.51	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.27.19 02.51	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	105	%	70-130	07.27.19 02.51		
4-Bromofluorobenzene	460-00-4	109	%	70-130	07.27.19 02.51		



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW03H**
Lab Sample Id: 631660-009

Matrix: Soil
Date Collected: 07.19.19 14.45

Date Received: 07.22.19 09.25
Sample Depth: 65 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096278

Date Prep: 07.23.19 15.00

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	24.6	5.00	mg/kg	07.23.19 17.39		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3096809

Date Prep: 07.28.19 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	07.28.19 19.23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.28.19 19.23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.28.19 19.23	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.28.19 19.23	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	07.28.19 19.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	71	%	70-135	07.28.19 19.23	
o-Terphenyl	84-15-1	62	%	70-135	07.28.19 19.23	**



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW03H**
Lab Sample Id: 631660-009

Matrix: Soil
Date Collected: 07.19.19 14.45

Date Received: 07.22.19 09.25
Sample Depth: 65 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096816

Prep Method: SW5030B

% Moisture:

Date Prep: 07.25.19 13.11

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	07.27.19 03.11	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.27.19 03.11	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.27.19 03.11	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	07.27.19 03.11	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.27.19 03.11	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	07.27.19 03.11	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.27.19 03.11	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	105	%	70-130	07.27.19 03.11		
1,4-Difluorobenzene	540-36-3	101	%	70-130	07.27.19 03.11		



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW03I**
Lab Sample Id: 631660-010

Matrix: Soil
Date Collected: 07.19.19 15.00

Date Received: 07.22.19 09.25
Sample Depth: 72 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096278

Date Prep: 07.23.19 15.00

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	1180	5.00	mg/kg	07.23.19 17.44		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3096809

Date Prep: 07.28.19 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	07.28.19 19.47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.28.19 19.47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.28.19 19.47	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.28.19 19.47	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	07.28.19 19.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	70	%	70-135	07.28.19 19.47	
o-Terphenyl	84-15-1	65	%	70-135	07.28.19 19.47	**



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW03I**
Lab Sample Id: 631660-010

Matrix: Soil
Date Collected: 07.19.19 15.00

Date Received: 07.22.19 09.25
Sample Depth: 72 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096816

Prep Method: SW5030B

% Moisture:

Date Prep: 07.25.19 13.11

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	07.27.19 03.31	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.27.19 03.31	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.27.19 03.31	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	07.27.19 03.31	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.27.19 03.31	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.27.19 03.31	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.27.19 03.31	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	114	%	70-130	07.27.19 03.31		
1,4-Difluorobenzene	540-36-3	105	%	70-130	07.27.19 03.31		



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW01**
Lab Sample Id: 631660-011

Matrix: Soil
Date Collected: 07.19.19 16.10

Date Received: 07.22.19 09.25
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096278

Date Prep: 07.23.19 15.00

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	99.2	4.99	mg/kg	07.23.19 16.40		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3096811

Date Prep: 07.28.19 10.00

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	07.28.19 21.47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.28.19 21.47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.28.19 21.47	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.28.19 21.47	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	07.28.19 21.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	74	%	70-135	07.28.19 21.47	
o-Terphenyl	84-15-1	64	%	70-135	07.28.19 21.47	**



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW01**
Lab Sample Id: 631660-011

Matrix: Soil
Date Collected: 07.19.19 16.10

Date Received: 07.22.19 09.25
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096816

Prep Method: SW5030B

% Moisture:

Date Prep: 07.25.19 13.11

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	07.27.19 04.50	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.27.19 04.50	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.27.19 04.50	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	07.27.19 04.50	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.27.19 04.50	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.27.19 04.50	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.27.19 04.50	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	07.27.19 04.50		
4-Bromofluorobenzene	460-00-4	107	%	70-130	07.27.19 04.50		



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW01A**
Lab Sample Id: 631660-012

Matrix: Soil
Date Collected: 07.19.19 16.15

Date Received: 07.22.19 09.25
Sample Depth: 5 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096278

Date Prep: 07.23.19 15.00

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	329	4.97	mg/kg	07.23.19 17.55		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3096811

Date Prep: 07.28.19 10.00

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	07.28.19 22.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.28.19 22.59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.28.19 22.59	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.28.19 22.59	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	07.28.19 22.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	73	%	70-135	07.28.19 22.59	
o-Terphenyl	84-15-1	66	%	70-135	07.28.19 22.59	**



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW01A**
Lab Sample Id: 631660-012

Matrix: Soil
Date Collected: 07.19.19 16.15

Date Received: 07.22.19 09.25
Sample Depth: 5 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096816

Prep Method: SW5030B

% Moisture:

Date Prep: 07.25.19 13.11

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	07.27.19 05.10	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.27.19 05.10	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.27.19 05.10	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.27.19 05.10	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.27.19 05.10	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.27.19 05.10	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.27.19 05.10	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	110	%	70-130	07.27.19 05.10		
1,4-Difluorobenzene	540-36-3	102	%	70-130	07.27.19 05.10		



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW01B**
Lab Sample Id: 631660-013

Matrix: Soil
Date Collected: 07.19.19 16.55

Date Received: 07.22.19 09.25
Sample Depth: 20 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096278

Date Prep: 07.23.19 15.00

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	1240	5.02	mg/kg	07.23.19 17.50		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3096811

Date Prep: 07.28.19 10.00

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	07.28.19 23.23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.28.19 23.23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.28.19 23.23	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.28.19 23.23	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	07.28.19 23.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	73	%	70-135	07.28.19 23.23	
o-Terphenyl	84-15-1	67	%	70-135	07.28.19 23.23	**



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW01B**
Lab Sample Id: 631660-013

Matrix: Soil
Date Collected: 07.19.19 16.55

Date Received: 07.22.19 09.25
Sample Depth: 20 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096816

Prep Method: SW5030B

% Moisture:

Date Prep: 07.25.19 13.11

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	07.27.19 05.30	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.27.19 05.30	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.27.19 05.30	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.27.19 05.30	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.27.19 05.30	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.27.19 05.30	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.27.19 05.30	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	120	%	70-130	07.27.19 05.30		
1,4-Difluorobenzene	540-36-3	105	%	70-130	07.27.19 05.30		



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW01C**
Lab Sample Id: 631660-014

Matrix: Soil
Date Collected: 07.19.19 17.05

Date Received: 07.22.19 09.25
Sample Depth: 30 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096278

Date Prep: 07.23.19 15.00

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	1090	25.3	mg/kg	07.23.19 18.11		5

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3096811

Date Prep: 07.28.19 10.00

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	07.28.19 23.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.28.19 23.46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.28.19 23.46	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.28.19 23.46	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	07.28.19 23.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	70	%	70-135	07.28.19 23.46	
o-Terphenyl	84-15-1	64	%	70-135	07.28.19 23.46	**



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW01C**
Lab Sample Id: 631660-014

Matrix: Soil
Date Collected: 07.19.19 17.05

Date Received: 07.22.19 09.25
Sample Depth: 30 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096816

Prep Method: SW5030B

% Moisture:

Date Prep: 07.25.19 13.11

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	07.27.19 05.50	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.27.19 05.50	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.27.19 05.50	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.27.19 05.50	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.27.19 05.50	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.27.19 05.50	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.27.19 05.50	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	105	%	70-130	07.27.19 05.50		
4-Bromofluorobenzene	460-00-4	114	%	70-130	07.27.19 05.50		



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW01D**
Lab Sample Id: 631660-015

Matrix: Soil
Date Collected: 07.19.19 17.20

Date Received: 07.22.19 09.25
Sample Depth: 40 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096278

Date Prep: 07.23.19 15.00

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	1610	25.3	mg/kg	07.23.19 18.16		5

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3096811

Date Prep: 07.28.19 10.00

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	07.29.19 00.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.29.19 00.10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.29.19 00.10	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.29.19 00.10	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	07.29.19 00.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	73	%	70-135	07.29.19 00.10	
o-Terphenyl	84-15-1	67	%	70-135	07.29.19 00.10	**



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW01D**
Lab Sample Id: 631660-015

Matrix: Soil
Date Collected: 07.19.19 17.20

Date Received: 07.22.19 09.25
Sample Depth: 40 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096816

Prep Method: SW5030B

% Moisture:

Date Prep: 07.25.19 13.11

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	07.27.19 06.10	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.27.19 06.10	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.27.19 06.10	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	07.27.19 06.10	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.27.19 06.10	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.27.19 06.10	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.27.19 06.10	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	112	%	70-130	07.27.19 06.10		
1,4-Difluorobenzene	540-36-3	105	%	70-130	07.27.19 06.10		



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW01E**
Lab Sample Id: 631660-016

Matrix: Soil
Date Collected: 07.19.19 17.30

Date Received: 07.22.19 09.25
Sample Depth: 50 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096278

Date Prep: 07.23.19 15.00

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	1930	25.3	mg/kg	07.23.19 18.32		5

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3096811

Date Prep: 07.28.19 10.00

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	07.29.19 00.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.29.19 00.34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.29.19 00.34	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.29.19 00.34	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	07.29.19 00.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	70	%	70-135	07.29.19 00.34	
o-Terphenyl	84-15-1	61	%	70-135	07.29.19 00.34	**



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW01E**
Lab Sample Id: 631660-016

Matrix: Soil
Date Collected: 07.19.19 17.30

Date Received: 07.22.19 09.25
Sample Depth: 50 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096816

Prep Method: SW5030B

% Moisture:

Date Prep: 07.25.19 13.11

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	07.27.19 06.31	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.27.19 06.31	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.27.19 06.31	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	07.27.19 06.31	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.27.19 06.31	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.27.19 06.31	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.27.19 06.31	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	106	%	70-130	07.27.19 06.31		
4-Bromofluorobenzene	460-00-4	117	%	70-130	07.27.19 06.31		



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW01F**
Lab Sample Id: 631660-017

Matrix: Soil
Date Collected: 07.20.19 08.10

Date Received: 07.22.19 09.25
Sample Depth: 51 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096278

Date Prep: 07.23.19 15.00

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	1730	25.0	mg/kg	07.23.19 18.38		5

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3096811

Date Prep: 07.28.19 10.00

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	07.29.19 00.58	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.29.19 00.58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.29.19 00.58	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.29.19 00.58	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	07.29.19 00.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	73	%	70-135	07.29.19 00.58	
o-Terphenyl	84-15-1	64	%	70-135	07.29.19 00.58	**



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW01F**
Lab Sample Id: 631660-017

Matrix: Soil
Date Collected: 07.20.19 08.10

Date Received: 07.22.19 09.25
Sample Depth: 51 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096816

Prep Method: SW5030B

% Moisture:

Date Prep: 07.25.19 13.11

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	07.27.19 06.51	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.27.19 06.51	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.27.19 06.51	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	07.27.19 06.51	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.27.19 06.51	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.27.19 06.51	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.27.19 06.51	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	119	%	70-130	07.27.19 06.51		
1,4-Difluorobenzene	540-36-3	104	%	70-130	07.27.19 06.51		



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW01G**
Lab Sample Id: 631660-018

Matrix: Soil
Date Collected: 07.20.19 08.30

Date Received: 07.22.19 09.25
Sample Depth: 55 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096278

Date Prep: 07.23.19 15.00

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	1900	24.9	mg/kg	07.23.19 18.43		5

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3096811

Date Prep: 07.28.19 10.00

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	07.29.19 01.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.29.19 01.21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.29.19 01.21	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.29.19 01.21	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	07.29.19 01.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	72	%	70-135	07.29.19 01.21	
o-Terphenyl	84-15-1	69	%	70-135	07.29.19 01.21	**



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW01G**
Lab Sample Id: 631660-018

Matrix: Soil
Date Collected: 07.20.19 08.30

Date Received: 07.22.19 09.25
Sample Depth: 55 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096816

Prep Method: SW5030B

% Moisture:

Date Prep: 07.25.19 13.11

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	07.27.19 07.11	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.27.19 07.11	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.27.19 07.11	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	07.27.19 07.11	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.27.19 07.11	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.27.19 07.11	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.27.19 07.11	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	105	%	70-130	07.27.19 07.11		
4-Bromofluorobenzene	460-00-4	115	%	70-130	07.27.19 07.11		



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW01H**
Lab Sample Id: 631660-019

Matrix: Soil
Date Collected: 07.20.19 08.40

Date Received: 07.22.19 09.25
Sample Depth: 60 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096278

Date Prep: 07.23.19 15.00

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	1190	5.00	mg/kg	07.23.19 18.48		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3096811

Date Prep: 07.28.19 10.00

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	07.29.19 01.45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.29.19 01.45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.29.19 01.45	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.29.19 01.45	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	07.29.19 01.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	72	%	70-135	07.29.19 01.45	
o-Terphenyl	84-15-1	63	%	70-135	07.29.19 01.45	**



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW01H**
Lab Sample Id: 631660-019

Matrix: Soil
Date Collected: 07.20.19 08.40

Date Received: 07.22.19 09.25
Sample Depth: 60 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096816

Prep Method: SW5030B

% Moisture:

Date Prep: 07.25.19 13.11

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	07.27.19 07.31	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.27.19 07.31	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.27.19 07.31	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	07.27.19 07.31	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.27.19 07.31	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	07.27.19 07.31	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.27.19 07.31	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	07.27.19 07.31		
4-Bromofluorobenzene	460-00-4	125	%	70-130	07.27.19 07.31		



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW01I**
Lab Sample Id: 631660-020

Matrix: Soil
Date Collected: 07.20.19 08.45

Date Received: 07.22.19 09.25
Sample Depth: 65 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096278

Date Prep: 07.23.19 15.00

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	1420	4.98	mg/kg	07.23.19 18.54		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3096811

Date Prep: 07.28.19 10.00

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	07.29.19 02.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.29.19 02.09	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.29.19 02.09	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.29.19 02.09	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	07.29.19 02.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	74	%	70-135	07.29.19 02.09	
o-Terphenyl	84-15-1	66	%	70-135	07.29.19 02.09	**



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW01I**
Lab Sample Id: 631660-020

Matrix: Soil
Date Collected: 07.20.19 08.45

Date Received: 07.22.19 09.25
Sample Depth: 65 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096816

