



LT Environmental, Inc.

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

April 24, 2020

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

**RE: Closure Request
Corral Canyon #3H
Remediation Permit Number 2RP-3910
Eddy County, New Mexico**

Dear Mr. Billings:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following Closure Request report detailing site assessment and soil sampling activities at the Corral Canyon #3H (Site) in Unit A, Section 8, Township 25 South, Range 29 East, in Eddy County, New Mexico (Figure 1). The purpose of the site assessment and soil sampling activities was to address impacts to soil after a release of crude oil and produced water at the Site.

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

RELEASE BACKGROUND

On September 4, 2016, the Corral Canyon #3H flow line was washed into the road by rain. An oil hauler ran over the flow line and caused a leak in the line. Approximately 16.16 barrels (bbls) of crude oil and 11.11 bbls of produced water were released. The pasture area north of the road was affected by the released fluids, the pasture area south of the road was affected by overspray. A vacuum truck recovered approximately 15 bbls of crude oil and 10 bbls of produced water. XTO reported the release to the NMOCD on a Release Notification and Corrective Action Form C-141 on September 6, 2016 and was assigned Remediation Permit (RP) Number 2RP-3910 (Attachment 1). The release location referenced on initial C-141 (Unit O, Section 5, Township 25 South, Range 29 East) is the location of the Corral Canyon #3H well not the location of the flow line release.



The final C-141 and attached figures reference the release location in Unit A, Section 8, Township 25 South, Range 29 East.

SITE CHARACTERIZATION

LTE characterized the Site according to Table 1, *Closure Criteria for Soils Impacted by a Release*, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Depth to groundwater at the Site is estimated to be between 51 and 100 feet below ground surface (bgs) based on the nearest water well data. The closest permitted water well with depth to water data is United States Geological Survey (USGS) well C-01880, located approximately 8,000 feet northwest of the Site. The water well has a depth to groundwater of approximately 40 feet bgs and a total depth of 85 feet bgs. However, as part of remediation efforts at a nearby site, Corral Canyon #1H flow line (2RP-5201), LTE installed six monitoring wells (MW01 through MW06) to assess depth to groundwater. The groundwater monitoring wells are located approximately 700 feet northeast of the Site. Static water level measured in monitoring wells MW01 through MW06 on September 13, 2019, ranged from 57.26 feet bgs in monitoring well MW04 to 62.29 feet bgs in monitoring well MW02 with an average depth to water of 58.80 feet bgs. The depth to water measurements are provided in the table below and the location of the monitoring wells is identified on Figure 1.

MONITORING WELL INFORMATION

Sample Name	Total Depth (feet bgs)	Depth to Water (feet bgs)	Sample Date
MW01	68.44	58.17	09/13/2019
MW02	68.10	62.29	09/13/2019
MW03	75.58	58.30	09/13/2019
MW04	69.08	57.26	09/13/2019
MW05	64.80	58.54	09/13/2019
MW06	64.11	58.25	09/13/2019

Notes:

bgs – below ground surface

Based on depth to water measured recently in the nearby monitoring wells, depth to water at the Site is estimated to be between 51 and 100 feet bgs. The closest continuously flowing water or significant watercourse to the Site is an unnamed stream, located approximately 1,000 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 located in a medium-potential karst area.



CLOSURE CRITERIA

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

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

SITE ASSESSMENT, EXCAVATION, AND DELINEATION SOIL SAMPLING ACTIVITIES

The release extent was inspected by Diversified Environmental Services, Inc. (DFSI) personnel on September 9, 2016, five days after the release occurred. Two release areas were identified. The release area north of the road measured approximately 1,052 square feet in area. The overspray release area south of the road measured approximately 2,939 square feet in area. DFSI submitted a remediation workplan to the NMOCD in September 2019, which was subsequently approved. DFSI's site documentation and proposed workplan are provided in Attachment 2. Documentation includes a release map, site photographs, correspondence with NMOCD, and soil sample laboratory analytical results. DFSI proposed excavation and liner installation in the release area north of the road, and MicroBlaze® application to the overspray release area south of the road. DFSI is no longer in operation and no confirmation soil sampling records from the remediation activities were available. LTE personnel conducted additional site assessment and soil sampling activities to confirm that the Closure Criteria requirements were met.

Between October 2019 and April 2020, LTE personnel was at the Site to complete site assessment activities to confirm that DFSI's approved workplan had been successfully implemented. Potholes and boreholes were advanced via backhoe or hand auger within and around the documented release areas to assess for the presence or absence of impacted soil. Potholes PH01 through PH04 and boreholes BH01 and BH02 were advanced to depths ranging from 3.5 feet to 4.5 feet bgs within and around the former excavation area north of the road. The backfilled former excavation extent was visibly identifiable. The edge of the liner was exposed to confirm that installation had been completed per the approved workplan (see photograph 4). Potholes PH05 through PH14 were advanced to depths ranging from 1 foot to 4 feet bgs within and around the overspray area within and south of the road. Delineation soil samples were collected from each pothole and borehole from depths ranging from 0.5 feet to 4.5 feet bgs.

Due to variable naturally occurring chloride concentrations in the surrounding area, additional potholes PH15 through PH17 and boreholes BG01 and BG02 were advanced uphill from and 50



feet to 100 feet from the documented release extent, to determine naturally occurring chloride concentrations in the soil. Background soil samples were collected from potholes PH15 through PH17 and boreholes BG01 and BG02 from depths ranging from 0.5 feet to 4.5 feet bgs.

Soil from the potholes and boreholes was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photoionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. Field screening results and observations for the potholes were logged on lithologic/soil sampling logs, which are included in Attachment 3. The delineation soil sample locations are depicted on Figure 2.

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

Photographic documentation was conducted during the Site visits. Photographs are included in Attachment 4.

ANALYTICAL RESULTS

Laboratory analytical results for the background soil samples collected from potholes PH15 through PH17 and boreholes BG01 and BG02 indicated naturally occurring chloride concentrations ranging from 1,100 mg/kg to 5,230 mg/kg at depths ranging from 0.5 feet to 4.5 feet bgs.

Laboratory analytical results for the delineation soil samples collected from potholes PH01 through PH14 and boreholes BH01 and BH02 indicated that BTEX, GRO/DRO, and TPH concentrations were compliant with the Closure Criteria and chloride concentrations were less than and/or comparable to the naturally occurring chloride concentrations at the Site.

Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Attachment 5.

CLOSURE REQUEST

Remediation activities, including excavation of impacted soil and MicroBlaze® application, were completed during 2016 to address the September 4, 2016, release of crude oil and produced water at the Site. All except 2 bbls of released fluids were recovered during initial response activities. Due to the absence of soil sample analytical results from the 2016 remediation

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activities, site assessment activities were completed between October 2019 and April 2020 to confirm remediation of impacted soil.

Background soil samples were collected to establish naturally occurring chloride concentrations at the Site. Laboratory analytical results for the background soil samples indicated naturally occurring chloride concentrations ranging from 1,100 mg/kg to 5,230 mg/kg.

Potholes and boreholes were advanced within the release extents to assess for the presence or absence of impacted soil. Laboratory analytical results for the delineation soil samples indicated that BTEX, GRO/DRO, and TPH concentrations were compliant with the Closure Criteria and chloride concentrations were less than and/or comparable to the naturally occurring chloride concentrations at the Site. Based on the soil sample laboratory analytical results from the site assessment activities, no further remediation was required. Additionally, during January 2020 a new lease road and well pad were constructed over the former release/excavation area on the north side of the road (see photograph 5).

Initial response efforts, natural attenuation, and excavation of impacted soil have mitigated impacts at this Site. XTO requests no further action for RP Number 2RP-3910. XTO backfilled the excavation with material purchased locally and recontoured the Site to match pre-existing site conditions. An updated NMOCD Form C-141 is included in Attachment 1.

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

Sincerely,

LT ENVIRONMENTAL, INC.

Aimee Cole
Project Environmental Scientist

Ashley L. Ager, P.G.
Senior Geologist

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

Attachments:

Figure 1 Site Location Map
Figure 2 Delineation Soil Sample Locations

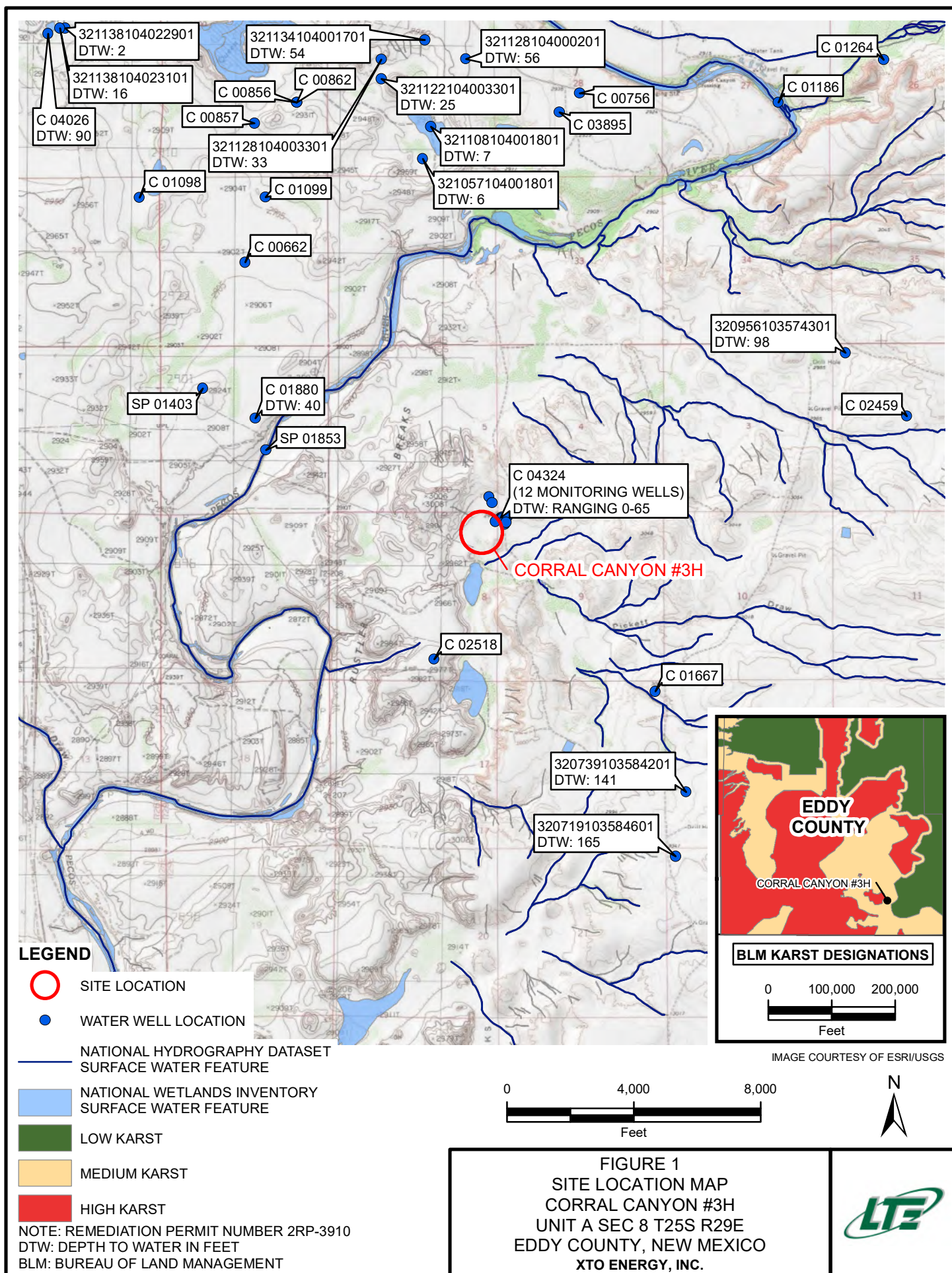


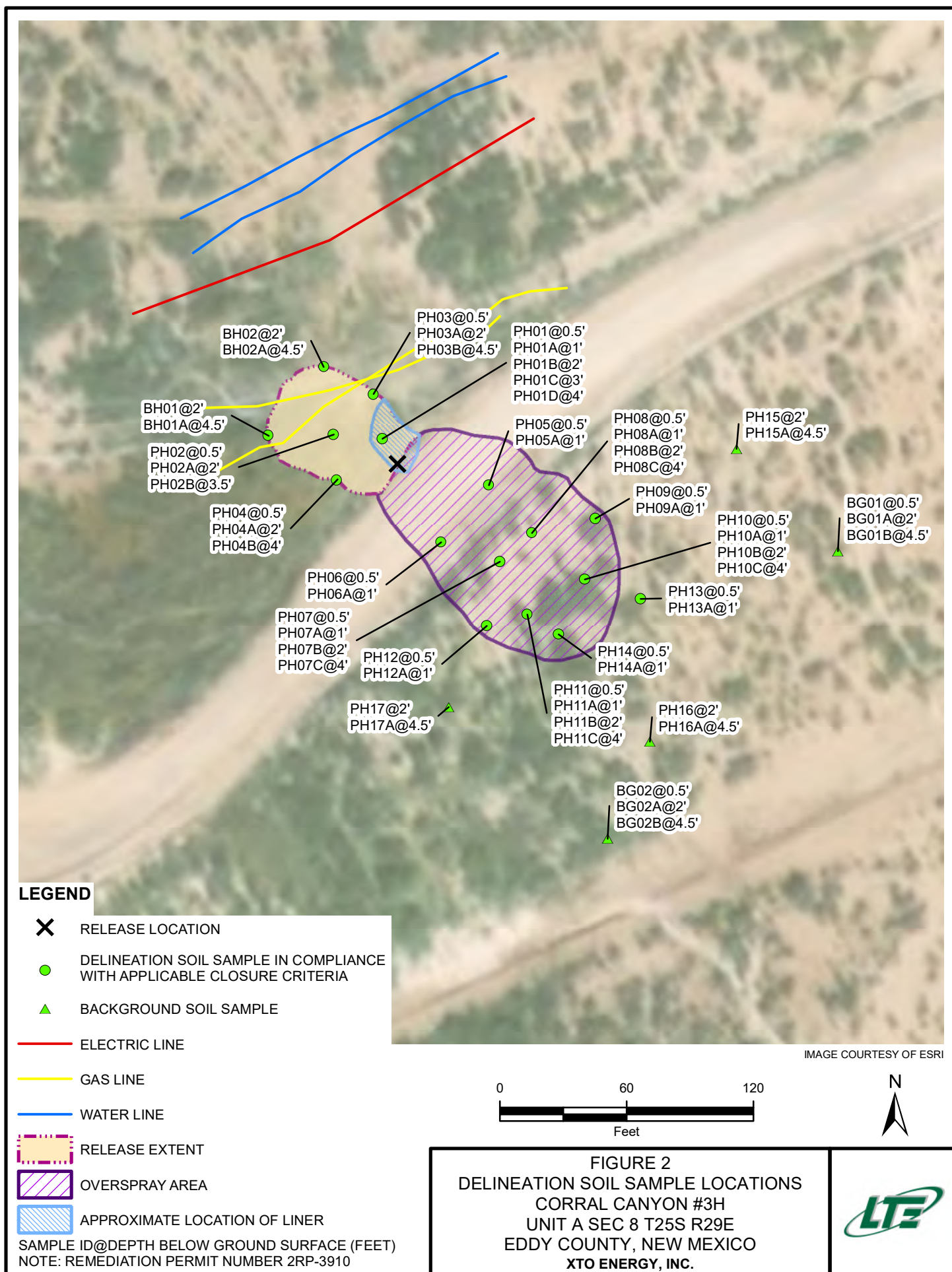
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Table 1	Soil Analytical Results
Attachment 1	Initial/Final NMOCD Form C-141 (2RP-3910)
Attachment 2	Historical Documentation
Attachment 3	Lithologic / Soil Sample Logs
Attachment 4	Photographic Log
Attachment 5	Laboratory Analytical Reports

FIGURES







P:\XTO Energy\GIS\MXD\012919248_CORRAL CANYON 3H\012919248_FIG02_DELINEATION_3910.mxd

TABLES



TABLE 1
SOIL ANALYTICAL RESULTS

CORRAL CANYON 3H
REMEDATION PERMIT NUMBER 2RP-3910
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)
NMOC Table 1 Closure Criteria			10	NE	NE	NE	50	NE	NE	NE	1,000	2,500	10,000
PH01	0.5	10/29/2019	<0.000998	<0.000998	<0.000998	<0.000998	<0.000998	<49.8	<49.8	<49.8	<49.8	<49.8	3.13
PH01A	1	10/29/2019	<0.000996	<0.000996	<0.000996	<0.000996	<0.000996	<50.1	<50.1	<50.1	<50.1	<50.1	23.9
PH01B	2	10/29/2019	<0.000990	<0.000990	<0.000990	<0.000990	<0.000990	<50.3	<50.3	<50.3	<50.3	<50.3	33.5
PH01C	3	10/29/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<49.8	<49.8	<49.8	<49.8	<49.8	51.7
PH01D	4	10/29/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<50.3	75.5	<50.3	75.5	75.5	318
PH02	0.5	10/29/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<49.8	73.3	<49.8	73.3	73.3	<9.94
PH02A	2	10/29/2019	<0.000994	<0.000994	<0.000994	<0.000994	<0.000994	<49.8	68.0	<49.8	68.0	68.0	22.3
PH02B	3.5	10/29/2019	<0.000996	<0.000996	<0.000996	<0.000996	<0.000996	<49.9	69.6	<49.9	69.6	69.6	206
PH03	0.5	11/01/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<50.2	<50.2	<50.2	<50.2	<50.2	146
PH03A	2	11/01/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<49.9	<49.9	<49.9	<49.9	<49.9	133
PH03B	4.5	11/01/2019	<0.000988	<0.000988	<0.000988	<0.000988	<0.000988	<50.1	<50.1	<50.1	<50.1	<50.1	205
PH04	0.5	11/01/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<50.1	<50.1	<50.1	<50.1	<50.1	16.0
PH04A	2	11/01/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<50.0	<50.0	<50.0	<50.0	<50.0	385
PH04B	4	11/01/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<50.2	<50.2	<50.2	<50.2	<50.2	810
BH01	2	01/15/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.8	<49.8	<49.8	<49.8	<49.8	10.4
BH01A	4.5	01/15/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.1	<50.1	<50.1	<50.1	<50.1	1,480
BH02	2	01/15/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.3	<50.3	<50.3	<50.3	<50.3	218
BH02A	4.5	01/15/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.8	<49.8	<49.8	<49.8	<49.8	1,260
PH05	0.5	11/01/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<50.0	<50.0	<50.0	<50.0	<50.0	107
PH05A	1	11/01/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<50.2	<50.2	<50.2	<50.2	<50.2	118
PH06	0.5	11/01/2019	<0.000992	<0.000992	<0.000992	<0.000992	<0.000992	<50.0	<50.0	<50.0	<50.0	<50.0	28.8
PH06A	1	11/01/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<50.0	<50.0	<50.0	<50.0	<50.0	49.4
PH07	0.5	11/01/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<50.1	<50.1	<50.1	<50.1	<50.1	139
PH07A	1	11/01/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<49.8	<49.8	<49.8	<49.8	<49.8	2,260
PH07B	2	04/16/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	3,300
PH07C	4	04/16/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<49.9	<49.9	<49.9	<49.9	<49.9	2,580
PH08	0.5	11/01/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<50.3	<50.3	<50.3	<50.3	<50.3	322
PH08A	1	11/01/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<50.1	<50.1	<50.1	<50.1	<50.1	2,010
PH08B	2	04/16/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.0	<50.0	<50.0	<50.0	<50.0	2,550
PH08C	4	04/16/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	3,220
PH09	0.5	11/01/2019	<0.000996	<0.000996	<0.000996	<0.000996	<0.000996	<50.2	<50.2	<50.2	<50.2	<50.2	669
PH09A	1	11/01/2019	<0.000998	<0.000998	<0.000998	<0.000998	<0.000998	<49.8	<49.8	<49.8	<49.8	<49.8	1,910