Prep Method: SW5030B

% Moisture:

Date Prep: 07.25.19 13.11

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	07.27.19 07.51	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.27.19 07.51	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.27.19 07.51	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	07.27.19 07.51	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.27.19 07.51	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.27.19 07.51	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.27.19 07.51	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	113	%	70-130	07.27.19 07.51		
1,4-Difluorobenzene	540-36-3	104	%	70-130	07.27.19 07.51		



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW05**
Lab Sample Id: 631660-021

Matrix: Soil
Date Collected: 07.20.19 10.10

Date Received: 07.22.19 09.25
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096278

Date Prep: 07.23.19 15.00

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	285	5.01	mg/kg	07.23.19 18.59		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3096811

Date Prep: 07.28.19 10.00

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	07.29.19 14.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.29.19 14.32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.29.19 14.32	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.29.19 14.32	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	07.29.19 14.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	73	%	70-135	07.29.19 14.32	
o-Terphenyl	84-15-1	63	%	70-135	07.29.19 14.32	**



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW05**
Lab Sample Id: 631660-021

Matrix: Soil
Date Collected: 07.20.19 10.10

Date Received: 07.22.19 09.25
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096818

Prep Method: SW5030B

% Moisture:

Date Prep: 07.25.19 14.40

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	07.26.19 13.30	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.26.19 13.30	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.26.19 13.30	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	07.26.19 13.30	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.26.19 13.30	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	07.26.19 13.30	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.26.19 13.30	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	106	%	70-130	07.26.19 13.30		
1,4-Difluorobenzene	540-36-3	107	%	70-130	07.26.19 13.30		



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW05A**
Lab Sample Id: 631660-022

Matrix: Soil
Date Collected: 07.20.19 10.30

Date Received: 07.22.19 09.25
Sample Depth: 10 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096278

Date Prep: 07.23.19 15.00

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	703	4.95	mg/kg	07.23.19 19.05		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3096811

Date Prep: 07.28.19 10.00

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	07.29.19 14.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.29.19 14.55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.29.19 14.55	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.29.19 14.55	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	07.29.19 14.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	70	%	70-135	07.29.19 14.55	
o-Terphenyl	84-15-1	61	%	70-135	07.29.19 14.55	**



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW05A**
Lab Sample Id: 631660-022

Matrix: Soil
Date Collected: 07.20.19 10.30

Date Received: 07.22.19 09.25
Sample Depth: 10 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096818

Prep Method: SW5030B

% Moisture:

Date Prep: 07.25.19 14.40

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	07.26.19 13.50	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.26.19 13.50	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.26.19 13.50	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.26.19 13.50	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.26.19 13.50	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.26.19 13.50	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.26.19 13.50	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	105	%	70-130	07.26.19 13.50		
1,4-Difluorobenzene	540-36-3	106	%	70-130	07.26.19 13.50		



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW05B**
Lab Sample Id: 631660-023

Matrix: Soil
Date Collected: 07.20.19 10.37

Date Received: 07.22.19 09.25
Sample Depth: 20 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096280

Date Prep: 07.23.19 16.00

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	1130	25.2	mg/kg	07.23.19 21.45		5

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3096811

Date Prep: 07.28.19 10.00

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	07.29.19 08.23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.29.19 08.23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.29.19 08.23	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.29.19 08.23	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	07.29.19 08.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	72	%	70-135	07.29.19 08.23	
o-Terphenyl	84-15-1	63	%	70-135	07.29.19 08.23	**



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW05B**
Lab Sample Id: 631660-023

Matrix: Soil
Date Collected: 07.20.19 10.37

Date Received: 07.22.19 09.25
Sample Depth: 20 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096818

Prep Method: SW5030B

% Moisture:

Date Prep: 07.25.19 14.40

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	07.26.19 14.10	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.26.19 14.10	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.26.19 14.10	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.26.19 14.10	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.26.19 14.10	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.26.19 14.10	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.26.19 14.10	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	108	%	70-130	07.26.19 14.10		
4-Bromofluorobenzene	460-00-4	109	%	70-130	07.26.19 14.10		



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW05C**
Lab Sample Id: 631660-024

Matrix: Soil
Date Collected: 07.20.19 10.40

Date Received: 07.22.19 09.25
Sample Depth: 25 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096280

Date Prep: 07.23.19 16.00

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	1210	4.99	mg/kg	07.23.19 21.51		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3096811

Date Prep: 07.28.19 10.00

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	07.29.19 15.20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.29.19 15.20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.29.19 15.20	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.29.19 15.20	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	07.29.19 15.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	71	%	70-135	07.29.19 15.20	
o-Terphenyl	84-15-1	64	%	70-135	07.29.19 15.20	**



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW05C**
Lab Sample Id: 631660-024

Matrix: Soil
Date Collected: 07.20.19 10.40

Date Received: 07.22.19 09.25
Sample Depth: 25 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096818

Prep Method: SW5030B

% Moisture:

Date Prep: 07.25.19 14.40

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	07.26.19 14.30	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.26.19 14.30	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.26.19 14.30	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.26.19 14.30	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.26.19 14.30	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.26.19 14.30	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.26.19 14.30	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	116	%	70-130	07.26.19 14.30		
1,4-Difluorobenzene	540-36-3	109	%	70-130	07.26.19 14.30		



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW05D**
Lab Sample Id: 631660-025

Matrix: Soil
Date Collected: 07.20.19 11.00

Date Received: 07.22.19 09.25
Sample Depth: 35 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096280

Date Prep: 07.23.19 16.00

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	1380	25.3	mg/kg	07.23.19 21.57		5

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3096811

Date Prep: 07.28.19 10.00

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	<14.9	14.9	mg/kg	07.29.19 16.07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	07.29.19 16.07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	07.29.19 16.07	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	07.29.19 16.07	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	07.29.19 16.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	73	%	70-135	07.29.19 16.07	
o-Terphenyl	84-15-1	62	%	70-135	07.29.19 16.07	**



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW05D**
Lab Sample Id: 631660-025

Matrix: Soil
Date Collected: 07.20.19 11.00

Date Received: 07.22.19 09.25
Sample Depth: 35 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096818

Prep Method: SW5030B

% Moisture:

Date Prep: 07.25.19 14.40

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	07.26.19 14.50	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.26.19 14.50	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.26.19 14.50	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.26.19 14.50	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.26.19 14.50	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.26.19 14.50	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.26.19 14.50	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	114	%	70-130	07.26.19 14.50		
1,4-Difluorobenzene	540-36-3	110	%	70-130	07.26.19 14.50		



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW05E**
Lab Sample Id: 631660-026

Matrix: Soil
Date Collected: 07.20.19 12.00

Date Received: 07.22.19 09.25
Sample Depth: 46 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096280

Date Prep: 07.23.19 16.00

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	1060	4.95	mg/kg	07.23.19 22.04		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3096811

Date Prep: 07.28.19 10.00

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	07.29.19 10.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.29.19 10.31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.29.19 10.31	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.29.19 10.31	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	07.29.19 10.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	70	%	70-135	07.29.19 10.31	
o-Terphenyl	84-15-1	62	%	70-135	07.29.19 10.31	**



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW05E**
Lab Sample Id: 631660-026

Matrix: Soil
Date Collected: 07.20.19 12.00

Date Received: 07.22.19 09.25
Sample Depth: 46 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096818

Prep Method: SW5030B

% Moisture:

Date Prep: 07.25.19 14.40

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	07.26.19 15.10	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.26.19 15.10	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.26.19 15.10	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.26.19 15.10	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.26.19 15.10	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.26.19 15.10	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.26.19 15.10	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	109	%	70-130	07.26.19 15.10		
1,4-Difluorobenzene	540-36-3	109	%	70-130	07.26.19 15.10		



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW05F**
Lab Sample Id: 631660-027

Matrix: Soil
Date Collected: 07.20.19 12.30

Date Received: 07.22.19 09.25
Sample Depth: 55 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096280

Date Prep: 07.23.19 16.00

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	397	4.96	mg/kg	07.23.19 21.26		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3096811

Date Prep: 07.28.19 10.00

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	07.29.19 10.56	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.29.19 10.56	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.29.19 10.56	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.29.19 10.56	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	07.29.19 10.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	70	%	70-135	07.29.19 10.56	
o-Terphenyl	84-15-1	58	%	70-135	07.29.19 10.56	**



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW05F**
Lab Sample Id: 631660-027

Matrix: Soil
Date Collected: 07.20.19 12.30

Date Received: 07.22.19 09.25
Sample Depth: 55 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096818

Date Prep: 07.25.19 14.40

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.26.19 15.30	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.26.19 15.30	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.26.19 15.30	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.26.19 15.30	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.26.19 15.30	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.26.19 15.30	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.26.19 15.30	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	113	%	70-130	07.26.19 15.30		
1,4-Difluorobenzene	540-36-3	109	%	70-130	07.26.19 15.30		



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW05G**
Lab Sample Id: 631660-028

Matrix: Soil
Date Collected: 07.20.19 12.50

Date Received: 07.22.19 09.25
Sample Depth: 62 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096280

Date Prep: 07.23.19 16.00

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	1150	5.02	mg/kg	07.23.19 22.23		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3096811

Date Prep: 07.28.19 10.00

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	07.29.19 11.20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.29.19 11.20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.29.19 11.20	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.29.19 11.20	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	07.29.19 11.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	75	%	70-135	07.29.19 11.20	
o-Terphenyl	84-15-1	65	%	70-135	07.29.19 11.20	**



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW05G**
Lab Sample Id: 631660-028

Matrix: Soil
Date Collected: 07.20.19 12.50

Date Received: 07.22.19 09.25
Sample Depth: 62 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096818

Prep Method: SW5030B

% Moisture:

Date Prep: 07.25.19 14.40

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	07.26.19 15.51	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.26.19 15.51	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.26.19 15.51	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.26.19 15.51	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.26.19 15.51	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.26.19 15.51	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.26.19 15.51	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	112	%	70-130	07.26.19 15.51		
1,4-Difluorobenzene	540-36-3	110	%	70-130	07.26.19 15.51		



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW05H**
Lab Sample Id: 631660-029

Matrix: Soil
Date Collected: 07.20.19 12.55

Date Received: 07.22.19 09.25
Sample Depth: 67 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096280

Date Prep: 07.23.19 16.00

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	1390	5.00	mg/kg	07.23.19 22.29		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3096811

Date Prep: 07.28.19 10.00

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	07.29.19 11.44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.29.19 11.44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.29.19 11.44	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.29.19 11.44	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	07.29.19 11.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	77	%	70-135	07.29.19 11.44	
o-Terphenyl	84-15-1	67	%	70-135	07.29.19 11.44	**



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW05H**
Lab Sample Id: 631660-029

Matrix: Soil
Date Collected: 07.20.19 12.55

Date Received: 07.22.19 09.25
Sample Depth: 67 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096818

Prep Method: SW5030B

% Moisture:

Date Prep: 07.25.19 14.40

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	07.26.19 16.32	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.26.19 16.32	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.26.19 16.32	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.26.19 16.32	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.26.19 16.32	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.26.19 16.32	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.26.19 16.32	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	110	%	70-130	07.26.19 16.32		
1,4-Difluorobenzene	540-36-3	108	%	70-130	07.26.19 16.32		



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW04**
Lab Sample Id: 631660-030

Matrix: Soil
Date Collected: 07.20.19 14.00

Date Received: 07.22.19 09.25
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096280

Date Prep: 07.23.19 16.00

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	33.1	4.95	mg/kg	07.23.19 22.54		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3096811

Date Prep: 07.28.19 10.00

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	07.29.19 12.08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.29.19 12.08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.29.19 12.08	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.29.19 12.08	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	07.29.19 12.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	72	%	70-135	07.29.19 12.08	
o-Terphenyl	84-15-1	65	%	70-135	07.29.19 12.08	**



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW04**
Lab Sample Id: 631660-030

Matrix: Soil
Date Collected: 07.20.19 14.00

Date Received: 07.22.19 09.25
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096818

Prep Method: SW5030B

% Moisture:

Date Prep: 07.25.19 14.40

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	07.26.19 16.52	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.26.19 16.52	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.26.19 16.52	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.26.19 16.52	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.26.19 16.52	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.26.19 16.52	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.26.19 16.52	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	109	%	70-130	07.26.19 16.52		
1,4-Difluorobenzene	540-36-3	107	%	70-130	07.26.19 16.52		



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW04A**
Lab Sample Id: 631660-031

Matrix: Soil
Date Collected: 07.20.19 14.10

Date Received: 07.22.19 09.25
Sample Depth: 10 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096280

Date Prep: 07.23.19 16.00

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	1300	4.99	mg/kg	07.23.19 22.35		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097150

Date Prep: 07.31.19 16.00

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	07.31.19 22.38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.31.19 22.38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.31.19 22.38	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.31.19 22.38	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	07.31.19 22.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	07.31.19 22.38	
o-Terphenyl	84-15-1	94	%	70-135	07.31.19 22.38	



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW04A**
Lab Sample Id: 631660-031

Matrix: Soil
Date Collected: 07.20.19 14.10

Date Received: 07.22.19 09.25
Sample Depth: 10 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096818

Prep Method: SW5030B

% Moisture:

Date Prep: 07.25.19 14.40

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.26.19 18.10	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.26.19 18.10	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.26.19 18.10	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.26.19 18.10	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.26.19 18.10	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.26.19 18.10	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.26.19 18.10	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	107	%	70-130	07.26.19 18.10		
4-Bromofluorobenzene	460-00-4	104	%	70-130	07.26.19 18.10		



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW04B**
Lab Sample Id: 631660-032

Matrix: Soil
Date Collected: 07.20.19 14.20

Date Received: 07.22.19 09.25
Sample Depth: 15 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096280

Date Prep: 07.23.19 16.00

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	1550	25.1	mg/kg	07.23.19 22.42		5

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097150

Date Prep: 07.31.19 16.00

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	<14.9	14.9	mg/kg	07.31.19 23.01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	07.31.19 23.01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	07.31.19 23.01	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	07.31.19 23.01	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	07.31.19 23.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	07.31.19 23.01	
o-Terphenyl	84-15-1	93	%	70-135	07.31.19 23.01	