TABLE 1
SOIL ANALYTICAL RESULTS

CORRAL CANYON 3H
REMEDATION PERMIT NUMBER 2RP-3910
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)
NMOCD Table 1 Closure Criteria			10	NE	NE	NE	50	NE	NE	NE	1,000	2,500	10,000
PH10	0.5	11/01/2019	<0.000988	<0.000988	<0.000988	<0.000988	<0.000988	<50.1	<50.1	<50.1	<50.1	<50.1	1,920
PH10A	1	11/01/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<50.0	<50.0	<50.0	<50.0	<50.0	3,290
PH10B	2	04/16/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	2,010
PH10C	4	04/16/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.2	<50.2	<50.2	<50.2	<50.2	2,620
PH11	0.5	11/01/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<50.1	<50.1	<50.1	<50.1	<50.1	169
PH11A	1	11/01/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<50.0	<50.0	<50.0	<50.0	<50.0	2,250
PH11B	2	04/16/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.8	<49.8	<49.8	<49.8	<49.8	3,490
PH11C	4	04/16/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.3	<50.3	<50.3	<50.3	<50.3	3,710
PH12	0.5	11/01/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<50.0	<50.0	<50.0	<50.0	<50.0	59.2
PH12A	1	11/01/2019	<0.0000994	<0.0000994	<0.0000994	<0.0000994	<0.0000994	<50.3	<50.3	<50.3	<50.3	<50.3	1,510
PH13	0.5	11/01/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<50.0	<50.0	<50.0	<50.0	<50.0	571
PH13A	1	11/01/2019	<0.000994	<0.000994	<0.000994	<0.000994	<0.000994	<50.3	<50.3	<50.3	<50.3	<50.3	702
PH14	0.5	11/01/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<50.2	<50.2	<50.2	<50.2	<50.2	429
PH14A	1	11/01/2019	<0.000998	<0.000998	<0.000998	<0.000998	<0.000998	<50.3	<50.3	<50.3	<50.3	<50.3	2,560
PH15	2	01/14/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	2,550
PH15A	4.5	01/14/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	3,240
PH16	2	01/14/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.1	<50.1	<50.1	<50.1	<50.1	2,860
PH16A	4.5	01/14/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.2	<50.2	<50.2	<50.2	<50.2	3,260
PH17	2	01/14/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	2,490
PH17A	4.5	01/14/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	5,230
BG01	0.5	02/20/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	1,840
BG01A	2	02/20/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.8	<49.8	<49.8	<49.8	<49.8	2,580
BG01B	4.5	02/20/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.0	<50.0	<50.0	<50.0	<50.0	2,150
BG02	0.5	02/20/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.8	<49.8	<49.8	<49.8	<49.8	1,100
BG02A	2	02/20/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	2,110
BG02B	4.5	02/20/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	2,290

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

NMOCD - New Mexico Oil Conservation Division

NE - not established

TPH - total petroleum hydrocarbons

Bold - indicates result exceeds the applicable regulatory standard

< - indicates result is below laboratory reporting limits

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

ATTACHMENT 1: INITIAL/FINAL NMOCD FORM C-141 (2RP-3910)

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

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Received
9/22/16
NMOC D Artesia
Form C-141
Revised August 8, 2011
Submit 1 Copy to appropriate District Office in
accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

NAB1627042576		OPERATOR		☐ Initial Report	☐ Final Report
Name of Company XTO Energy, Inc. 5380		Contact John Robinson			
Address 500 W Illinois, Midland, TX 79701		Telephone No. 575-441-5199			
Facility Name Corral Canyon #3 H		Facility Type Well			
Surface Owner BLM		Mineral Owner BLM		API No. 30-015-42922	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
O	5	25 S	29 E	170	South	2210	East	Eddy
Latitude				Longitude				

NATURE OF RELEASE

Type of Release Oil and Produced Water	Volume of Release 16.16 barrels oil and 11.11 barrels produced water.	Volume Recovered 15 barrels oil and 10 barrels produced water.
Source of Release Flow line	Date and Hour of Occurrence 9-4-16 2:30 pm	Date and Hour of Discovery 9-4-16 2:30 pm
Was Immediate Notice Given? X Yes ☐ No ☐ Not Required	If YES, To Whom? Shelly Tucker With BLM Left voice mail	
By Whom? John Robinson	Date and Hour 7:03 pm	
Was a Watercourse Reached? ☐ Yes X No	If YES, Volume Impacting the Watercourse.	
If a Watercourse was Impacted, Describe Fully.*		
Describe Cause of Problem and Remedial Action Taken.* Flow line was washed into road from recent rains and a oil or water hauler ran over flexpipe and caused a leak. Pumper had all standing fluid cleaned up and hauled to corral canyon battery.		
Describe Area Affected and Cleanup Action Taken.* Affected area was the road and pasture. Will have environmental company map area and take samples. When we get samples back from lab I will get with BLM and clean up accordingly.		
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOC 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 NMOC marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOC acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.		
Signature: John Robinson	OIL CONSERVATION DIVISION	
Printed Name: John Robinson	Approved by Environmental Specialist: [Signature]	
Title: Maintenance Foreman	Approval Date: 9/26/16	Expiration Date: N/A
E-mail Address: john_robinson@xtoenergy.com	Conditions of Approval: Remediation per O.C.D. Rules & Guidelines	
Date: 9-6-16 Phone: 575-441-5199	Attached ☐	

* Attach Additional Sheets If Necessary

SUBMIT REMEDIATION PROPOSAL NO

ATER THAN: 10/26/16

2RP-3910

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

State of New Mexico
Energy Minerals and Natural
Resources Department

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

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

Incident ID	
District RP	
Facility ID	2RP-3910
Application ID	

Release Notification

Responsible Party

Responsible Party: XTO Energy, Inc	OGRID: 5380
Contact Name: Kyle Littrell	Contact Telephone: (432)-221-7331
Contact email: Kyle_Littrell@xtoenergy.com	Incident #: 2RP-3910
Contact mailing address: 522 W. Mermod, Suite 704 Carlsbad, NM 88220	

Location of Release Source

Latitude N 32.150215 Longitude W -103.999602
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Corral Canyon #3H	Site Type: Production Facility
Date Release Discovered: 9/4/2016	API# (if applicable): 30-015-42922

Unit Letter	Section	Township	Range	County
A	8	25S	29E	Eddy

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

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls): 16.16	Volume Recovered (bbls): 15
☒ Produced Water	Volume Released (bbls): 11.11	Volume Recovered (bbls): 10
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls):	Volume Recovered (bbls):
☐ Natural Gas	Volume Released (Mcf):	Volume Recovered (Mcf):
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

The flow line washed into the road due to recent rains and an oil/water hauler ran over the flow line and caused a leak. All free-standing fluid was recovered.

Incident ID	
District RP	
Facility ID	2RP-3910
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? Release volume was greater than 25 bbls.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Immediate notice was given by John Robinson to Shelly Tucker (BLM) on 9-4-2016 at 7:03 PM.	