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW04B**
Lab Sample Id: 631660-032

Matrix: Soil
Date Collected: 07.20.19 14.20

Date Received: 07.22.19 09.25
Sample Depth: 15 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096818

Prep Method: SW5030B

% Moisture:

Date Prep: 07.25.19 14.40

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.26.19 18.30	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.26.19 18.30	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.26.19 18.30	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.26.19 18.30	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.26.19 18.30	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.26.19 18.30	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.26.19 18.30	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	108	%	70-130	07.26.19 18.30		
4-Bromofluorobenzene	460-00-4	109	%	70-130	07.26.19 18.30		



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW04C**
Lab Sample Id: 631660-033

Matrix: Soil
Date Collected: 07.20.19 14.40

Date Received: 07.22.19 09.25
Sample Depth: 25 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096280

Date Prep: 07.23.19 16.00

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	664	24.9	mg/kg	07.23.19 22.48		5

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097150

Date Prep: 07.31.19 16.00

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	07.31.19 23.24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.31.19 23.24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.31.19 23.24	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.31.19 23.24	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	07.31.19 23.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	07.31.19 23.24	
o-Terphenyl	84-15-1	93	%	70-135	07.31.19 23.24	



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW04C**
Lab Sample Id: 631660-033

Matrix: Soil
Date Collected: 07.20.19 14.40

Date Received: 07.22.19 09.25
Sample Depth: 25 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096818

Prep Method: SW5030B

% Moisture:

Date Prep: 07.25.19 14.40

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	07.26.19 18.51	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.26.19 18.51	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.26.19 18.51	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	07.26.19 18.51	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.26.19 18.51	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.26.19 18.51	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.26.19 18.51	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	108	%	70-130	07.26.19 18.51		
4-Bromofluorobenzene	460-00-4	109	%	70-130	07.26.19 18.51		



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW04D**
Lab Sample Id: 631660-034

Matrix: Soil
Date Collected: 07.20.19 15.00

Date Received: 07.22.19 09.25
Sample Depth: 35 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096280

Date Prep: 07.23.19 16.00

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	1770	25.3	mg/kg	07.23.19 23.13		5

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097150

Date Prep: 07.31.19 16.00

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	07.31.19 23.47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.31.19 23.47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.31.19 23.47	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.31.19 23.47	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	07.31.19 23.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	07.31.19 23.47	
o-Terphenyl	84-15-1	95	%	70-135	07.31.19 23.47	



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW04D**
Lab Sample Id: 631660-034

Matrix: Soil
Date Collected: 07.20.19 15.00

Date Received: 07.22.19 09.25
Sample Depth: 35 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096818

Date Prep: 07.25.19 14.40

Prep Method: SW5030B

% Moisture:

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	07.26.19 19.11	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.26.19 19.11	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.26.19 19.11	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	07.26.19 19.11	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.26.19 19.11	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.26.19 19.11	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.26.19 19.11	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	109	%	70-130	07.26.19 19.11		
4-Bromofluorobenzene	460-00-4	110	%	70-130	07.26.19 19.11		



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW04E**
Lab Sample Id: 631660-035

Matrix: Soil
Date Collected: 07.20.19 15.45

Date Received: 07.22.19 09.25
Sample Depth: 45 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096280

Date Prep: 07.23.19 16.00

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	1440	25.0	mg/kg	07.23.19 23.20		5

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097150

Date Prep: 07.31.19 16.00

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	08.01.19 00.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.01.19 00.10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.01.19 00.10	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.01.19 00.10	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.01.19 00.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	08.01.19 00.10	
o-Terphenyl	84-15-1	96	%	70-135	08.01.19 00.10	



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW04E**
Lab Sample Id: 631660-035

Matrix: Soil
Date Collected: 07.20.19 15.45

Date Received: 07.22.19 09.25
Sample Depth: 45 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096818

Prep Method: SW5030B

% Moisture:

Date Prep: 07.25.19 14.40

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	07.26.19 19.31	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.26.19 19.31	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.26.19 19.31	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	07.26.19 19.31	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.26.19 19.31	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	07.26.19 19.31	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.26.19 19.31	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	107	%	70-130	07.26.19 19.31		
4-Bromofluorobenzene	460-00-4	110	%	70-130	07.26.19 19.31		



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW04F**
Lab Sample Id: 631660-036

Matrix: Soil
Date Collected: 07.20.19 16.25

Date Received: 07.22.19 09.25
Sample Depth: 55 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096280

Date Prep: 07.23.19 16.00

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	902	5.04	mg/kg	07.23.19 23.39		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097150

Date Prep: 07.31.19 16.00

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	08.01.19 00.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.01.19 00.33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.01.19 00.33	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.01.19 00.33	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.01.19 00.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	08.01.19 00.33	
o-Terphenyl	84-15-1	97	%	70-135	08.01.19 00.33	



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW04F**
Lab Sample Id: 631660-036

Matrix: Soil
Date Collected: 07.20.19 16.25

Date Received: 07.22.19 09.25
Sample Depth: 55 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096818

Prep Method: SW5030B

% Moisture:

Date Prep: 07.25.19 14.40

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	07.26.19 19.51	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.26.19 19.51	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.26.19 19.51	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	07.26.19 19.51	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.26.19 19.51	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.26.19 19.51	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.26.19 19.51	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	118	%	70-130	07.26.19 19.51		
1,4-Difluorobenzene	540-36-3	109	%	70-130	07.26.19 19.51		



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW04G**
Lab Sample Id: 631660-037

Matrix: Soil
Date Collected: 07.21.19 08.30

Date Received: 07.22.19 09.25
Sample Depth: 65 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096280

Date Prep: 07.23.19 16.00

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	1670	25.0	mg/kg	07.23.19 23.45		5

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097150

Date Prep: 07.31.19 16.00

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	08.01.19 01.19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.01.19 01.19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.01.19 01.19	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.01.19 01.19	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.01.19 01.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	08.01.19 01.19	
o-Terphenyl	84-15-1	100	%	70-135	08.01.19 01.19	



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW04G**
Lab Sample Id: 631660-037

Matrix: Soil
Date Collected: 07.21.19 08.30

Date Received: 07.22.19 09.25
Sample Depth: 65 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096818

Prep Method: SW5030B

% Moisture:

Date Prep: 07.25.19 14.40

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	07.26.19 20.11	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.26.19 20.11	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.26.19 20.11	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	07.26.19 20.11	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.26.19 20.11	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.26.19 20.11	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.26.19 20.11	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	107	%	70-130	07.26.19 20.11		
1,4-Difluorobenzene	540-36-3	109	%	70-130	07.26.19 20.11		



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW02**
Lab Sample Id: 631660-038

Matrix: Soil
Date Collected: 07.21.19 09.05

Date Received: 07.22.19 09.25
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096280

Date Prep: 07.23.19 16.00

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	384	5.02	mg/kg	07.23.19 23.51		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097150

Date Prep: 07.31.19 16.00

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	08.01.19 01.42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.01.19 01.42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.01.19 01.42	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.01.19 01.42	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.01.19 01.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	08.01.19 01.42	
o-Terphenyl	84-15-1	94	%	70-135	08.01.19 01.42	



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW02**
Lab Sample Id: 631660-038

Matrix: Soil
Date Collected: 07.21.19 09.05

Date Received: 07.22.19 09.25
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096818

Prep Method: SW5030B

% Moisture:

Date Prep: 07.25.19 14.40

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	07.26.19 20.31	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.26.19 20.31	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.26.19 20.31	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.26.19 20.31	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.26.19 20.31	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.26.19 20.31	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.26.19 20.31	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	109	%	70-130	07.26.19 20.31		
1,4-Difluorobenzene	540-36-3	109	%	70-130	07.26.19 20.31		



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW02A**
Lab Sample Id: 631660-039

Matrix: Soil
Date Collected: 07.21.19 09.15

Date Received: 07.22.19 09.25
Sample Depth: 10 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096280

Date Prep: 07.23.19 16.00

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	532	5.02	mg/kg	07.23.19 23.57		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097150

Date Prep: 07.31.19 16.00

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	08.01.19 02.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.01.19 02.05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.01.19 02.05	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.01.19 02.05	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.01.19 02.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	08.01.19 02.05	
o-Terphenyl	84-15-1	92	%	70-135	08.01.19 02.05	



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW02A**
Lab Sample Id: 631660-039

Matrix: Soil
Date Collected: 07.21.19 09.15

Date Received: 07.22.19 09.25
Sample Depth: 10 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096818

Prep Method: SW5030B

% Moisture:

Date Prep: 07.25.19 14.40

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	07.26.19 20.51	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.26.19 20.51	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.26.19 20.51	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.26.19 20.51	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.26.19 20.51	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.26.19 20.51	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.26.19 20.51	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	109	%	70-130	07.26.19 20.51		
1,4-Difluorobenzene	540-36-3	107	%	70-130	07.26.19 20.51		



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW02B**
Lab Sample Id: 631660-040

Matrix: Soil
Date Collected: 07.21.19 09.25

Date Received: 07.22.19 09.25
Sample Depth: 15 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096280

Date Prep: 07.23.19 16.00

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	955	4.98	mg/kg	07.24.19 00.04		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097150

Date Prep: 07.31.19 16.00

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	08.01.19 02.27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.01.19 02.27	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.01.19 02.27	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.01.19 02.27	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.01.19 02.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	08.01.19 02.27	
o-Terphenyl	84-15-1	99	%	70-135	08.01.19 02.27	



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW02B**
Lab Sample Id: 631660-040

Matrix: Soil
Date Collected: 07.21.19 09.25

Date Received: 07.22.19 09.25
Sample Depth: 15 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096818

Prep Method: SW5030B

% Moisture:

Date Prep: 07.25.19 14.40

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.26.19 21.12	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.26.19 21.12	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.26.19 21.12	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.26.19 21.12	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.26.19 21.12	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.26.19 21.12	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.26.19 21.12	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	106	%	70-130	07.26.19 21.12		
4-Bromofluorobenzene	460-00-4	111	%	70-130	07.26.19 21.12		



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW02C**
Lab Sample Id: 631660-041

Matrix: Soil
Date Collected: 07.21.19 10.00

Date Received: 07.22.19 09.25
Sample Depth: 24 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096280

Date Prep: 07.23.19 16.00

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	1270	4.95	mg/kg	07.24.19 00.10		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097150

Date Prep: 07.31.19 16.00

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	<14.9	14.9	mg/kg	08.01.19 02.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	08.01.19 02.50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	08.01.19 02.50	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	08.01.19 02.50	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	08.01.19 02.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	08.01.19 02.50	
o-Terphenyl	84-15-1	93	%	70-135	08.01.19 02.50	



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW02C**
Lab Sample Id: 631660-041

Matrix: Soil
Date Collected: 07.21.19 10.00

Date Received: 07.22.19 09.25
Sample Depth: 24 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096781

Prep Method: SW5030B

% Moisture:

Date Prep: 07.26.19 10.30

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	07.27.19 11.09	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.27.19 11.09	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.27.19 11.09	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.27.19 11.09	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.27.19 11.09	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.27.19 11.09	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.27.19 11.09	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	108	%	70-130	07.27.19 11.09		
1,4-Difluorobenzene	540-36-3	106	%	70-130	07.27.19 11.09		



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW02D**
Lab Sample Id: 631660-042

Matrix: Soil
Date Collected: 07.21.19 10.15

Date Received: 07.22.19 09.25
Sample Depth: 34 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096280

Date Prep: 07.23.19 16.00

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	592	4.95	mg/kg	07.24.19 00.16		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097150

Date Prep: 07.31.19 16.00

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	08.01.19 03.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.01.19 03.13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.01.19 03.13	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.01.19 03.13	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.01.19 03.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	08.01.19 03.13	
o-Terphenyl	84-15-1	92	%	70-135	08.01.19 03.13	



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW02D**
Lab Sample Id: 631660-042

Matrix: Soil
Date Collected: 07.21.19 10.15

Date Received: 07.22.19 09.25
Sample Depth: 34 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096781

Date Prep: 07.26.19 10.30

Prep Method: SW5030B

% Moisture:

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	07.27.19 11.29	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.27.19 11.29	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.27.19 11.29	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	07.27.19 11.29	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.27.19 11.29	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.27.19 11.29	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.27.19 11.29	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	109	%	70-130	07.27.19 11.29		
4-Bromofluorobenzene	460-00-4	119	%	70-130	07.27.19 11.29		



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW02E**
Lab Sample Id: 631660-043

Matrix: Soil
Date Collected: 07.21.19 10.50

Date Received: 07.22.19 09.25
Sample Depth: 44 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096409

Date Prep: 07.24.19 09.45

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	1420	5.02	mg/kg	07.24.19 11.25		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097150

Date Prep: 07.31.19 16.00

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	08.01.19 03.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.01.19 03.36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.01.19 03.36	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.01.19 03.36	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.01.19 03.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	08.01.19 03.36	
o-Terphenyl	84-15-1	97	%	70-135	08.01.19 03.36	



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW02E**
Lab Sample Id: 631660-043

Matrix: Soil
Date Collected: 07.21.19 10.50

Date Received: 07.22.19 09.25
Sample Depth: 44 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096781

Prep Method: SW5030B

% Moisture:

Date Prep: 07.26.19 10.30

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	07.27.19 11.49	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.27.19 11.49	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.27.19 11.49	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	07.27.19 11.49	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.27.19 11.49	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.27.19 11.49	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.27.19 11.49	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	105	%	70-130	07.27.19 11.49		
4-Bromofluorobenzene	460-00-4	107	%	70-130	07.27.19 11.49		



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW02F**
Lab Sample Id: 631660-044

Matrix: Soil
Date Collected: 07.21.19 10.55

Date Received: 07.22.19 09.25
Sample Depth: 49 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096409

Date Prep: 07.24.19 09.45

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	166	5.05	mg/kg	07.24.19 11.50		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097150

Date Prep: 07.31.19 16.00

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	08.01.19 03.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.01.19 03.59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.01.19 03.59	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.01.19 03.59	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.01.19 03.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	08.01.19 03.59	
o-Terphenyl	84-15-1	84	%	70-135	08.01.19 03.59	