Initial Response

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

☒ The source of the release has been stopped. ☒ The impacted area has been secured to protect human health and the environment. ☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. ☒ All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <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: <u>Kyle Littrell</u>	Title: <u>SH&E Supervisor</u>
Signature: _____	Date: <u>4-24-2020</u>
email: <u>Kyle_Littrell@xtoenergy.com</u>	Telephone: <u>432-221-7331</u>
<u>OCD Only</u> Received by: _____ Date: _____	

Incident ID	
District RP	
Facility ID	2RP-3910
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Page 4

Incident ID	
District RP	
Facility ID	2RP-3910
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: 4-24-2020

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

OCD Only

Received by: _____ Date: _____

Incident ID	nAB1627042576
District RP	
Facility ID	2RP-3910
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: 4-24-2020

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

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: Jennifer Nobui Date: 01/19/2022

Printed Name: Jennifer Nobui Title: Environmental Specialist A

ATTACHMENT 2: HISTORICAL DOCUMENTATION





Corral Canyon Federal #003H

WORK PLAN

API No. 30-015-42922

Release Date: September 4, 2016

Unit Letter O, Section 5, Township 25 South, Range 39 East

NMOCD Case #: Not Assigned

September 22, 2016

Prepared by:

Laura Flores
Environmental Department
Diversified Field Service, Inc.
206 W. Snyder
Hobbs, NM 88240
Phone: (575)964-8394
Fax: (575)393-8396

XTO Energy

Table of Contents

- 1 Introduction
- 2 Site Activities
- 3 Conclusion

FIGURE

- 1 – Site Map
- 2 – Proposed Excavation

APPENDICES

- Appendix I – Initial C-141
- Appendix II – Site Photos
- Appendix III – Laboratory Analysis
- Appendix IV – Groundwater Study

Diversified Field Service, Inc.
206 W Snyder
Hobbs, NM 88240
(575) 964-8394

XTO ENERGY

09/22/2016

Heather Patterson
Environmental Protection Specialist
New Mexico Oil Conservation District
811 S First St
Artesia, NM 88210

RE: **XTO – Corral Canyon Federal #003H – Remediation Work Plan**
UL/O, Section 5, T25S, R39E
API No. 30-015-42922
NMOCD Score: 20

Ms. Patterson,

XTO Energy (XTO) has retained Diversified Environmental (DFSI) to address environmental issues for the site detailed herein.

The site is located southeast of Malaga, NM, in Eddy County. The spill site resulted from a burst polyline, washed into lease road due to heavy rains, and subsequently ran over by lease road traffic. A total of approximately 11.11 barrels of produced water and 16.16 barrels of oil was released with ten barrels of produced water and 15 barrels of oil recovered. An initial C-141 was submitted to NMOCD on September 6, 2016 (Appendix I).

Site Assessment

On September 9, 2016 DFSI personnel were on site to obtain samples within the leak area (Figure 1). Four samples were obtained and field sampled for chloride levels, as well as BTEX (Appendix II). The BTEX samples were performed using a Mini Rae Photoionization Detector (PID). Due to encountering hard rock, additional samples were unable to be obtained at SP1. Clean field samples were submitted for laboratory analysis at Cardinal Laboratory of Hobbs, NM to obtain confirmation (Appendix III).

DFSI has conducted a groundwater study of the area and has determined, according to the New Mexico Office of the State Engineer, the average depth to groundwater beneath the site is approximately 40 ft bgs (Appendix IV).

XTO ENERGY

09/22/2016

Conclusion

After careful review DFSI, on behalf of XTO, would like to propose the following:

SP1 will be further delineated until NMOCD and BLM guidelines are met. A clean confirmation sample will be submitted for laboratory analysis.

The area around SP1 will be excavated to a depth of 4' bgs. At the base of the excavation, a 20-mil, reinforced poly liner will be installed and properly seated. The areas around SP2, SP3, and SP4 will be scraped 6" bgs. The excavation and scraped areas will be backfill with clean, imported soil to ground surface and contoured to the surrounding area. The overspray area will be treated with microblaze. The site will be seeded with a blend of native vegetation.

Following the approval of the above plan, DFSI will submit all proper closure documentation to the NMOCD and BLM in accordance to the State and Federal Guidelines set forth.

Please feel free to contact Mike Burton at 575-390-5454 or me with any questions concerning this remediation plan request.

Sincerely,



Laura Flores

Environmental Report Writer | Diversified Field Services, Inc.

206 West Snyder | Hobbs, NM 88240

Office: (575)964-8394 | Fax: (575)964-8396 | Email: lflores@diversifiedfsi.com

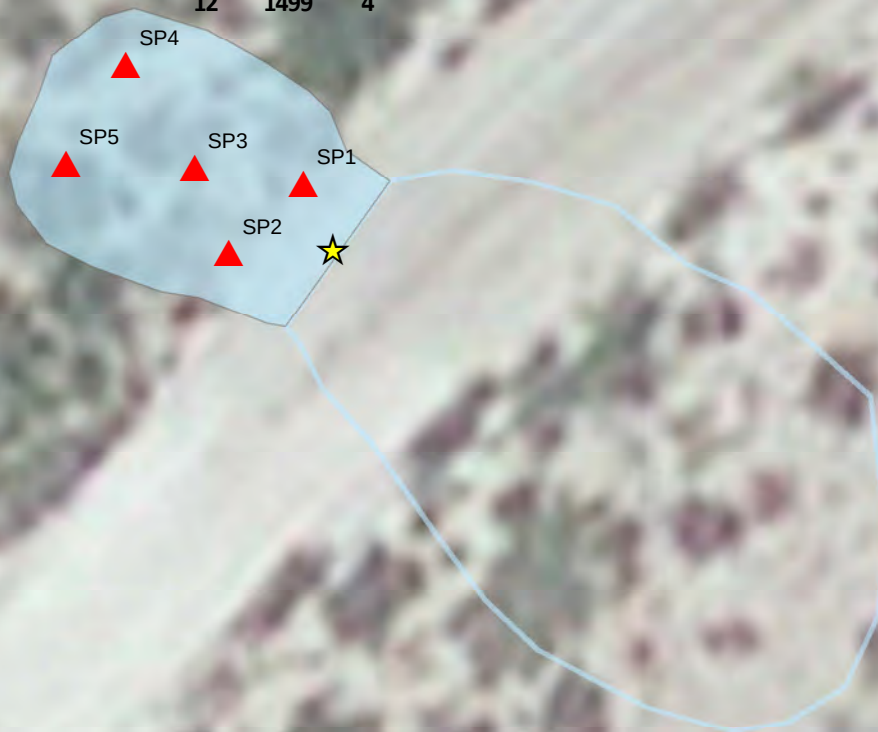
Cc: Mike Bratcher, NMOCD
Shelly Tucker, BLM

Figures: Site Diagram
Proposed Work

Appendices: Initial C-141
Site Photos
Laboratory Analysis
Groundwater Study

Site Map

SP1			SP2									
Depth	CI-	PID	Depth	CI-	PID	Lab CI-	GRO	DRO	B	T	E	X
SS	3,724	140.8	SS	1,249	3.9							
1'	250	64	1'	199	1.6	64	<10	80.4	<0.05	0.062	0.074	0.283
2'	1,474	47.3										
3'	749	18.9										
SP3												
4'	1,199	40.3	Depth	CI-	PID	Lab CI-	GRO	DRO	B	T	E	X
5'	1724	30.6	SS	424	0							
6'	1424	7.3	1'	174	0	<16	<10	12.5	<0.05	<0.05	<0.05	<0.15
7'	1399	6.7										
8'	1224	1.6										
SP4												
9'	1074	6.4	Depth	CI-	PID	Lab CI-	GRO	DRO	B	T	E	X
10'	1124	0.2	SS	999	249							
11'	949	0	1'	249	0.1	48	<10	<10	<0.05	<0.05	0.053	0.153
12'	1499	4										



Legend

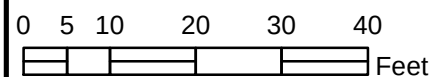
- ▲ Sample Points
- ★ Source
- Oil (1052 sq ft)
- Overspray (2939 sq ft)

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



XTO
Corral Canyon Federal #003H
Unit Letter O, Section 5, T25S, R39E
Eddy County, NM
API #: 30-015-42922

Drafted by: L Flores
 Date: 09/15/2016



Proposed Work



Legend

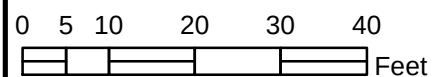
-  Sample Points
-  Source
-  Proposed 4' excavation with 20-mil liner installation (256 sq ft)
-  Proposed 6" scrape (1025 sq ft)
-  Proposed Microblaze application (3295 sq ft)
-  Oil (1052 sq ft)
-  Overspray (2939 sq ft)

alGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, X, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS



XTO
Corral Canyon Federal #003H
Unit Letter O, Section 5, T25S, R39E
Eddy County, NM
API #: 30-015-42922

Drafted by: L Flores
 Date: 09/15/2016



Appendix I

INITIAL C-141

Diversified Field Service, Inc.
206 W. Snyder
Hobbs, NM 88240
(575) 964-8394

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☐ Final Report

Name of Company XTO Energy, Inc.	Contact John Robinson
Address 500 W Illinois, Midland, TX 79701	Telephone No. 575-441-5199
Facility Name Corral Canyon #3 H	Facility Type Well
Surface Owner BLM	Mineral Owner BLM
API No. 30-015-42922	

LOCATION OF RELEASE

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O	5	25 S	29 E	170	South	2210	East	Eddy