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW02F**
Lab Sample Id: 631660-044

Matrix: Soil
Date Collected: 07.21.19 10.55

Date Received: 07.22.19 09.25
Sample Depth: 49 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096781

Date Prep: 07.26.19 10.30

Prep Method: SW5030B

% Moisture:

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	07.27.19 12.09	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.27.19 12.09	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.27.19 12.09	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	07.27.19 12.09	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.27.19 12.09	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.27.19 12.09	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.27.19 12.09	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	114	%	70-130	07.27.19 12.09		
1,4-Difluorobenzene	540-36-3	109	%	70-130	07.27.19 12.09		



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW02G**
Lab Sample Id: 631660-045

Matrix: Soil
Date Collected: 07.21.19 12.10

Date Received: 07.22.19 09.25
Sample Depth: 60 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096409

Date Prep: 07.24.19 09.45

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	2020	24.8	mg/kg	07.24.19 11.31		5

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3097150

Date Prep: 07.31.19 16.00

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	08.01.19 04.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.01.19 04.22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.01.19 04.22	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.01.19 04.22	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.01.19 04.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	08.01.19 04.22	
o-Terphenyl	84-15-1	100	%	70-135	08.01.19 04.22	



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW02G**
Lab Sample Id: 631660-045

Matrix: Soil
Date Collected: 07.21.19 12.10

Date Received: 07.22.19 09.25
Sample Depth: 60 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096781

Prep Method: SW5030B

% Moisture:

Date Prep: 07.26.19 10.30

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	07.27.19 12.30	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.27.19 12.30	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.27.19 12.30	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	07.27.19 12.30	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.27.19 12.30	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.27.19 12.30	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.27.19 12.30	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	106	%	70-130	07.27.19 12.30		
4-Bromofluorobenzene	460-00-4	105	%	70-130	07.27.19 12.30		



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW02H**
Lab Sample Id: 631660-046

Matrix: Soil
Date Collected: 07.21.19 12.30

Date Received: 07.22.19 09.25
Sample Depth: 70 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3096409

Date Prep: 07.24.19 09.45

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	1680	24.9	mg/kg	07.24.19 11.37		5

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3096731

Date Prep: 07.27.19 09.00

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	07.28.19 07.20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.28.19 07.20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.28.19 07.20	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.28.19 07.20	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	07.28.19 07.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	83	%	70-135	07.28.19 07.20	
o-Terphenyl	84-15-1	72	%	70-135	07.28.19 07.20	



Certificate of Analytical Results 631660

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H (2RP-5201)

Sample Id: **MW02H**
Lab Sample Id: 631660-046

Matrix: Soil
Date Collected: 07.21.19 12.30

Date Received: 07.22.19 09.25
Sample Depth: 70 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALG

Analyst: FOV

Seq Number: 3096781

Prep Method: SW5030B

% Moisture:

Date Prep: 07.26.19 10.30

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	07.27.19 12.50	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.27.19 12.50	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.27.19 12.50	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	07.27.19 12.50	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.27.19 12.50	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.27.19 12.50	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.27.19 12.50	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	105	%	70-130	07.27.19 12.50		
4-Bromofluorobenzene	460-00-4	107	%	70-130	07.27.19 12.50		

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 631660

LT Environmental, Inc.
Corral Canyon 1H (2RP-5201)

Analytical Method: Chloride by EPA 300

Seq Number: 3096273

MB Sample Id: 7682587-1-BLK

Matrix: Solid

LCS Sample Id: 7682587-1-BKS

Prep Method: E300P

Date Prep: 07.23.19

LCSD Sample Id: 7682587-1-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	249	100	249	100	90-110	0	20	mg/kg	07.23.19 16:16	

Analytical Method: Chloride by EPA 300

Seq Number: 3096280

MB Sample Id: 7682590-1-BLK

Matrix: Solid

LCS Sample Id: 7682590-1-BKS

Prep Method: E300P

Date Prep: 07.23.19

LCSD Sample Id: 7682590-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1.50	250	255	102	253	101	90-110	1	20	mg/kg	07.23.19 16:30	

Analytical Method: Chloride by EPA 300

Seq Number: 3096280

MB Sample Id: 7682628-1-BLK

Matrix: Solid

LCS Sample Id: 7682628-1-BKS

Prep Method: E300P

Date Prep: 07.23.19

LCSD Sample Id: 7682628-1-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	253	101	253	101	90-110	0	20	mg/kg	07.23.19 21:13	

Analytical Method: Chloride by EPA 300

Seq Number: 3096409

MB Sample Id: 7682652-1-BLK

Matrix: Solid

LCS Sample Id: 7682652-1-BKS

Prep Method: E300P

Date Prep: 07.24.19

LCSD Sample Id: 7682652-1-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	246	98	246	98	90-110	0	20	mg/kg	07.24.19 10:09	

Analytical Method: Chloride by EPA 300

Seq Number: 3096273

Parent Sample Id: 631730-001

Matrix: Soil

MS Sample Id: 631730-001 S

Prep Method: E300P

Date Prep: 07.23.19

MSD Sample Id: 631730-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2.03	250	251	100	252	100	90-110	0	20	mg/kg	07.23.19 16:41	

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 631660

LT Environmental, Inc.
Corral Canyon 1H (2RP-5201)

Analytical Method: Chloride by EPA 300

Seq Number: 3096273

Parent Sample Id: 631734-005

Matrix: Soil

MS Sample Id: 631734-005 S

Prep Method: E300P

Date Prep: 07.23.19

MSD Sample Id: 631734-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	209	250	465	102	465	102	90-110	0	20	mg/kg	07.23.19 18:09	

Analytical Method: Chloride by EPA 300

Seq Number: 3096278

Parent Sample Id: 631660-011

Matrix: Soil

MS Sample Id: 631660-011 S

Prep Method: E300P

Date Prep: 07.23.19

MSD Sample Id: 631660-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	99.2	250	371	109	363	106	90-110	2	20	mg/kg	07.23.19 16:46	

Analytical Method: Chloride by EPA 300

Seq Number: 3096278

Parent Sample Id: 631660-012

Matrix: Soil

MS Sample Id: 631660-012 S

Prep Method: E300P

Date Prep: 07.23.19

MSD Sample Id: 631660-012 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	329	249	581	101	577	100	90-110	1	20	mg/kg	07.23.19 18:00	

Analytical Method: Chloride by EPA 300

Seq Number: 3096280

Parent Sample Id: 631660-027

Matrix: Soil

MS Sample Id: 631660-027 S

Prep Method: E300P

Date Prep: 07.23.19

MSD Sample Id: 631660-027 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	397	248	635	96	635	96	90-110	0	20	mg/kg	07.23.19 21:32	

Analytical Method: Chloride by EPA 300

Seq Number: 3096280

Parent Sample Id: 631660-030

Matrix: Soil

MS Sample Id: 631660-030 S

Prep Method: E300P

Date Prep: 07.23.19

MSD Sample Id: 631660-030 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	33.1	248	288	103	288	103	90-110	0	20	mg/kg	07.23.19 23:01	

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



QC Summary 631660

LT Environmental, Inc.
Corral Canyon 1H (2RP-5201)

Analytical Method: Chloride by EPA 300

Seq Number: 3096409

Parent Sample Id: 631660-044

Matrix: Soil

MS Sample Id: 631660-044 S

Prep Method: E300P

Date Prep: 07.24.19

MSD Sample Id: 631660-044 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	166	253	418	100	419	100	90-110	0	20	mg/kg	07.24.19 11:56	

Analytical Method: Chloride by EPA 300

Seq Number: 3096409

Parent Sample Id: 631780-001

Matrix: Soil

MS Sample Id: 631780-001 S

Prep Method: E300P

Date Prep: 07.24.19

MSD Sample Id: 631780-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	133	248	374	97	376	98	90-110	1	20	mg/kg	07.24.19 10:28	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3096731

MB Sample Id: 7682996-1-BLK

Matrix: Solid

LCS Sample Id: 7682996-1-BKS

Prep Method: TX1005P

Date Prep: 07.27.19

LCSD Sample Id: 7682996-1-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	1010	101	875	88	70-135	14	20	mg/kg	07.27.19 21:56	
Diesel Range Organics (DRO)	<8.13	1000	1040	104	964	96	70-135	8	20	mg/kg	07.27.19 21:56	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	77		83		76		70-135	%	07.27.19 21:56
o-Terphenyl	68	**	79		77		70-135	%	07.27.19 21:56

Analytical Method: TPH by SW8015 Mod

Seq Number: 3096809

MB Sample Id: 7682997-1-BLK

Matrix: Solid

LCS Sample Id: 7682997-1-BKS

Prep Method: TX1005P

Date Prep: 07.28.19

LCSD Sample Id: 7682997-1-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	903	90	861	86	70-135	5	20	mg/kg	07.28.19 10:08	
Diesel Range Organics (DRO)	<8.13	1000	951	95	909	91	70-135	5	20	mg/kg	07.28.19 10:08	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	79		74		71		70-135	%	07.28.19 10:08
o-Terphenyl	66	**	73		74		70-135	%	07.28.19 10:08

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 631660

LT Environmental, Inc.
Corral Canyon 1H (2RP-5201)

Analytical Method: TPH by SW8015 Mod

Seq Number: 3096811

MB Sample Id: 7683001-1-BLK

Matrix: Solid

LCS Sample Id: 7683001-1-BKS

Prep Method: TX1005P

Date Prep: 07.28.19

LCSD Sample Id: 7683001-1-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	890	89	890	89	70-135	0	20	mg/kg	07.28.19 20:59	
Diesel Range Organics (DRO)	<8.13	1000	934	93	985	99	70-135	5	20	mg/kg	07.28.19 20:59	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag		LCSD %Rec	LCSD Flag		Limits	Units	Analysis Date	
1-Chlorooctane	74		72			74			70-135	%	07.28.19 20:59	
o-Terphenyl	73		76			79			70-135	%	07.28.19 20:59	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3097150

MB Sample Id: 7683060-1-BLK

Matrix: Solid

LCS Sample Id: 7683060-1-BKS

Prep Method: TX1005P

Date Prep: 07.31.19

LCSD Sample Id: 7683060-1-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	941	94	848	85	70-135	10	20	mg/kg	07.31.19 19:36	
Diesel Range Organics (DRO)	<8.13	1000	1060	106	1050	105	70-135	1	20	mg/kg	07.31.19 19:36	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date	Flag		
1-Chlorooctane	112		116		117		70-135	%	07.31.19 19:36			
o-Terphenyl	102		115		114		70-135	%	07.31.19 19:36			

Analytical Method: TPH by SW8015 Mod

Seq Number: 3096731

Parent Sample Id: 632174-001

Matrix: Soil

MS Sample Id: 632174-001 S

Prep Method: TX1005P

Date Prep: 07.27.19

MSD Sample Id: 632174-001 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)	10.0	998	848	84	918	91	70-135	8	20	mg/kg	07.27.19 23:07	
Diesel Range Organics (DRO)	36.7	998	930	90	992	96	70-135	6	20	mg/kg	07.27.19 23:07	
Surrogate			MS %Rec	MS Flag		MSD %Rec	MSD Flag	Limits		Units	Analysis Date	
1-Chlorooctane			76			81		70-135		%	07.27.19 23:07	
o-Terphenyl			78			80		70-135		%	07.27.19 23:07	

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 631660

LT Environmental, Inc.
Corral Canyon 1H (2RP-5201)

Analytical Method: TPH by SW8015 Mod

Seq Number: 3096809

Parent Sample Id: 631518-001

Matrix: Soil

MS Sample Id: 631518-001 S

Prep Method: TX1005P

Date Prep: 07.28.19

MSD Sample Id: 631518-001 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)	10.9	997	848	84	861	85	70-135	2	20	mg/kg	07.28.19 11:24	
Diesel Range Organics (DRO)	8.59	997	909	90	912	91	70-135	0	20	mg/kg	07.28.19 11:24	
Surrogate			MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits			Units	Analysis Date	
1-Chlorooctane			80		83		70-135			%	07.28.19 11:24	
o-Terphenyl			71		70		70-135			%	07.28.19 11:24	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3096811

Parent Sample Id: 631660-011

Matrix: Soil

MS Sample Id: 631660-011 S

Prep Method: TX1005P

Date Prep: 07.28.19

MSD Sample Id: 631660-011 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)	10.9	998	865	86	867	86	70-135	0	20	mg/kg	07.28.19 22:11	
Diesel Range Organics (DRO)	9.85	998	909	90	902	89	70-135	1	20	mg/kg	07.28.19 22:11	
Surrogate			MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits			Units	Analysis Date	
1-Chlorooctane			76		76		70-135			%	07.28.19 22:11	
o-Terphenyl			75		70		70-135			%	07.28.19 22:11	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3097150

Parent Sample Id: 632385-001

Matrix: Soil

MS Sample Id: 632385-001 S

Prep Method: TX1005P

Date Prep: 07.31.19

MSD Sample Id: 632385-001 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)	12.1	997	1030	102	1030	102	70-135	0	20	mg/kg	07.31.19 20:44	
Diesel Range Organics (DRO)	12.7	997	1130	112	1150	114	70-135	2	20	mg/kg	07.31.19 20:44	
Surrogate			MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits			Units	Analysis Date	
1-Chlorooctane			78		78		70-135			%	07.31.19 20:44	
o-Terphenyl			74		76		70-135			%	07.31.19 20:44	

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

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

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 631660

LT Environmental, Inc.
Corral Canyon 1H (2RP-5201)

Analytical Method: BTEX by EPA 8021B

Seq Number: 3096816

MB Sample Id: 7682805-1-BLK

Matrix: Solid

LCS Sample Id: 7682805-1-BKS

Prep Method: SW5030B

Date Prep: 07.25.19

LCSD Sample Id: 7682805-1-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	0.103	103	0.112	112	70-130	8	35	mg/kg	07.26.19 22:30	
Toluene	<0.000456	0.100	0.0926	93	0.101	101	70-130	9	35	mg/kg	07.26.19 22:30	
Ethylbenzene	<0.000565	0.100	0.0913	91	0.0994	99	70-130	8	35	mg/kg	07.26.19 22:30	
m,p-Xylenes	<0.00101	0.200	0.182	91	0.198	99	70-130	8	35	mg/kg	07.26.19 22:30	
o-Xylene	<0.000344	0.100	0.0959	96	0.105	105	70-130	9	35	mg/kg	07.26.19 22:30	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date			
1,4-Difluorobenzene	103		101		102		70-130	%	07.26.19 22:30			
4-Bromofluorobenzene	105		103		106		70-130	%	07.26.19 22:30			

Analytical Method: BTEX by EPA 8021B

Seq Number: 3096818

MB Sample Id: 7682806-1-BLK

Matrix: Solid

LCS Sample Id: 7682806-1-BKS

Prep Method: SW5030B

Date Prep: 07.25.19

LCSD Sample Id: 7682806-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	0.000450	0.100	0.107	107	0.0943	94	70-130	13	35	mg/kg	07.26.19 08:36	
Toluene	0.000570	0.100	0.100	100	0.0897	90	70-130	11	35	mg/kg	07.26.19 08:36	
Ethylbenzene	<0.000565	0.100	0.101	101	0.0898	90	70-130	12	35	mg/kg	07.26.19 08:36	
m,p-Xylenes	<0.00101	0.200	0.202	101	0.183	92	70-130	10	35	mg/kg	07.26.19 08:36	
o-Xylene	0.000390	0.100	0.106	106	0.0969	97	70-130	9	35	mg/kg	07.26.19 08:36	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date	Flag		
1,4-Difluorobenzene	107		100		101		70-130	%	07.26.19 08:36			
4-Bromofluorobenzene	111		108		109		70-130	%	07.26.19 08:36			

Analytical Method: BTEX by EPA 8021B

Seq Number: 3096781

MB Sample Id: 7682919-1-BLK

Matrix: Solid

LCS Sample Id: 7682919-1-BKS

Prep Method: SW5030B

Date Prep: 07.26.19

LCSD Sample Id: 7682919-1-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	0.0945	95	0.104	104	70-130	10	35	mg/kg	07.27.19 09:09	
Toluene	<0.000456	0.100	0.0890	89	0.0946	95	70-130	6	35	mg/kg	07.27.19 09:09	
Ethylbenzene	<0.000565	0.100	0.0892	89	0.0931	93	70-130	4	35	mg/kg	07.27.19 09:09	
m,p-Xylenes	<0.00101	0.200	0.180	90	0.186	93	70-130	3	35	mg/kg	07.27.19 09:09	
o-Xylene	<0.000344	0.100	0.0943	94	0.0974	97	70-130	3	35	mg/kg	07.27.19 09:09	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date			
1,4-Difluorobenzene	106		99		101		70-130	%	07.27.19 09:09			
4-Bromofluorobenzene	101		106		102		70-130	%	07.27.19 09:09			

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 631660

LT Environmental, Inc.
Corral Canyon 1H (2RP-5201)

Analytical Method: BTEX by EPA 8021B

Seq Number: 3096816

Parent Sample Id: 631660-001

Matrix: Soil

MS Sample Id: 631660-001 S

Prep Method: SW5030B

Date Prep: 07.25.19

MSD Sample Id: 631660-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0822	81	0.0886	89	70-130	7	35	mg/kg	07.26.19 23:10	
Toluene	<0.00202	0.101	0.0745	74	0.0822	83	70-130	10	35	mg/kg	07.26.19 23:10	
Ethylbenzene	<0.00202	0.101	0.0735	73	0.0819	82	70-130	11	35	mg/kg	07.26.19 23:10	
m,p-Xylenes	<0.00102	0.202	0.146	72	0.163	82	70-130	11	35	mg/kg	07.26.19 23:10	
o-Xylene	<0.00202	0.101	0.0768	76	0.0865	87	70-130	12	35	mg/kg	07.26.19 23:10	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		103		70-130	%	07.26.19 23:10
4-Bromofluorobenzene	106		117		70-130	%	07.26.19 23:10

Analytical Method: BTEX by EPA 8021B

Seq Number: 3096818

Parent Sample Id: 631660-021

Matrix: Soil

MS Sample Id: 631660-021 S

Prep Method: SW5030B

Date Prep: 07.25.19

MSD Sample Id: 631660-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.101	0.0833	82	0.0904	91	70-130	8	35	mg/kg	07.26.19 09:17	
Toluene	<0.00201	0.101	0.0730	72	0.0863	87	70-130	17	35	mg/kg	07.26.19 09:17	
Ethylbenzene	<0.00201	0.101	0.0769	76	0.0871	88	70-130	12	35	mg/kg	07.26.19 09:17	
m,p-Xylenes	<0.00102	0.201	0.152	76	0.177	89	70-130	15	35	mg/kg	07.26.19 09:17	
o-Xylene	<0.00201	0.101	0.0851	84	0.0912	92	70-130	7	35	mg/kg	07.26.19 09:17	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		101		70-130	%	07.26.19 09:17
4-Bromofluorobenzene	116		115		70-130	%	07.26.19 09:17

Analytical Method: BTEX by EPA 8021B

Seq Number: 3096781

Parent Sample Id: 631660-041

Matrix: Soil

MS Sample Id: 631660-041 S

Prep Method: SW5030B

Date Prep: 07.26.19

MSD Sample Id: 631660-041 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	0.0795	80	0.0761	76	70-130	4	35	mg/kg	07.27.19 09:50	
Toluene	<0.00200	0.100	0.0704	70	0.0697	70	70-130	1	35	mg/kg	07.27.19 09:50	
Ethylbenzene	<0.00200	0.100	0.0709	71	0.0705	71	70-130	1	35	mg/kg	07.27.19 09:50	
m,p-Xylenes	<0.00101	0.200	0.140	70	0.141	71	70-130	1	35	mg/kg	07.27.19 09:50	
o-Xylene	<0.00200	0.100	0.0728	73	0.0737	74	70-130	1	35	mg/kg	07.27.19 09:50	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		103		70-130	%	07.27.19 09:50
4-Bromofluorobenzene	103		109		70-130	%	07.27.19 09:50

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: 631660

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
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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:	lbellell@ltenv.com

Project Name:	Corral Canyon 1H 2A - Soil		Turn Around	
Project Number:	012919015		Routine	☒
P.O. Number:			Rush:	
Sampler's Name:	Benjamin Bellill		Due Date:	

SAMPLE RECEIPT	Temp Blank:	☒ Yes ☐ No	Wet Ice:	☒ Yes ☐ No
Temperature (°C):	1.0 Thermometer ID			
Received Intact:	☒ Yes ☐ No T-NM-037			
Cooler Custody Seals:	☒ Yes ☐ No Correction Factor: -0.2			
Sample Custody Seals:	☒ Yes ☐ No Total Containers: 10			

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Numb	TPH (E	BTEX	Chloride	Sample Comments											
MW03	S	7/19/19	1320	1'	1	X	X	X												
MW03A			1325	5'	1	X	X	X												
MW03B			1312	15'	1	X	X	X												
MW03C			1330	22'	1	X	X	X												
MW03D			1345	32'	1	X	X	X												
MW03E			1410	38'	1	X	X	X												
MW03F			1415	45'	1	X	X	X												
MW03G			1430	55'	1	X	X	X												
MW03H			1445	65'	1	X	X	X												
MW03I			1510	72'	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

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Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		07/26/19 9:25			07/26/19 10:16



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Hobbs, NM (575) 392-7550 Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000

Chain of Custody

Work Order No: 431460

Page 2 of 5

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:	dbelliii@ltenv.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:	Level 1 Levee Fed 141700501	Turn Around	
Project Number:	012414015	Routine ☒	
P.O. Number:		Rush: ☐	
Sampler's Name:	Benjamin Beill	Due Date:	

SAMPLE RECEIPT		Temp Blank:	Yes ☒ No ☐	Wet Ice:	Yes ☒ No ☐
Temperature (°C):	1.8	Thermometer ID	T-NM-001		
Received Intact:	Yes ☒ No ☐	Correction Factor:	-0.2		
Cooler Custody Seals:	Yes ☒ No ☐	Total Containers:	10		
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
MWD1 A	S	7/19/19	1610	1'	1					
MWD1 B			1615	5'	1					
MWD1 C			1655	20'	1					
MWD1 D			1705	30'	1					
MWD1 E			1720	40'	1					
MWD1 F			1730	50'	1					
MWD1 G			7/20/19	0810	51'					
MWD1 H			0830	55'						
MWD1 I			0840	60'						
MWD1 J			0845	63700						

Total 200.7 / 6010	200.8 / 6020:	8RCRA 13PPM Texas 11	AI 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

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Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		07/20/19 9:25			07/22/19 10:00



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Hobbs, NM (575) 392-7550 Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000

Chain of Custody

Work Order No: W31060

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

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

Project Name:	Corral Canyon Fed 14 (29-520)	Turn Around	
Project Number:	012919019	Routine ☒	
P.O. Number:		Rush:	
Sampler's Name:	Benjamin Beill	Due Date:	

SAMPLE RECEIPT	Temp Blank:	Yes ☐ No ☒	Wet Ice:	Yes ☐ No ☒
Temperature (°C):	1.8	Thermometer ID		
Received Intact:	Yes ☒ No ☐	Correction Factor:	-0.2	
Cooler Custody Seals:	Yes ☒ No ☐ N/A	Total Containers:	10	
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
ANW05	S	7/10/19	10:10	1'	1	X	X	X		
A	1		10:30	10'	1	X	X	X		
B	1		10:37	20'	1	X	X	X		
C	1		10:40	25'	1	X	X	X		
D	1		11:00	35'	1	X	X	X		
E	1		12:00	46'	1	X	X	X		
F	1		12:30	55'	1	X	X	X		
G	1		12:50	62'	1	X	X	X		
H	1		12:55	67'	1	X	X	X		
ANW04	S	7/10/19	14:00	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

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Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<u>[Signature]</u>	<u>[Signature]</u>	07/22/19 9:25	<u>[Signature]</u>	<u>[Signature]</u>	07/24/19 10:10
1					
3					
5					



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Hobbs, NM (575) 392-7550 Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000

Chain of Custody

Work Order No: 24712419
1031640

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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:	dbellill@ltenv.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: ☐

ANALYSIS REQUEST

Work Order Notes

Project Name:	Garret Canyon Field (10/18/2019)	Turn Around	
Project Number:	017919018	Routine ☒	
P.O. Number:		Rush:	
Sampler's Name:	Benjamin Beill	Due Date:	

SAMPLE RECEIPT	Temp Blank:	☒ Yes ☐ No	Wet Ice:	☒ Yes ☐ No
	Temperature (°C):	1.8	Thermometer ID	
	Received Intact:	☒ Yes ☐ No	Correction Factor: -0.7	
	Cooler Custody Seals:	Yes ☒ No ☐ N/A	Total Containers: 10	
	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 Requested	Work Order Notes
MW04A	S	7/22/19	1410	10'	1	✓	✓	✓		
MW04B	S	7/22/19	1420	15'	1	✓	✓	✓		
MW04C	S	7/22/19	1440	25'	1	✓	✓	✓		
MW04D	S	7/22/19	1500	35'	1	✓	✓	✓		
MW04E	S	7/22/19	1545	45'	1	✓	✓	✓		
MW04F	S	7/22/19	1625	55'	1	✓	✓	✓		
MW04G	S	7/22/19	0830	65'	1	✓	✓	✓		
MW04H	S	7/22/19	0905	1'	1	✓	✓	✓		
MW04I	S	7/22/19	0915	10'	1	✓	✓	✓		
MW04J	S	7/22/19	0925	14'	1	✓	✓	✓		

Total 200.7 / 6010 200.8 / 6020:
Circle Method(s) and Metal(s) to be analyzed

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

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Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 <u>Bell</u>	<u>[Signature]</u>	07/22/19 9:25	2 <u>[Signature]</u>	<u>[Signature]</u>	07/22/19 10:10
3			4		
5			6		



Chain of Custody

Work Order No: 431460

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Midland, TX (432-704-5440) EL Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296
Hobbs, NM (575-392-7550) Phoenix, AZ (480-365-0900) Atlanta, GA (770-449-8800) Tampa, FL (813-620-2000)

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

Project Name:	Local Layer Fed 14 (24-520)	Turn Around	
Project Number:	012419018	Routine	☒
P.O. Number:		Rush:	
Sampler's Name:	Benjamin Beill	Due Date:	

SAMPLE RECEIPT	Temp Blank:	☒ Yes ☐ No	Wet Ice:	☒ Yes ☐ No
Temperature (°C):	1.8	Thermometer ID		
Received Intact:	☒ Yes ☐ No	Correction Factor:	-0.2	
Cooler Custody Seals:	Yes ☒ No ☐ N/A	Total Containers:	10	
Sample Custody Seals:	Yes ☒ No ☐ N/A			

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Num	TPH	BTE	Chlor																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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Total 200.7 / 6010	200.8 / 6020:	8RCRA 13PPM	Texas 11	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	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																																		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
<u>[Signature]</u>	<u>[Signature]</u>	07/24/19 9:25	<u>[Signature]</u>	<u>[Signature]</u>	8/24/19 10:10