Latitude _____ Longitude _____

NATURE OF RELEASE

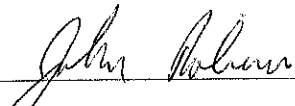
Type of Release Oil and Produced Water	Volume of Release 16.16 barrels oil and 11.11 barrels produced water.	Volume Recovered 15 barrels oil and 10 barrels produced water.
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Signature: 	OIL CONSERVATION DIVISION	
Printed Name: John Robinson	Approved by Environmental Specialist:	
Title: Maintenance Foreman	Approval Date:	Expiration Date:
E-mail Address: john_robinson@xtoenergy.com	Conditions of Approval:	Attached ☐
Date: 9-6-16 Phone: 575-441-5199		

* Attach Additional Sheets If Necessary

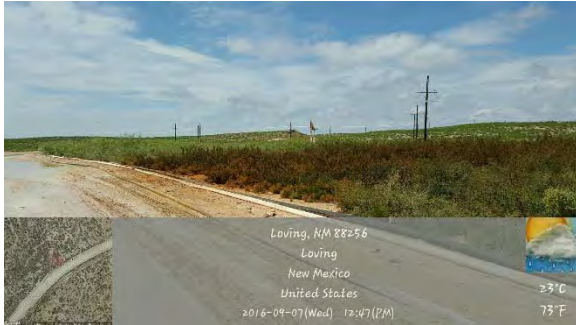
Appendix II

SITE PHOTOS

Diversified Field Service, Inc.
206 W. Snyder
Hobbs, NM 88240
(575) 964-8394

CORRAL CANYON FEDERAL #003H

PHOTO PAGE



Site prior

09/07/2016



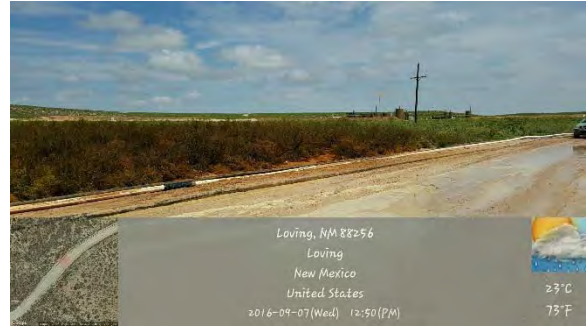
Site prior

09/07/2016



Site prior

09/07/2016



Site prior

09/07/2016



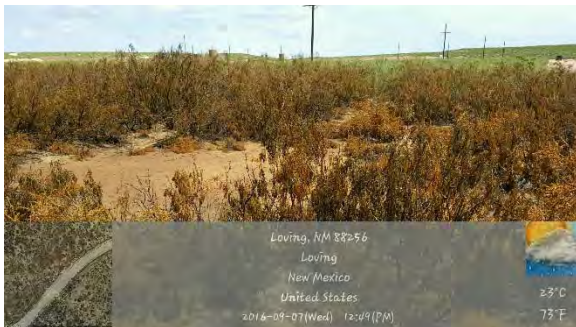
Site prior

09/07/2016



Site prior

09/07/2016



Site prior

09/07/2016



Site prior

09/07/2016

Appendix III

LABORATORY ANALYSIS

Diversified Field Service, Inc.
206 W. Snyder
Hobbs, NM 88240
(575) 964-8394



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

September 16, 2016

MIKE BURTON

DIVERSIFIED FIELD SERVICES, INC.

P. O. BOX 5966

HOBBS, NM 88241

RE: CORRAL CANYON #3

Enclosed are the results of analyses for samples received by the laboratory on 09/15/16 10:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

DIVERSIFIED FIELD SERVICES, INC.
 MIKE BURTON
 P. O. BOX 5966
 HOBBS NM, 88241
 Fax To: (575) 393-2981

Received:	09/15/2016	Sampling Date:	09/12/2016
Reported:	09/16/2016	Sampling Type:	Soil
Project Name:	CORRAL CANYON #3	Sampling Condition:	Cool & Intact
Project Number:	20629	Sample Received By:	Jodi Henson
Project Location:	XTO		

Sample ID: SP 2 @ 1' (H602071-01)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/15/2016	ND	2.01	101	2.00	0.0950	
Toluene*	0.062	0.050	09/15/2016	ND	2.04	102	2.00	0.0251	
Ethylbenzene*	0.074	0.050	09/15/2016	ND	1.95	97.3	2.00	0.114	
Total Xylenes*	0.283	0.150	09/15/2016	ND	5.85	97.6	6.00	0.135	
Total BTX	0.419	0.300	09/15/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	09/15/2016	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/16/2016	ND	182	91.0	200	5.31	
DRO >C10-C28	80.4	10.0	09/16/2016	ND	192	95.8	200	7.89	

Surrogate: 1-Chlorooctane 84.8 % 35-147

Surrogate: 1-Chlorooctadecane 89.6 % 28-171

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

DIVERSIFIED FIELD SERVICES, INC.
 MIKE BURTON
 P. O. BOX 5966
 HOBBS NM, 88241
 Fax To: (575) 393-2981

Received: 09/15/2016
 Reported: 09/16/2016
 Project Name: CORRAL CANYON #3
 Project Number: 20629
 Project Location: XTO

Sampling Date: 09/12/2016
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SP 3 @ 1' (H602071-02)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/15/2016	ND	2.01	101	2.00	0.0950	
Toluene*	<0.050	0.050	09/15/2016	ND	2.04	102	2.00	0.0251	
Ethylbenzene*	<0.050	0.050	09/15/2016	ND	1.95	97.3	2.00	0.114	
Total Xylenes*	<0.150	0.150	09/15/2016	ND	5.85	97.6	6.00	0.135	
Total BTX	<0.300	0.300	09/15/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.1 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	09/15/2016	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/16/2016	ND	182	91.0	200	5.31	
DRO >C10-C28	12.5	10.0	09/16/2016	ND	192	95.8	200	7.89	

Surrogate: 1-Chlorooctane 94.2 % 35-147

Surrogate: 1-Chlorooctadecane 96.9 % 28-171

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

DIVERSIFIED FIELD SERVICES, INC.
 MIKE BURTON
 P. O. BOX 5966
 HOBBS NM, 88241
 Fax To: (575) 393-2981

Received: 09/15/2016
 Reported: 09/16/2016
 Project Name: CORRAL CANYON #3
 Project Number: 20629
 Project Location: XTO

Sampling Date: 09/12/2016
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SP 4 @ 1' (H602071-03)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/15/2016	ND	2.01	101	2.00	0.0950	
Toluene*	<0.050	0.050	09/15/2016	ND	2.04	102	2.00	0.0251	
Ethylbenzene*	0.053	0.050	09/15/2016	ND	1.95	97.3	2.00	0.114	
Total Xylenes*	0.163	0.150	09/15/2016	ND	5.85	97.6	6.00	0.135	
Total BTX	<0.300	0.300	09/15/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.9 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	09/15/2016	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/16/2016	ND	182	91.0	200	5.31	
DRO >C10-C28	<10.0	10.0	09/16/2016	ND	192	95.8	200	7.89	

Surrogate: 1-Chlorooctane 89.2 % 35-147

Surrogate: 1-Chlorooctadecane 95.2 % 28-171

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Company Name: <u>XTO</u>				BILL TO				ANALYSIS REQUEST													
Project Manager: <u>John Robertson</u>				P.O. #: <u>20679</u>																	
Address:				Company: <u>Diversified</u>																	
City:		State:		Zip:		Attn: <u>M. Burton</u>															
Phone #:		Fax #:		Address:																	
Project #:		Project Owner:		City:																	
Project Name:				State:																Zip:	
Project Location: <u>Corral Canyon #3</u>				Phone #:																	
Sampler Name: <u>Picky Alvarez</u>				Fax #:																	
FOR LAB USE ONLY				MATRIX				PRESERV.				SAMPLING									
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME	CL	TPH	BTEX				
<u>H607D71</u>																					
<u>1</u>	<u>SP02 @ 1'</u>	<u>G</u>	<u>1</u>			<u>X</u>					<u>X</u>		<u>9-12-16</u>	<u>9:00 am</u>	<u>X</u>	<u>X</u>	<u>X</u>				
<u>2</u>	<u>SP03 @ 1'</u>	<u>G</u>	<u>1</u>			<u>X</u>					<u>X</u>		<u>9-12-16</u>	<u>10:30 am</u>	<u>X</u>	<u>X</u>	<u>X</u>				
<u>3</u>	<u>SP04 @ 1'</u>	<u>G</u>	<u>1</u>			<u>X</u>					<u>X</u>		<u>9-12-16</u>	<u>11:30 am</u>	<u>X</u>	<u>X</u>	<u>X</u>				

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Relinquished By: <u>Picky Alvarez</u>	Date: <u>9/13/16</u>	Received By: <u>John Robertson</u>	Phone Result: ☐ Yes ☐ No	Add'l Phone #:
Relinquished By:	Time: <u>10:15</u>	Received By:	Fax Result: ☐ Yes ☐ No	Add'l Fax #:
Delivered By: (Circle One)		Sample Condition	REMARKS:	
Sampler - UPS - Bus - Other:		Cool Intact	Email to: <u>IFlores@diversifiedesi.com</u>	
		☒ Yes ☐ No	M. Burton	
		☐ Yes ☐ No	M. Patterson	
		CHECKED BY: <u>JA</u>		

† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326

Appendix IV

GROUNDWATER STUDY

Diversified Field Service, Inc.
206 W. Snyder
Hobbs, NM 88240
(575) 964-8394



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
C 01880	C	ED		3	3	2	06	25S	29E	592161	3558605*	85	40	45
C 02518	C	ED		3	4	08	25S	29E	593895	3556300*		462		

Average Depth to Water: **40 feet**

Minimum Depth: **40 feet**

Maximum Depth: **40 feet**

Record Count: 2

PLSS Search:

Section(s): 4, 5, 6, 7, 8, 9 **Township:** 25S **Range:** 29E

*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

9/12/16 1:00 PM

Page 1 of 1

WATER COLUMN/ AVERAGE
DEPTH TO WATER

ATTACHMENT 3: LITHOLOGIC / SOIL SAMPLE LOGS

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation					Identifier: PH01		Date: 10/29/2019	
					Project Name: Corral Canyon 3H		RP Number: 2RP-3910	
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: Anna Byers		Method: Track Hoe	
Lat/Long: Refer to Collector			Field Screening: PID and HACH Chloride Str			Hole Diameter: n/a		Total Depth: 4 ft
Comments: ND - Not Detected (Chlorides below detection limit on HACH Chloride Strips)								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
MOIST	ND	0	NO	PH01	0	0.5 ft	SC	brown, poorly-graded clayey sand; high plasticity
WET	ND	0	NO	PH01A	1	1 ft	SC	brown, poorly-graded clayey sand; high plasticity
WET	ND	0	NO	PH01B	2	2 ft	SC	brown, poorly-graded clayey sand; high plasticity
WET	ND	0	NO	PH01C	3	3 ft	SC	brown, poorly-graded clayey sand; high plasticity
MOIST	ND	0	NO	PH01D	4	4 ft	SC	red-brown, poorly-graded clayey sand; high plasticity
					Total Depth			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation					Identifier: PH02		Date: 10/29/2019	
					Project Name: Corral Canyon 3H		RP Number: 2RP-3910	
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: Anna Byers		Method: Track Hoe	
Lat/Long: Refer to Collector			Field Screening: PID and HACH Chloride Str			Hole Diameter: n/a		Total Depth: 3.5 ft
Comments: ND - Not Detected (Chloride concentrations measured below detection level on HACH test strips)								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
MOIST	ND	0	NO	PH02	0	0.5 ft	SC	brown, poorly-graded clayey sand; high plasticity
WET	ND	0	NO	PH02A	1	1 ft	SC	brown, poorly-graded clayey sand; high plasticity
WET	ND	0	NO	PH02B	2	2 ft	SC	brown, poorly-graded clayey sand; high plasticity
					3			
MOIST	ND	0	NO	PH02C	3.5	3.5 ft	SC	red-brown, poorly-graded clayey sand; high plasticity
					4	Total Depth		
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation					Identifier: PH03		Date: 11/01/2019	
					Project Name: Corral Canyon 3H		RP Number: 2RP-3910	
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: Anna Byers		Method: Hand Auger	
Lat/Long: Refer to Collector			Field Screening: PID and HACH Chloride Str			Hole Diameter: 2.5"		Total Depth: 4.5 ft
Comments: ND - Not Detected (Chloride concentrations measured below detection limit on HACH test strips)								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
MOIST	ND	0	NO	PH03	0	0.5 ft	SC	brown, poorly-graded clayey sand; high plasticity
					1			
WET	ND	0	NO	PH03A	2	2 ft	SC	brown, poorly-graded clayey sand; high plasticity
					3			
					4			
MOIST	ND	0	NO	PH03B	4.5	4.5 ft	SC	red-brown, poorly-graded clayey sand; high plasticity
					5	Total Depth		
					6			
					7			
					8			
					9			
					10			
					11			
					12			

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation					Identifier: PH04		Date: 11/01/2019	
					Project Name: Corral Canyon 3H		RP Number: 2RP-3910	
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: Anna Byers		Method: Hand Auger	
Lat/Long: Refer to Collector			Field Screening: PID and HACH Chloride Str			Hole Diameter: 2.5 "		Total Depth: 4 ft
Comments: ND - Not Detected (Chloride concentrations measured below detection limit on Hach test strips)								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
MOIST	ND	0	NO	PH04	0	0.5 ft	SC	brown, poorly-graded clayey sand; high plasticity
					1			
WET	ND	0	NO	PH04A	2	2 ft	SC	brown, poorly-graded clayey sand; high plasticity
					3			
MOIST	ND	0	NO	PH04B	4	4 ft	SC	red-brown, poorly-graded clayey sand; high plasticity
					5	Total Depth		
					6			
					7			
					8			
					9			
					10			
					11			
					12			

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation					Identifier: PH05		Date: 11/01/2019	
					Project Name: Corral Canyon 3H		RP Number: 2RP-3910	
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: Anna Byers		Method: Hand Shovel	
Lat/Long: Refer to Collector			Field Screening: PID and HACH Chloride Str			Hole Diameter: 1 ft		Total Depth: 1 ft
Comments: Delineation of Overspray Area South of Access Road								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
DRY	-	0	NO	PH05	0	0.5 ft	SM	brown, non-plastic poorly-graded silty sand (m.); no odor, trace organics
DRY	-	0	NO	PH05A	1	1 ft	SM	
					Total Depth			
					2			
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation					Identifier: PH06		Date: 11/01/2019	
					Project Name: Corral Canyon 3H		RP Number: 2RP-3910	
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: Anna Byers		Method: Hand Shovel	
Lat/Long: Refer to Collector			Field Screening: PID and HACH Chloride Str			Hole Diameter: 1 ft		Total Depth: 1 ft
Comments: Delineation of Overspray Area South of Access Road								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
DRY	-	0	NO	PH06	0	0.5 ft	SM	brown, non-plastic poorly-graded silty sand (m.); no odor, trace organics
DRY	-	0	NO	PH06A	1	1 ft	SM	
					Total Depth			
					2			
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation					Identifier: PH07		Date: 11/01/2019	
					Project Name: Corral Canyon 3H		RP Number: 2RP-3910	
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: Anna Byers		Method: Hand Shovel	
Lat/Long: Refer to Collector			Field Screening: PID and HACH Chloride Str			Hole Diameter: 1 ft		Total Depth: 1 ft
Comments: Delineation of Overspray Area South of Access Road								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
DRY	-	0	NO	PH07	0	0.5 ft	SM	brown, non-plastic poorly-graded silty sand (m.); no odor, trace organics
DRY	-	0	NO	PH07A	1	1 ft	SM	
					Total Depth			
					2			
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation					Identifier: PH08		Date: 11/01/2019	
					Project Name: Corral Canyon 3H		RP Number: 2RP-3910	
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: Anna Byers		Method: Hand Shovel	
Lat/Long: Refer to Collector			Field Screening: PID and HACH Chloride Str			Hole Diameter: 1 ft		Total Depth: 1 ft
Comments: Delineation of Overspray Area South of Access Road								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
DRY	-	0	NO	PH08	0	0.5 ft	SM	brown, non-plastic poorly-graded silty sand (m.); no odor, trace organics
DRY	-	0	NO	PH08A	1	1 ft	SM	
					Total Depth			
					2			
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation					Identifier: PH09		Date: 11/01/2019	
					Project Name: Corral Canyon 3H		RP Number: 2RP-3910	
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: Anna Byers		Method: Hand Shovel	
Lat/Long: Refer to Collector			Field Screening: PID and HACH Chloride Str			Hole Diameter: 1 ft		Total Depth: 1 ft
Comments: Delineation of Overspray Area South of Access Road								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
DRY	-	0	NO	PH09	0	0.5 ft	SM	brown, non-plastic poorly-graded silty sand (m.); no odor, trace organics
DRY	-	0	NO	PH09A	1	1 ft	SM	
					Total Depth			
					2			
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation					Identifier: PH10		Date: 11/01/2019	
					Project Name: Corral Canyon 3H		RP Number: 2RP-3910	
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: Anna Byers		Method: Hand Shovel	
Lat/Long: Refer to Collector			Field Screening: PID and HACH Chloride Str			Hole Diameter: 1 ft		Total Depth: 1 ft
Comments: Delineation of Overspray Area South of Access Road								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
DRY	-	0	NO	PH10	0	0.5 ft	SM	brown, non-plastic poorly-graded silty sand (m.); no odor, trace organics
DRY	-	0	NO	PH10A	1	1 ft	SM	
					Total Depth			
					2			
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation					Identifier: PH11		Date: 11/01/2019	
					Project Name: Corral Canyon 3H		RP Number: 2RP-3910	
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: Anna Byers		Method: Hand Shovel	
Lat/Long: Refer to Collector			Field Screening: PID and HACH Chloride Str			Hole Diameter: 1 ft		Total Depth: 1 ft
Comments: Delineation of Overspray Area South of Access Road								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
DRY	-	0	NO	PH11	0	0.5 ft	SM	brown, non-plastic poorly-graded silty sand (m.); no odor, trace organics
DRY	-	0	NO	PH11A	1	1 ft	SM	
					Total Depth			
					2			
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation					Identifier: PH12		Date: 11/01/2019	
					Project Name: Corral Canyon 3H		RP Number: 2RP-3910	
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: Anna Byers		Method: Hand Shovel	
Lat/Long: Refer to Collector			Field Screening: PID and HACH Chloride Str			Hole Diameter: 1 ft		Total Depth: 1 ft
Comments: Delineation of Overspray Area South of Access Road								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
DRY	-	0	NO	PH12	0	0.5 ft	SM	brown, non-plastic poorly-graded silty sand (m.); no odor, trace organics
DRY	-	0	NO	PH12A	1	1 ft	SM	
					Total Depth			
					2			
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation					Identifier: PH13		Date: 11/01/2019	
					Project Name: Corral Canyon 3H		RP Number: 2RP-3910	
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: Anna Byers		Method: Hand Shovel	
Lat/Long: Refer to Collector			Field Screening: PID and HACH Chloride Str			Hole Diameter: 1 ft		Total Depth: 1 ft
Comments: Delineation of Overspray Area South of Access Road								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
DRY	-	0	NO	PH13	0	0.5 ft	SM	brown, non-plastic poorly-graded silty sand (m.); no odor, trace organics
DRY	-	0	NO	PH13A	1	1 ft	SM	
					Total Depth			
					2			
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation					Identifier: PH14		Date: 11/01/2019	
					Project Name: Corral Canyon 3H		RP Number: 2RP-3910	
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: Anna Byers		Method: Hand Shovel	
Lat/Long: Refer to Collector			Field Screening: PID and HACH Chloride Str			Hole Diameter: 1 ft		Total Depth: 1 ft
Comments: Delineation of Overspray Area South of Access Road								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
DRY	-	0	NO	PH14	0	0.5 ft	SM	brown, non-plastic poorly-graded silty sand (m.); no odor, trace organics
DRY	-	0	NO	PH14A	1	1 ft	SM	
					Total Depth			
					2			
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

		LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220		Identifier: PH07		Date: 1-14-20		
				Project Name: Corral Canyon 3H		RP Number: 2RP-3910		
LITHOLOGIC / SOIL SAMPLING LOG				Logged By: SL		Method: Backhoe		
Lat/Long:		Field Screening:		Hole Diameter:		Total Depth:		
		☒ PID ☒ Chloride		—		10'		
Comments: TD @ 10'								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			Refer to previous log
					1			
M	1271	0.0	N		2		CH	1-9 Clay, Brown, no odor, no stain, high plasticity, high cohesiveness
M	991	0.0	N		3			
M	1271	0.0	N		4			
M	1719	0.0	N		5			
M	1988	0.0	N		6			
M	1848	0.0	N		7			
M	1719	0.0	N		8			
M	1484	0.0	N		9			
M	1075	0.0	N		10		CH	9-10 clayey sand, no odor, no stains, high plasticity, low cohesiveness, m-f, poorly graded
					11			TD @ 10'
					12			

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220		Identifier: PH10 Date: 1.14.20						
Project Name: Corral Canyon 3H		RP Number: 2RP-3910						
LITHOLOGIC / SOIL SAMPLING LOG		Logged By: SL						
Lat/Long:		Field Screening: PH Cl Chloride						
Hole Diameter:		Method: Backhoe						
Total Depth: 10'								
Comments: TD @ 10'								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			See previous log
					1			
M	1980	0.0	N		2		cl	1-9 Clay, Brown, no stain, no odor, high plasticity, high cohesiveness
					3			
M	1848	0.0	N		4			
					5			
D	2131	0.0	N		6			
					7			
D	2290	0.0	N		8			
					9			
D	1719	0.0	N		10			
					11			
					12			TD @ 10'

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220		Identifier: PH15	Date: 1.14.20					
		Project Name: Corral Canyon 3H	RP Number: 2RP-3910					
LITHOLOGIC / SOIL SAMPLING LOG		Logged By: SL	Method: Backhoe					
Lat/Long:		Field Screening: ☒ PID ☒ Chloride	Total Depth: 4.5'					
Comments: TD @ 4.5'								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	1372	0.0	N	PH15	0		CH	0-4.5 Clay, Brown, no odor, high plasticity, high cohesiveness
					1			
					2	2		
					3			
					4			
D	907	0.0	N	PH15A	4	4.5		
					5			TD @ 4.5'
					6			
					7			
					8			
					9			
					10			
					11			
					12			

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220		Identifier: PH16	Date: 11.4.20					
		Project Name: Corral Canyon 3H	RP Number: 2RP-3910					
LITHOLOGIC / SOIL SAMPLING LOG		Logged By: SL	Method: Backhoe					
Lat/Long:	Field Screening: PID Chloride	Hole Diameter: —	Total Depth: 4.5'					
Comments: TD @ 4.5'								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
M	1988	0.0	N	PH16	0	2	clt	0-4.5
					1			clay, Brown, no odor, no stain, high plasticity, high cohesiveness
					2			
					3			
					4			
M	1271	0.0	N	PH16A	4	4.5		
					5			TD @ 4.5'
					6			
					7			
					8			
					9			
					10			
					11			
					12			

		LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220		Identifier: PH17		Date: 1.14.20		
				Project Name: Corral Canyon 3H		RP Number: 2RP-3910		
LITHOLOGIC / SOIL SAMPLING LOG				Logged By: SL		Method: Backhoe		
Lat/Long:		Field Screening:		Hole Diameter:		Total Depth: 4.5'		
		PHD Chloride						
Comments: TD @ 4.5'								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			0-4.5' Clay, Brown, no odor, no staining High plasticity, high cohesiveness
					1			
M	1848	0.0	N	PH17	2	2	CH	
					3			
M	1271	0.0	N	PH17A	4	4.5		
					5			TD @ 4.5'
					6			
					7			
					8			
					9			
					10			
					11			
					12			

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220		Identifier: PH18	Date: 1.14.20					
		Project Name: Corral Canyon 3H	RP Number: 288-3910					
LITHOLOGIC / SOIL SAMPLING LOG		Logged By: SL	Method: Backhoe					
Lat/Long:		Field Screening: PID ☒ Chloride ☒	Hole Diameter: —					
Total Depth: 4.5'								
Comments: TD @ 4.5'								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
					1			
D	1848	0.0	2		2		CH	0-4.5'
					3			Clay, Brown, no odor, no stain, high cohesiveness, high plasticity
					4			
D	1271	0.0	2					
					5			TD @ 4.5'
					6			
					7			
					8			
					9			
					10			
					11			
					12			

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220		Identifier: PH19	Date: 1.14.20					
		Project Name: Corral Canyon 3H	RP Number: 2RP-3910					
LITHOLOGIC / SOIL SAMPLING LOG		Logged By: SV	Method: Backhoe					
Lat/Long:	Field Screening: ☒ PID ☒ Chloride	Hole Diameter: —	Total Depth: 4.5'					
Comments: TD @ 4.5'								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
					1			
D	1848	0.0	N		2		clt	0-4.5 Clay, Brown, no odor, no staining, high plasticity, high cohesiveness
					3			
					4			
D	1986	0.0	N		5			TD @ 4.5'
					6			
					7			
					8			
					9			
					10			
					11			
					12			

		LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220		Identifier: BH02		Date: 1.15.20		
				Project Name: Corral Canyon 3H		RP Number: 2RP - 3910		
LITHOLOGIC / SOIL SAMPLING LOG				Logged By: SL		Method: Hand Auger		
Lat/Long:		Field Screening: ☒ PID ☒ Chloride		Hole Diameter: 2.25"		Total Depth: 4.5'		
Comments: TD @ 4.5'								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
					1			
D	718	0.0	N	BH02	2	2	CH	0-4.5'
					3			Clay, Brown, no odor, no stain, high plasticity, high cohesiveness
					4			
D	616	0.0	N	BH02A	4.5	4.5		
					5			TD @ 4.5'
					6			
					7			
					8			
					9			
					10			
					11			
					12			

		LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220		Identifier: BH01		Date: 1-15-20		
				Project Name: Corral Canyon 3H		RP Number: 2RP-3910		
LITHOLOGIC / SOIL SAMPLING LOG								
Lat/Long:		Field Screening:		Logged By: SL		Method: Hand Auger		
		☒ PID ☒ Chloride		Hole Diameter: 2.25"		Total Depth: 4.5'		
Comments: TD @ 4.5'								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			0-4.5' Clay, Brown, no odor, no stain, high plasticity, high cohesiveness
					1			
D	<179	0.0	N	BH01	2	2	Cl	
					3			
D	554	0.0	N	BH01A	4	4.5		
					5			TD @ 4.5'
					6			
					7			
					8			
					9			
					10			
					11			
					12			

ATTACHMENT 4: PHOTOGRAPHIC LOG



PHOTOGRAPHIC LOG



Photograph 1: North facing view of the release area on the north side of the road.



Photograph 2: South facing view of the overspray area south of the road.

PHOTOGRAPHIC LOG



Photograph 3: Southeast facing view of the overspray area south of the road.



Photograph 4: View of the installed liner in the excavation north of the road.

PHOTOGRAPHIC LOG



Photograph 5: North facing view of new lease road constructed over the north side release area.

ATTACHMENT 5: LABORATORY ANALYTICAL REPORTS

Analytical Report 641852

for
LT Environmental, Inc.