Inter-Office Shipment

Page 1 of 6

IOS Number **44728**

Date/Time: 07/22/19 17:04

Created by: Elizabeth McClellan

Please send report to: Jessica Kramer

Lab# From: **Carlsbad**

Delivery Priority: Fedex

Address: 1089 N Canal Street

Lab# To: **Midland**

Air Bill No.: 8146 9417 0340

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
631660-001	S	MW03	07/19/19 13:00	SW8021B	BTEX by EPA 8021B	07/26/19	08/02/19	JKR	BR4FBZ BZ BZME EBZ X	
631660-001	S	MW03	07/19/19 13:00	SW8015MOD_NM	TPH by SW8015 Mod	07/26/19	08/02/19	JKR	GRO-DRO PHCC10C28 PI	
631660-001	S	MW03	07/19/19 13:00	E300_CL	Chloride by EPA 300	07/26/19	01/15/20	JKR	CL	
631660-002	S	MW03A	07/19/19 13:05	SW8021B	BTEX by EPA 8021B	07/26/19	08/02/19	JKR	BR4FBZ BZ BZME EBZ X	
631660-002	S	MW03A	07/19/19 13:05	SW8015MOD_NM	TPH by SW8015 Mod	07/26/19	08/02/19	JKR	GRO-DRO PHCC10C28 PI	
631660-002	S	MW03A	07/19/19 13:05	E300_CL	Chloride by EPA 300	07/26/19	01/15/20	JKR	CL	
631660-003	S	MW03B	07/19/19 13:10	SW8015MOD_NM	TPH by SW8015 Mod	07/26/19	08/02/19	JKR	GRO-DRO PHCC10C28 PI	
631660-003	S	MW03B	07/19/19 13:10	SW8021B	BTEX by EPA 8021B	07/26/19	08/02/19	JKR	BR4FBZ BZ BZME EBZ X	
631660-003	S	MW03B	07/19/19 13:10	E300_CL	Chloride by EPA 300	07/26/19	01/15/20	JKR	CL	
631660-004	S	MW03C	07/19/19 13:30	E300_CL	Chloride by EPA 300	07/26/19	01/15/20	JKR	CL	
631660-004	S	MW03C	07/19/19 13:30	SW8015MOD_NM	TPH by SW8015 Mod	07/26/19	08/02/19	JKR	GRO-DRO PHCC10C28 PI	
631660-004	S	MW03C	07/19/19 13:30	SW8021B	BTEX by EPA 8021B	07/26/19	08/02/19	JKR	BR4FBZ BZ BZME EBZ X	
631660-005	S	MW03D	07/19/19 13:45	SW8021B	BTEX by EPA 8021B	07/26/19	08/02/19	JKR	BR4FBZ BZ BZME EBZ X	
631660-005	S	MW03D	07/19/19 13:45	E300_CL	Chloride by EPA 300	07/26/19	01/15/20	JKR	CL	
631660-005	S	MW03D	07/19/19 13:45	SW8015MOD_NM	TPH by SW8015 Mod	07/26/19	08/02/19	JKR	GRO-DRO PHCC10C28 PI	
631660-006	S	MW03E	07/19/19 14:10	SW8015MOD_NM	TPH by SW8015 Mod	07/26/19	08/02/19	JKR	GRO-DRO PHCC10C28 PI	
631660-006	S	MW03E	07/19/19 14:10	SW8021B	BTEX by EPA 8021B	07/26/19	08/02/19	JKR	BR4FBZ BZ BZME EBZ X	
631660-006	S	MW03E	07/19/19 14:10	E300_CL	Chloride by EPA 300	07/26/19	01/15/20	JKR	CL	
631660-007	S	MW03F	07/19/19 14:15	E300_CL	Chloride by EPA 300	07/26/19	01/15/20	JKR	CL	
631660-007	S	MW03F	07/19/19 14:15	SW8015MOD_NM	TPH by SW8015 Mod	07/26/19	08/02/19	JKR	GRO-DRO PHCC10C28 PI	
631660-007	S	MW03F	07/19/19 14:15	SW8021B	BTEX by EPA 8021B	07/26/19	08/02/19	JKR	BR4FBZ BZ BZME EBZ X	
631660-008	S	MW03G	07/19/19 14:30	SW8015MOD_NM	TPH by SW8015 Mod	07/26/19	08/02/19	JKR	GRO-DRO PHCC10C28 PI	
631660-008	S	MW03G	07/19/19 14:30	E300_CL	Chloride by EPA 300	07/26/19	01/15/20	JKR	CL	
631660-008	S	MW03G	07/19/19 14:30	SW8021B	BTEX by EPA 8021B	07/26/19	08/02/19	JKR	BR4FBZ BZ BZME EBZ X	
631660-009	S	MW03H	07/19/19 14:45	SW8015MOD_NM	TPH by SW8015 Mod	07/26/19	08/02/19	JKR	GRO-DRO PHCC10C28 PI	



Inter-Office Shipment

IOS Number **44728**

Date/Time: 07/22/19 17:04

Created by: Elizabeth McClellan

Please send report to: Jessica Kramer

Lab# From: **Carlsbad**

Delivery Priority: Fedex

Address: 1089 N Canal Street

Lab# To: **Midland**

Air Bill No.: 8146 9417 0340

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
631660-009	S	MW03H	07/19/19 14:45	SW8021B	BTEX by EPA 8021B	07/26/19	08/02/19	JKR	BR4FBZ BZ BZME EBZ X	
631660-009	S	MW03H	07/19/19 14:45	E300_CL	Chloride by EPA 300	07/26/19	01/15/20	JKR	CL	
631660-010	S	MW03I	07/19/19 15:00	SW8015MOD_NM	TPH by SW8015 Mod	07/26/19	08/02/19	JKR	GRO-DRO PHCC10C28 PI	
631660-010	S	MW03I	07/19/19 15:00	E300_CL	Chloride by EPA 300	07/26/19	01/15/20	JKR	CL	
631660-010	S	MW03I	07/19/19 15:00	SW8021B	BTEX by EPA 8021B	07/26/19	08/02/19	JKR	BR4FBZ BZ BZME EBZ X	
631660-011	S	MW01	07/19/19 16:10	SW8015MOD_NM	TPH by SW8015 Mod	07/26/19	08/02/19	JKR	GRO-DRO PHCC10C28 PI	
631660-011	S	MW01	07/19/19 16:10	SW8021B	BTEX by EPA 8021B	07/26/19	08/02/19	JKR	BR4FBZ BZ BZME EBZ X	
631660-011	S	MW01	07/19/19 16:10	E300_CL	Chloride by EPA 300	07/26/19	01/15/20	JKR	CL	
631660-012	S	MW01A	07/19/19 16:15	SW8015MOD_NM	TPH by SW8015 Mod	07/26/19	08/02/19	JKR	GRO-DRO PHCC10C28 PI	
631660-012	S	MW01A	07/19/19 16:15	SW8021B	BTEX by EPA 8021B	07/26/19	08/02/19	JKR	BR4FBZ BZ BZME EBZ X	
631660-012	S	MW01A	07/19/19 16:15	E300_CL	Chloride by EPA 300	07/26/19	01/15/20	JKR	CL	
631660-013	S	MW01B	07/19/19 16:55	SW8015MOD_NM	TPH by SW8015 Mod	07/26/19	08/02/19	JKR	GRO-DRO PHCC10C28 PI	
631660-013	S	MW01B	07/19/19 16:55	SW8021B	BTEX by EPA 8021B	07/26/19	08/02/19	JKR	BR4FBZ BZ BZME EBZ X	
631660-013	S	MW01B	07/19/19 16:55	E300_CL	Chloride by EPA 300	07/26/19	01/15/20	JKR	CL	
631660-014	S	MW01C	07/19/19 17:05	SW8015MOD_NM	TPH by SW8015 Mod	07/26/19	08/02/19	JKR	GRO-DRO PHCC10C28 PI	
631660-014	S	MW01C	07/19/19 17:05	SW8021B	BTEX by EPA 8021B	07/26/19	08/02/19	JKR	BR4FBZ BZ BZME EBZ X	
631660-014	S	MW01C	07/19/19 17:05	E300_CL	Chloride by EPA 300	07/26/19	01/15/20	JKR	CL	
631660-015	S	MW01D	07/19/19 17:20	SW8015MOD_NM	TPH by SW8015 Mod	07/26/19	08/02/19	JKR	GRO-DRO PHCC10C28 PI	
631660-015	S	MW01D	07/19/19 17:20	SW8021B	BTEX by EPA 8021B	07/26/19	08/02/19	JKR	BR4FBZ BZ BZME EBZ X	
631660-015	S	MW01D	07/19/19 17:20	E300_CL	Chloride by EPA 300	07/26/19	01/15/20	JKR	CL	
631660-016	S	MW01E	07/19/19 17:30	SW8015MOD_NM	TPH by SW8015 Mod	07/26/19	08/02/19	JKR	GRO-DRO PHCC10C28 PI	
631660-016	S	MW01E	07/19/19 17:30	SW8021B	BTEX by EPA 8021B	07/26/19	08/02/19	JKR	BR4FBZ BZ BZME EBZ X	
631660-016	S	MW01E	07/19/19 17:30	E300_CL	Chloride by EPA 300	07/26/19	01/15/20	JKR	CL	
631660-017	S	MW01F	07/20/19 08:10	SW8015MOD_NM	TPH by SW8015 Mod	07/26/19	08/03/19	JKR	GRO-DRO PHCC10C28 PI	
631660-017	S	MW01F	07/20/19 08:10	SW8021B	BTEX by EPA 8021B	07/26/19	08/03/19	JKR	BR4FBZ BZ BZME EBZ X	

Inter Office Shipment or Sample Comments:



Inter-Office Shipment

IOS Number **44728**

Date/Time: 07/22/19 17:04

Created by: Elizabeth McClellan

Please send report to: Jessica Kramer

Lab# From: **Carlsbad**

Delivery Priority: Fedex

Address: 1089 N Canal Street

Lab# To: **Midland**

Air Bill No.: 8146 9417 0340

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
631660-017	S	MW01F	07/20/19 08:10	E300_CL	Chloride by EPA 300	07/26/19	01/16/20	JKR	CL	
631660-018	S	MW01G	07/20/19 08:30	SW8015MOD_NM	TPH by SW8015 Mod	07/26/19	08/03/19	JKR	GRO-DRO PHCC10C28 PI	
631660-018	S	MW01G	07/20/19 08:30	SW8021B	BTEX by EPA 8021B	07/26/19	08/03/19	JKR	BR4FBZ BZ BZME EBZ X	
631660-018	S	MW01G	07/20/19 08:30	E300_CL	Chloride by EPA 300	07/26/19	01/16/20	JKR	CL	
631660-019	S	MW01H	07/20/19 08:40	SW8015MOD_NM	TPH by SW8015 Mod	07/26/19	08/03/19	JKR	GRO-DRO PHCC10C28 PI	
631660-019	S	MW01H	07/20/19 08:40	SW8021B	BTEX by EPA 8021B	07/26/19	08/03/19	JKR	BR4FBZ BZ BZME EBZ X	
631660-019	S	MW01H	07/20/19 08:40	E300_CL	Chloride by EPA 300	07/26/19	01/16/20	JKR	CL	
631660-020	S	MW01I	07/20/19 08:45	SW8015MOD_NM	TPH by SW8015 Mod	07/26/19	08/03/19	JKR	GRO-DRO PHCC10C28 PI	
631660-020	S	MW01I	07/20/19 08:45	SW8021B	BTEX by EPA 8021B	07/26/19	08/03/19	JKR	BR4FBZ BZ BZME EBZ X	
631660-020	S	MW01I	07/20/19 08:45	E300_CL	Chloride by EPA 300	07/26/19	01/16/20	JKR	CL	
631660-021	S	MW05	07/20/19 10:10	SW8015MOD_NM	TPH by SW8015 Mod	07/26/19	08/03/19	JKR	GRO-DRO PHCC10C28 PI	
631660-021	S	MW05	07/20/19 10:10	SW8021B	BTEX by EPA 8021B	07/26/19	08/03/19	JKR	BR4FBZ BZ BZME EBZ X	
631660-021	S	MW05	07/20/19 10:10	E300_CL	Chloride by EPA 300	07/26/19	01/16/20	JKR	CL	
631660-022	S	MW05A	07/20/19 10:30	SW8015MOD_NM	TPH by SW8015 Mod	07/26/19	08/03/19	JKR	GRO-DRO PHCC10C28 PI	
631660-022	S	MW05A	07/20/19 10:30	SW8021B	BTEX by EPA 8021B	07/26/19	08/03/19	JKR	BR4FBZ BZ BZME EBZ X	
631660-022	S	MW05A	07/20/19 10:30	E300_CL	Chloride by EPA 300	07/26/19	01/16/20	JKR	CL	
631660-023	S	MW05B	07/20/19 10:37	SW8015MOD_NM	TPH by SW8015 Mod	07/26/19	08/03/19	JKR	GRO-DRO PHCC10C28 PI	
631660-023	S	MW05B	07/20/19 10:37	E300_CL	Chloride by EPA 300	07/26/19	01/16/20	JKR	CL	
631660-023	S	MW05B	07/20/19 10:37	SW8021B	BTEX by EPA 8021B	07/26/19	08/03/19	JKR	BR4FBZ BZ BZME EBZ X	
631660-024	S	MW05C	07/20/19 10:40	E300_CL	Chloride by EPA 300	07/26/19	01/16/20	JKR	CL	
631660-024	S	MW05C	07/20/19 10:40	SW8021B	BTEX by EPA 8021B	07/26/19	08/03/19	JKR	BR4FBZ BZ BZME EBZ X	
631660-024	S	MW05C	07/20/19 10:40	SW8015MOD_NM	TPH by SW8015 Mod	07/26/19	08/03/19	JKR	GRO-DRO PHCC10C28 PI	
631660-025	S	MW05D	07/20/19 11:00	SW8015MOD_NM	TPH by SW8015 Mod	07/26/19	08/03/19	JKR	GRO-DRO PHCC10C28 PI	
631660-025	S	MW05D	07/20/19 11:00	SW8021B	BTEX by EPA 8021B	07/26/19	08/03/19	JKR	BR4FBZ BZ BZME EBZ X	
631660-025	S	MW05D	07/20/19 11:00	E300_CL	Chloride by EPA 300	07/26/19	01/16/20	JKR	CL	

Inter Office Shipment or Sample Comments:

Relinquished By:

Received By:



Inter-Office Shipment

IOS Number **44728**

Date/Time: 07/22/19 17:04

Created by: Elizabeth McClellan

Please send report to: Jessica Kramer

Lab# From: **Carlsbad**

Delivery Priority: Fedex

Address: 1089 N Canal Street

Lab# To: **Midland**

Air Bill No.: 8146 9417 0340

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
631660-026	S	MW05E	07/20/19 12:00	SW8015MOD_NM	TPH by SW8015 Mod	07/26/19	08/03/19	JKR	GRO-DRO PHCC10C28 PI	
631660-026	S	MW05E	07/20/19 12:00	SW8021B	BTEX by EPA 8021B	07/26/19	08/03/19	JKR	BR4FBZ BZ BZME EBZ X	
631660-026	S	MW05E	07/20/19 12:00	E300_CL	Chloride by EPA 300	07/26/19	01/16/20	JKR	CL	
631660-027	S	MW05F	07/20/19 12:30	E300_CL	Chloride by EPA 300	07/26/19	01/16/20	JKR	CL	
631660-027	S	MW05F	07/20/19 12:30	SW8021B	BTEX by EPA 8021B	07/26/19	08/03/19	JKR	BR4FBZ BZ BZME EBZ X	
631660-027	S	MW05F	07/20/19 12:30	SW8015MOD_NM	TPH by SW8015 Mod	07/26/19	08/03/19	JKR	GRO-DRO PHCC10C28 PI	
631660-028	S	MW05G	07/20/19 12:50	SW8021B	BTEX by EPA 8021B	07/26/19	08/03/19	JKR	BR4FBZ BZ BZME EBZ X	
631660-028	S	MW05G	07/20/19 12:50	SW8015MOD_NM	TPH by SW8015 Mod	07/26/19	08/03/19	JKR	GRO-DRO PHCC10C28 PI	
631660-028	S	MW05G	07/20/19 12:50	E300_CL	Chloride by EPA 300	07/26/19	01/16/20	JKR	CL	
631660-029	S	MW05H	07/20/19 12:55	SW8021B	BTEX by EPA 8021B	07/26/19	08/03/19	JKR	BR4FBZ BZ BZME EBZ X	
631660-029	S	MW05H	07/20/19 12:55	SW8015MOD_NM	TPH by SW8015 Mod	07/26/19	08/03/19	JKR	GRO-DRO PHCC10C28 PI	
631660-029	S	MW05H	07/20/19 12:55	E300_CL	Chloride by EPA 300	07/26/19	01/16/20	JKR	CL	
631660-030	S	MW04	07/20/19 14:00	SW8015MOD_NM	TPH by SW8015 Mod	07/26/19	08/03/19	JKR	GRO-DRO PHCC10C28 PI	
631660-030	S	MW04	07/20/19 14:00	SW8021B	BTEX by EPA 8021B	07/26/19	08/03/19	JKR	BR4FBZ BZ BZME EBZ X	
631660-030	S	MW04	07/20/19 14:00	E300_CL	Chloride by EPA 300	07/26/19	01/16/20	JKR	CL	
631660-031	S	MW04A	07/20/19 14:10	SW8021B	BTEX by EPA 8021B	07/26/19	08/03/19	JKR	BR4FBZ BZ BZME EBZ X	
631660-031	S	MW04A	07/20/19 14:10	SW8015MOD_NM	TPH by SW8015 Mod	07/26/19	08/03/19	JKR	GRO-DRO PHCC10C28 PI	
631660-031	S	MW04A	07/20/19 14:10	E300_CL	Chloride by EPA 300	07/26/19	01/16/20	JKR	CL	
631660-032	S	MW04B	07/20/19 14:20	SW8015MOD_NM	TPH by SW8015 Mod	07/26/19	08/03/19	JKR	GRO-DRO PHCC10C28 PI	
631660-032	S	MW04B	07/20/19 14:20	SW8021B	BTEX by EPA 8021B	07/26/19	08/03/19	JKR	BR4FBZ BZ BZME EBZ X	
631660-032	S	MW04B	07/20/19 14:20	E300_CL	Chloride by EPA 300	07/26/19	01/16/20	JKR	CL	
631660-033	S	MW04C	07/20/19 14:40	SW8015MOD_NM	TPH by SW8015 Mod	07/26/19	08/03/19	JKR	GRO-DRO PHCC10C28 PI	
631660-033	S	MW04C	07/20/19 14:40	SW8021B	BTEX by EPA 8021B	07/26/19	08/03/19	JKR	BR4FBZ BZ BZME EBZ X	
631660-033	S	MW04C	07/20/19 14:40	E300_CL	Chloride by EPA 300	07/26/19	01/16/20	JKR	CL	
631660-034	S	MW04D	07/20/19 15:00	SW8015MOD_NM	TPH by SW8015 Mod	07/26/19	08/03/19	JKR	GRO-DRO PHCC10C28 PI	

Inter Office Shipment or Sample Comments:

Date Relinquished:

Date Received:



Inter-Office Shipment

IOS Number **44728**

Date/Time: 07/22/19 17:04

Created by: Elizabeth McClellan

Please send report to: Jessica Kramer

Lab# From: **Carlsbad**

Delivery Priority: Fedex

Address: 1089 N Canal Street

Lab# To: **Midland**

Air Bill No.: 8146 9417 0340

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
631660-034	S	MW04D	07/20/19 15:00	SW8021B	BTEX by EPA 8021B	07/26/19	08/03/19	JKR	BR4FBZ BZ BZME EBZ X	
631660-034	S	MW04D	07/20/19 15:00	E300_CL	Chloride by EPA 300	07/26/19	01/16/20	JKR	CL	
631660-035	S	MW04E	07/20/19 15:45	SW8021B	BTEX by EPA 8021B	07/26/19	08/03/19	JKR	BR4FBZ BZ BZME EBZ X	
631660-035	S	MW04E	07/20/19 15:45	E300_CL	Chloride by EPA 300	07/26/19	01/16/20	JKR	CL	
631660-035	S	MW04E	07/20/19 15:45	SW8015MOD_NM	TPH by SW8015 Mod	07/26/19	08/03/19	JKR	GRO-DRO PHCC10C28 PI	
631660-036	S	MW04F	07/20/19 16:25	SW8015MOD_NM	TPH by SW8015 Mod	07/26/19	08/03/19	JKR	GRO-DRO PHCC10C28 PI	
631660-036	S	MW04F	07/20/19 16:25	SW8021B	BTEX by EPA 8021B	07/26/19	08/03/19	JKR	BR4FBZ BZ BZME EBZ X	
631660-036	S	MW04F	07/20/19 16:25	E300_CL	Chloride by EPA 300	07/26/19	01/16/20	JKR	CL	
631660-037	S	MW04G	07/21/19 08:30	SW8015MOD_NM	TPH by SW8015 Mod	07/26/19	08/04/19	JKR	GRO-DRO PHCC10C28 PI	
631660-037	S	MW04G	07/21/19 08:30	SW8021B	BTEX by EPA 8021B	07/26/19	08/04/19	JKR	BR4FBZ BZ BZME EBZ X	
631660-037	S	MW04G	07/21/19 08:30	E300_CL	Chloride by EPA 300	07/26/19	01/17/20	JKR	CL	
631660-038	S	MW02	07/21/19 09:05	SW8015MOD_NM	TPH by SW8015 Mod	07/26/19	08/04/19	JKR	GRO-DRO PHCC10C28 PI	
631660-038	S	MW02	07/21/19 09:05	SW8021B	BTEX by EPA 8021B	07/26/19	08/04/19	JKR	BR4FBZ BZ BZME EBZ X	
631660-038	S	MW02	07/21/19 09:05	E300_CL	Chloride by EPA 300	07/26/19	01/17/20	JKR	CL	
631660-039	S	MW02A	07/21/19 09:15	SW8015MOD_NM	TPH by SW8015 Mod	07/26/19	08/04/19	JKR	GRO-DRO PHCC10C28 PI	
631660-039	S	MW02A	07/21/19 09:15	SW8021B	BTEX by EPA 8021B	07/26/19	08/04/19	JKR	BR4FBZ BZ BZME EBZ X	
631660-039	S	MW02A	07/21/19 09:15	E300_CL	Chloride by EPA 300	07/26/19	01/17/20	JKR	CL	
631660-040	S	MW02B	07/21/19 09:25	SW8015MOD_NM	TPH by SW8015 Mod	07/26/19	08/04/19	JKR	GRO-DRO PHCC10C28 PI	
631660-040	S	MW02B	07/21/19 09:25	SW8021B	BTEX by EPA 8021B	07/26/19	08/04/19	JKR	BR4FBZ BZ BZME EBZ X	
631660-040	S	MW02B	07/21/19 09:25	E300_CL	Chloride by EPA 300	07/26/19	01/17/20	JKR	CL	
631660-041	S	MW02C	07/21/19 10:00	SW8015MOD_NM	TPH by SW8015 Mod	07/26/19	08/04/19	JKR	GRO-DRO PHCC10C28 PI	
631660-041	S	MW02C	07/21/19 10:00	SW8021B	BTEX by EPA 8021B	07/26/19	08/04/19	JKR	BR4FBZ BZ BZME EBZ X	
631660-041	S	MW02C	07/21/19 10:00	E300_CL	Chloride by EPA 300	07/26/19	01/17/20	JKR	CL	
631660-042	S	MW02D	07/21/19 10:15	SW8015MOD_NM	TPH by SW8015 Mod	07/26/19	08/04/19	JKR	GRO-DRO PHCC10C28 PI	
631660-042	S	MW02D	07/21/19 10:15	SW8021B	BTEX by EPA 8021B	07/26/19	08/04/19	JKR	BR4FBZ BZ BZME EBZ X	

Inter Office Shipment or Sample Comments:

Cooler Temperature:



Inter-Office Shipment

IOS Number **44728**

Date/Time: 07/22/19 17:04

Lab# From: **Carlsbad**

Lab# To: **Midland**

Created by: Elizabeth McClellan

Delivery Priority: Fedex

Air Bill No.: 8146 9417 0340

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
631660-042	S	MW02D	07/21/19 10:15	E300_CL	Chloride by EPA 300	07/26/19	01/17/20	JKR	CL	
631660-043	S	MW02E	07/21/19 10:50	SW8015MOD_NM	TPH by SW8015 Mod	07/26/19	08/04/19	JKR	GRO-DRO PHCC10C28 PI	
631660-043	S	MW02E	07/21/19 10:50	SW8021B	BTEX by EPA 8021B	07/26/19	08/04/19	JKR	BR4FBZ BZ BZME EBZ X	
631660-043	S	MW02E	07/21/19 10:50	E300_CL	Chloride by EPA 300	07/26/19	01/17/20	JKR	CL	
631660-044	S	MW02F	07/21/19 10:55	SW8015MOD_NM	TPH by SW8015 Mod	07/26/19	08/04/19	JKR	GRO-DRO PHCC10C28 PI	
631660-044	S	MW02F	07/21/19 10:55	SW8021B	BTEX by EPA 8021B	07/26/19	08/04/19	JKR	BR4FBZ BZ BZME EBZ X	
631660-044	S	MW02F	07/21/19 10:55	E300_CL	Chloride by EPA 300	07/26/19	01/17/20	JKR	CL	
631660-045	S	MW02G	07/21/19 12:10	SW8015MOD_NM	TPH by SW8015 Mod	07/26/19	08/04/19	JKR	GRO-DRO PHCC10C28 PI	
631660-045	S	MW02G	07/21/19 12:10	SW8021B	BTEX by EPA 8021B	07/26/19	08/04/19	JKR	BR4FBZ BZ BZME EBZ X	
631660-045	S	MW02G	07/21/19 12:10	E300_CL	Chloride by EPA 300	07/26/19	01/17/20	JKR	CL	
631660-046	S	MW02H	07/21/19 12:30	SW8015MOD_NM	TPH by SW8015 Mod	07/26/19	08/04/19	JKR	GRO-DRO PHCC10C28 PI	
631660-046	S	MW02H	07/21/19 12:30	SW8021B	BTEX by EPA 8021B	07/26/19	08/04/19	JKR	BR4FBZ BZ BZME EBZ X	
631660-046	S	MW02H	07/21/19 12:30	E300_CL	Chloride by EPA 300	07/26/19	01/17/20	JKR	CL	

Inter Office Shipment or Sample Comments:

Elizabeth McClellan

07/22/2019

Katie Lowe

07/23/2019 11:30

3.1



XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 44728

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sent By: Elizabeth McClellan

Date Sent: 07/22/2019 05:04 PM

Received By: Katie Lowe

Date Received: 07/23/2019 11:30 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	3.1
#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: 07/23/2019



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 07/22/2019 09:25:00 AM

Work Order #: 631660

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.8
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	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:

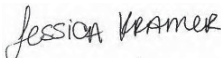
PH Device/Lot#:

Checklist completed by:


Elizabeth McClellan

Date: 07/22/2019

Checklist reviewed by:


Jessica Kramer

Date: 07/24/2019

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	
BTEX by EPA 8021B SUB: T104704400-18-16	Sampled:	Jul-24-19 08:45	Jul-24-19 08:50	Jul-24-19 09:00	Jul-24-19 09:45	
	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 RL <0.00198 0.00198	mg/kg RL <0.00199 0.00199	mg/kg RL <0.00198 0.00198	mg/kg RL <0.00199 0.00199	
Chloride by EPA 300 SUB: T104704400-18-16	Extracted:	Toluene	<0.00198 0.00198	<0.00198 0.00198	<0.00199 0.00199	
		Ethylbenzene	<0.00198 0.00198	<0.00198 0.00198	<0.00199 0.00199	
		m,p-Xylenes	<0.00396 0.00396	<0.00397 0.00397	<0.00398 0.00398	
		o-Xylene	<0.00198 0.00198	<0.00198 0.00198	<0.00199 0.00199	
		Total Xylenes	<0.00198 0.00198	<0.00198 0.00198	<0.00199 0.00199	
		Total BTEX	<0.00198 0.00198	<0.00198 0.00198	<0.00199 0.00199	
TPH by SW8015 Mod SUB: T104704215-19-29	Extracted:	Chloride	2950 25.1	631 24.9	126 4.99	
			mg/kg RL	mg/kg RL	mg/kg RL	
		Jul-26-19 13:50	Jul-26-19 13:50	Jul-26-19 13:50	Jul-26-19 13:50	
		Jul-26-19 23:26	Jul-26-19 23:32	Jul-26-19 23:37	Jul-26-19 23:42	
Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) Motor Oil Range Hydrocarbons (MRO) Total TPH Total GRO-DRO	Analyzed:	Aug-01-19 01:03	Aug-01-19 01:22	Aug-01-19 01:41	Aug-01-19 02:19	
		mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
		<49.8 49.8	<49.8 49.8	<49.9 49.9	<50.0 50.0	
		<49.8 49.8	<49.8 49.8	<49.9 49.9	<50.0 50.0	
		<49.8 49.8	<49.8 49.8	<49.9 49.9	<50.0 50.0	
		<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

Jessica Kramer
Project Assistant



Certificate of Analytical Results 632041

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

Sample Id: BG01	Matrix: Soil	Date Received: 07.25.19 08.55
Lab Sample Id: 632041-001	Date Collected: 07.24.19 08.45	Sample Depth: 9 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 07.26.19 13.50	Basis: Wet Weight
Seq Number: 3096698		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		Prep Method: TX1005P
Tech: ISU		% Moisture:
Analyst: ISU	Date Prep: 07.31.19 15.21	Basis: Wet Weight
Seq Number: 3097314		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

Date Prep: 07.26.19 14.30

Prep Method: SW5030B

% Moisture:

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** Matrix: Soil Date Received: 07.25.19 08.55
Lab Sample Id: 632041-002 Date Collected: 07.24.19 08.50 Sample Depth: 9 ft
Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: CHE % Moisture:
Analyst: CHE Date Prep: 07.26.19 13.50 Basis: Wet Weight
Seq Number: 3096698 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 Prep Method: TX1005P
Tech: ISU % Moisture:
Analyst: ISU Date Prep: 07.31.19 15.24 Basis: Wet Weight
Seq Number: 3097314 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-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	0.0928	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

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

Atlanta GA (770-449-8800) Tampa FL (813-620-2000)

Page 1 of 1

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

Work Order Comments Program: UST/PST ☐ PRP ☐ Brownfields ☐ RC ☐ Superfund ☐ State of Project: Reporting Level II ☐ Level III ☐ UST/UST ☐ RRP ☐ Level IV ☐ Deliverables: EDD ☐ ADAPT ☐ Other:	Work Order Notes
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Project Name:	CORRAL CANYON 14H (RP# NOT ASS	Turn Around
Project Number:	012419153	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 In tact:	Yes No	Correction Factor:
Cooler Custody Seals:	Yes No N/A	Total Containers:
Sample Custody Seals:	Yes No N/A	

Number of Containers

EPA 8015)

(EPA 0=8021)

de (EPA 300.0)

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

[illegible]

Total	200.7 / 6010	200.8 / 6020:
8RCRA	13PPM	Texas 11
	Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Ni Pb Mn Tl	
	Cd Hg Ag Sn Zn Cu Ni Se Mg Al Ti	
		CHZ Na Cl K Br Li Zn
		1633 / 245.1 / 7470 / 7471 : Hq

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 H U

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466
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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			7/5/19 0855	2		
2				4		
3						
5				6		

Revised Date 05/14/18 Rev. 2017



Inter-Office Shipment

IOS Number **44973**

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

Lab# From: **Carlsbad**

Lab# To: **Midland**

Created by: Elizabeth McClellan

Delivery Priority:

Air Bill No.:

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	07/24/19 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

Received By:

Date Relinquished:

07/25/2019

Date Received:

Cooler Temperature:

Inter-Office Shipment

IOS Number : 45109

Date/Time: 07.29.2019 14:03

Lab# From: Carlsbad

Lab# To: Houston

Created by: Jessica Kramer

Delivery Priority:

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

Jessica Kramer

Travis Simmons

Relinquished By:

Received By:

Jessica Kramer

Travis Simmons

Date Relinquished: 07.29.2019

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 636933

for
LT Environmental, Inc.

Project Manager: Dan Moir

Corral Canyon 1H

012919018

26-SEP-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 (TX104704295-19-21), 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-Tampa: Florida (E87429), North Carolina (483)



26-SEP-19

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

Reference: XENCO Report No(s): **636933**
Corral Canyon 1H
Project Address: Eddy County

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 636933. 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. 636933 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 636933

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW01	W	09-13-19 14:00	68.4 ft	636933-001
MW02	W	09-13-19 09:30	68.1 ft	636933-002
MW03	W	09-13-19 13:00	75.6 ft	636933-003
MW04	W	09-13-19 10:45	69.1 ft	636933-004
MW05	W	09-13-19 11:30	64.2 ft	636933-005
MW06	W	09-13-19 14:45	64.1 ft	636933-006



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *Corral Canyon 1H*

Project ID: 012919018
Work Order Number(s): 636933

Report Date: 26-SEP-19
Date Received: 09/13/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3101788 Chloride by EPA 300

Lab Sample ID 636933-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 636933-001, -002, -003, -004, -005, -006.

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



Certificate of Analysis Summary 636933
LT Environmental, Inc., Arvada, CO
Project Name: Corral Canyon 1H

Project Id: 012919018
Contact: Dan Moir
Project Location: Eddy County

Date Received in Lab: Fri Sep-13-19 04:34 pm
Report Date: 26-SEP-19
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	636933-001	636933-002	636933-003	636933-004	636933-005	636933-006
	Field Id:	MW01	MW02	MW03	MW04	MW05	MW06
	Depth:	68.4 ft	68.1 ft	75.6 ft	69.1 ft	64.2 ft	64.1 ft
	Matrix:	WATER	WATER	WATER	WATER	WATER	WATER
Chloride by EPA 300	Sampled:	Sep-13-19 14:00	Sep-13-19 09:30	Sep-13-19 13:00	Sep-13-19 10:45	Sep-13-19 11:30	Sep-13-19 14:45
	Extracted:	Sep-17-19 14:00	Sep-17-19 14:00	Sep-17-19 14:00	Sep-17-19 14:00	Sep-17-19 14:00	Sep-17-19 14:00
	Analyzed:	Sep-17-19 14:21	Sep-17-19 14:27	Sep-17-19 14:34	Sep-17-19 14:40	Sep-17-19 14:47	Sep-17-19 14:53
	Units/RL:	mg/L RL 2500	mg/L RL 2500	mg/L RL 2500	mg/L RL 2500	mg/L RL 2500	mg/L RL 2500
TDS by SM2540C SUB: T104704400-18-18	Extracted:						
	Analyzed:	Sep-17-19 15:30	Sep-17-19 15:30	Sep-17-19 15:30	Sep-17-19 15:30	Sep-17-19 15:30	Sep-17-19 15:30
	Units/RL:	mg/L RL 5.00	mg/L RL 5.00	mg/L RL 5.00	mg/L RL 5.00	mg/L RL 5.00	mg/L RL 5.00
	Total Dissolved Solids	17100	21800	23900	18900	10500	11600

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: 1.0%

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analytical Results 636933

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H

Sample Id: **MW01**
Lab Sample Id: 636933-001

Matrix: Water
Date Collected: 09.13.19 14.00

Date Received: 09.13.19 16.34
Sample Depth: 68.4 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3101788

Date Prep: 09.17.19 14.00

Prep Method: E300P

% Moisture:

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	9320	2500	mg/L	09.17.19 14.21		5000

Analytical Method: TDS by SM2540C

Tech: CHE

Analyst: CHE

Seq Number: 3101818

% Moisture:

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total Dissolved Solids	1642222	17100	5.00	mg/L	09.17.19 15.30		1



Certificate of Analytical Results 636933

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H

Sample Id: **MW02**
Lab Sample Id: 636933-002

Matrix: Water
Date Collected: 09.13.19 09.30

Date Received: 09.13.19 16.34
Sample Depth: 68.1 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3101788

Date Prep: 09.17.19 14.00

Prep Method: E300P

% Moisture:

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	11900	2500	mg/L	09.17.19 14.27		5000

Analytical Method: TDS by SM2540C

Tech: CHE

Analyst: CHE

Seq Number: 3101818

% Moisture:

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total Dissolved Solids	1642222	21800	5.00	mg/L	09.17.19 15.30		1



Certificate of Analytical Results 636933

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H

Sample Id: **MW03**
Lab Sample Id: 636933-003

Matrix: Water
Date Collected: 09.13.19 13.00

Date Received: 09.13.19 16.34
Sample Depth: 75.6 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3101788

Date Prep: 09.17.19 14.00

Prep Method: E300P

% Moisture:

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	13300	2500	mg/L	09.17.19 14.34		5000

Analytical Method: TDS by SM2540C

Tech: CHE

Analyst: CHE

Seq Number: 3101818

% Moisture:

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total Dissolved Solids	1642222	23900	5.00	mg/L	09.17.19 15.30		1



Certificate of Analytical Results 636933

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H

Sample Id: **MW04**
Lab Sample Id: 636933-004

Matrix: Water
Date Collected: 09.13.19 10.45

Date Received: 09.13.19 16.34
Sample Depth: 69.1 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3101788

Date Prep: 09.17.19 14.00

Prep Method: E300P

% Moisture:

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	12600	2500	mg/L	09.17.19 14.40		5000

Analytical Method: TDS by SM2540C

Tech: CHE

Analyst: CHE

Seq Number: 3101818

% Moisture:

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total Dissolved Solids	1642222	18900	5.00	mg/L	09.17.19 15.30		1



Certificate of Analytical Results 636933

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H

Sample Id: **MW05**
Lab Sample Id: 636933-005

Matrix: Water
Date Collected: 09.13.19 11.30

Date Received: 09.13.19 16.34
Sample Depth: 64.2 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3101788

Date Prep: 09.17.19 14.00

Prep Method: E300P

% Moisture:

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6500	2500	mg/L	09.17.19 14.47		5000

Analytical Method: TDS by SM2540C

Tech: CHE

Analyst: CHE

Seq Number: 3101818

% Moisture:

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total Dissolved Solids	1642222	10500	5.00	mg/L	09.17.19 15.30		1



Certificate of Analytical Results 636933

LT Environmental, Inc., Arvada, CO

Corral Canyon 1H

Sample Id: **MW06**
Lab Sample Id: 636933-006

Matrix: Water
Date Collected: 09.13.19 14.45

Date Received: 09.13.19 16.34
Sample Depth: 64.1 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3101788

Date Prep: 09.17.19 14.00

Prep Method: E300P

% Moisture:

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8600	2500	mg/L	09.17.19 14.53		5000

Analytical Method: TDS by SM2540C

Tech: CHE

Analyst: CHE

Seq Number: 3101818

% Moisture:

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total Dissolved Solids	1642222	11600	5.00	mg/L	09.17.19 15.30		1

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 636933

LT Environmental, Inc. Corral Canyon 1H

Analytical Method: Chloride by EPA 300

Seq Number: 3101788

MB Sample Id: 7686384-1-BLK

Matrix: Water

LCS Sample Id: 7686384-1-BKS

Prep Method: E300P

Date Prep: 09.17.19

LCSD Sample Id: 7686384-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.500	25.0	27.1	108	27.1	108	90-110	0	20	mg/L	09.17.19 12:14	

Analytical Method: Chloride by EPA 300

Seq Number: 3101788

Parent Sample Id: 636933-001

Matrix: Water

MS Sample Id: 636933-001 S

Prep Method: E300P

Date Prep: 09.17.19

MSD Sample Id: 636933-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	9320	100000	123000	114	124000	115	90-110	1	20	mg/L	09.17.19 15:06	X

Analytical Method: TDS by SM2540C

Seq Number: 3101818

MB Sample Id: 3101818-1-BLK

Matrix: Water

LCS Sample Id: 3101818-1-BKS

LCSD Sample Id: 3101818-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Total Dissolved Solids	<5.00	1000	986	99	984	98	80-120	0	10	mg/L	09.17.19 15:30	

Analytical Method: TDS by SM2540C

Seq Number: 3101818

Parent Sample Id: 636933-001

Matrix: Water

MD Sample Id: 636933-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Total Dissolved Solids	17100	17700	3	10	mg/L	09.17.19 15:30	

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



Work Order No: 10310933

Hobbs NM (575-392-7550) Phoenix AZ (480-355-0900) Atlanta GA (770-449-8800) Tampa FL (813-620-2000)

Page 1 of 1
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Total	200.7 / 6010	200.8 / 6020:
8RCRA	13PPM	Texas 11
Al	Sb	As
Ba	Be	B
Cd	Ca	Cr
Cu	Fe	Pb
Mg	Mn	Mo
Ni	K	Se
Ag	SiO ₂	Na
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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		16:34 9/3/19			



Inter-Office Shipment

IOS Number **48031**

Date/Time: 09/16/19 11:59

Lab# From: **Carlsbad**

Lab# To: **Midland**

Created by: Elizabeth McClellan

Delivery Priority:

Air Bill No.:

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
636933-001	W	MW01	09/13/19 14:00	SM2540C	TDS by SM2540C	09/19/19	09/20/19 14:00	JKR	TDS	
636933-002	W	MW02	09/13/19 09:30	SM2540C	TDS by SM2540C	09/19/19	09/20/19 09:30	JKR	TDS	
636933-003	W	MW03	09/13/19 13:00	SM2540C	TDS by SM2540C	09/19/19	09/20/19 13:00	JKR	TDS	
636933-004	W	MW04	09/13/19 10:45	SM2540C	TDS by SM2540C	09/19/19	09/20/19 10:45	JKR	TDS	
636933-005	W	MW05	09/13/19 11:30	SM2540C	TDS by SM2540C	09/19/19	09/20/19 11:30	JKR	TDS	
636933-006	W	MW06	09/13/19 14:45	SM2540C	TDS by SM2540C	09/19/19	09/20/19 14:45	JKR	TDS	

Inter Office Shipment or Sample Comments:

Relinquished By:

Elizabeth McClellan

Received By:

Date Relinquished: 09/16/2019

Date Received:

Cooler Temperature:



XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 48031

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sent By: Elizabeth McClellan

Date Sent: 09/16/2019 11:59 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

Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

Date/ Time Received: 09/13/2019 04:34:00 PM

Work Order #: 636933

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	2.8
#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)?	No LIMITED SAMPLE****
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	Yes TDS subbed to Midland.
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

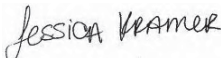
PH Device/Lot#:

Checklist completed by:


Elizabeth McClellan

Date: 09/16/2019

Checklist reviewed by:


Jessica Kramer

Date: 09/17/2019