Project Manager: Aimee Cole

Corral Canyon 3H

012919248

06-NOV-19

Collected By: Client



1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)

Xenco-Carlsbad (LELAP): Louisiana (05092)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Tampa: Florida (E87429), North Carolina (483)



06-NOV-19

Project Manager: **Aimee Cole**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **641852**

Corral Canyon 3H

Project Address: Rural Eddy County

Aimee Cole:

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) 641852. 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. 641852 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'.

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 641852****LT Environmental, Inc., Arvada, CO**

Corral Canyon 3H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH01	S	10-29-19 15:45	0.5 ft	641852-001
PH01A	S	10-29-19 15:50	1 ft	641852-002
PH01B	S	10-29-19 15:55	2 ft	641852-003
PH01C	S	10-29-19 16:00	3 ft	641852-004
PH01D	S	10-29-19 16:15	4 ft	641852-005
PH02	S	10-29-19 16:40	0.5 ft	641852-006
PH02A	S	10-29-19 16:45	2 ft	641852-007
PH02B	S	10-29-19 16:50	3.5 ft	641852-008



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Corral Canyon 3H

Project ID: 012919248
Work Order Number(s): 641852

Report Date: 06-NOV-19
Date Received: 11/01/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3106313 BTEX by EPA 8021B

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

Batch: LBA-3106427 Chloride by EPA 300

Lab Sample ID 641864-001 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: 641852-001, -002, -003, -004, -005, -006, -007, -008.

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

Batch: LBA-3106525 TPH by SW8015 Mod

Surrogate 1-Chlorooctane recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 641907-019 SD.



Certificate of Analysis Summary 641852

LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon 3H

Project Id: 012919248
Contact: Aimee Cole
Project Location: Rural Eddy County

Date Received in Lab: Fri Nov-01-19 01:59 pm
Report Date: 06-NOV-19
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	641852-001	641852-002	641852-003	641852-004	641852-005	641852-006
	<i>Field Id:</i>	PH01	PH01A	PH01B	PH01C	PH01D	PH02
	<i>Depth:</i>	0.5- ft	1- ft	2- ft	3- ft	4- ft	0.5- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Oct-29-19 15:45	Oct-29-19 15:50	Oct-29-19 15:55	Oct-29-19 16:00	Oct-29-19 16:15	Oct-29-19 16:40
BTEX by EPA 8021B	<i>Extracted:</i>	Nov-01-19 15:11	Nov-01-19 15:11	Nov-01-19 15:11	Nov-01-19 15:11	Nov-01-19 15:11	Nov-01-19 15:11
	<i>Analyzed:</i>	Nov-02-19 04:17	Nov-02-19 04:38	Nov-02-19 05:53	Nov-02-19 06:13	Nov-02-19 06:34	Nov-02-19 06:54
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.000998 0.000998	<0.000996 0.000996	<0.000990 0.000990	<0.00100 0.00100	<0.00100 0.00100	<0.00101 0.00101
Toluene		<0.000998 0.000998	<0.000996 0.000996	<0.000990 0.000990	<0.00100 0.00100	<0.00100 0.00100	<0.00101 0.00101
Ethylbenzene		<0.000998 0.000998	<0.000996 0.000996	<0.000990 0.000990	<0.00100 0.00100	<0.00100 0.00100	<0.00101 0.00101
m,p-Xylenes		<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200	<0.00201 0.00201	<0.00202 0.00202
o-Xylene		<0.000998 0.000998	<0.000996 0.000996	<0.000990 0.000990	<0.00100 0.00100	<0.00100 0.00100	<0.00101 0.00101
Total Xylenes		<0.000998 0.000998	<0.000996 0.000996	<0.000990 0.000990	<0.00100 0.00100	<0.00100 0.00100	<0.00101 0.00101
Total BTEX		<0.000998 0.000998	<0.000996 0.000996	<0.000990 0.000990	<0.00100 0.00100	<0.00100 0.00100	<0.00101 0.00101
Chloride by EPA 300	<i>Extracted:</i>	Nov-04-19 11:11	Nov-04-19 11:11	Nov-04-19 11:11	Nov-04-19 11:11	Nov-04-19 11:11	Nov-04-19 11:11
	<i>Analyzed:</i>	Nov-04-19 16:00	Nov-04-19 16:18	Nov-04-19 16:24	Nov-04-19 16:30	Nov-04-19 16:36	Nov-04-19 17:41
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		3.13 0.998	23.9 10.0	33.5 10.1	51.7 10.0	318 10.1	<9.94 9.94
TPH by SW8015 Mod	<i>Extracted:</i>	Nov-04-19 17:00	Nov-04-19 17:00	Nov-04-19 17:00	Nov-04-19 17:00	Nov-04-19 17:00	Nov-04-19 17:00
	<i>Analyzed:</i>	Nov-06-19 01:28	Nov-06-19 01:48	Nov-06-19 02:07	Nov-06-19 02:27	Nov-04-19 22:10	Nov-04-19 22:31
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<49.8 49.8	<50.1 50.1	<50.3 50.3	<49.8 49.8	<50.3 50.3	<49.8 49.8
Diesel Range Organics (DRO)		<49.8 49.8	<50.1 50.1	<50.3 50.3	<49.8 49.8	75.5 50.3	73.3 49.8
Motor Oil Range Hydrocarbons (MRO)		<49.8 49.8	<50.1 50.1	<50.3 50.3	<49.8 49.8	<50.3 50.3	<49.8 49.8
Total GRO-DRO		<49.8 49.8	<50.1 50.1	<50.3 50.3	<49.8 49.8	75.5 50.3	73.3 49.8
Total TPH		<49.8 49.8	<50.1 50.1	<50.3 50.3	<49.8 49.8	75.5 50.3	73.3 49.8

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

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

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 641852

LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon 3H

Project Id: 012919248
Contact: Aimee Cole
Project Location: Rural Eddy County

Date Received in Lab: Fri Nov-01-19 01:59 pm
Report Date: 06-NOV-19
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	641852-007	641852-008				
	Field Id:	PH02A	PH02B				
	Depth:	2- ft	3.5- ft				
	Matrix:	SOIL	SOIL				
	Sampled:	Oct-29-19 16:45	Oct-29-19 16:50				
BTEX by EPA 8021B	Extracted:	Nov-01-19 15:11	Nov-01-19 15:11				
	Analyzed:	Nov-02-19 07:15	Nov-02-19 07:35				
	Units/RL:	mg/kg RL	mg/kg RL				
Benzene		<0.000994 0.000994	<0.000996 0.000996				
Toluene		<0.000994 0.000994	<0.000996 0.000996				
Ethylbenzene		<0.000994 0.000994	<0.000996 0.000996				
m,p-Xylenes		<0.00199 0.00199	<0.00199 0.00199				
o-Xylene		<0.000994 0.000994	<0.000996 0.000996				
Total Xylenes		<0.000994 0.000994	<0.000996 0.000996				
Total BTEX		<0.000994 0.000994	<0.000996 0.000996				
Chloride by EPA 300	Extracted:	Nov-04-19 11:11	Nov-04-19 11:11				
	Analyzed:	Nov-04-19 16:59	Nov-04-19 17:05				
	Units/RL:	mg/kg RL	mg/kg RL				
Chloride		22.3 9.96	206 10.0				
TPH by SW8015 Mod	Extracted:	Nov-04-19 17:00	Nov-04-19 17:00				
	Analyzed:	Nov-04-19 22:51	Nov-04-19 23:11				
	Units/RL:	mg/kg RL	mg/kg RL				
Gasoline Range Hydrocarbons (GRO)		<49.8 49.8	<49.9 49.9				
Diesel Range Organics (DRO)		68.0 49.8	69.6 49.9				
Motor Oil Range Hydrocarbons (MRO)		<49.8 49.8	<49.9 49.9				
Total GRO-DRO		68.0 49.8	69.6 49.9				
Total TPH		68.0 49.8	69.6 49.9				

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.
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Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Jessica Kramer
Project Assistant



Certificate of Analytical Results 641852

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH01** Matrix: Soil Date Received: 11.01.19 13.59
 Lab Sample Id: 641852-001 Date Collected: 10.29.19 15.45 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 11.04.19 11.11 Basis: Wet Weight
 Seq Number: 3106427

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3.13	0.998	mg/kg	11.04.19 16.00		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 11.04.19 17.00 Basis: Wet Weight
 Seq Number: 3106525

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	11.06.19 01.28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	11.06.19 01.28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	11.06.19 01.28	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	11.06.19 01.28	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	11.06.19 01.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	11.06.19 01.28	
o-Terphenyl	84-15-1	110	%	70-135	11.06.19 01.28	



Certificate of Analytical Results 641852

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH01**
Lab Sample Id: 641852-001

Matrix: Soil
Date Collected: 10.29.19 15.45

Date Received: 11.01.19 13.59
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 11.01.19 15.11

Basis: Wet Weight

Seq Number: 3106313

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000998	0.000998	mg/kg	11.02.19 04.17	U	1
Toluene	108-88-3	<0.000998	0.000998	mg/kg	11.02.19 04.17	U	1
Ethylbenzene	100-41-4	<0.000998	0.000998	mg/kg	11.02.19 04.17	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	11.02.19 04.17	U	1
o-Xylene	95-47-6	<0.000998	0.000998	mg/kg	11.02.19 04.17	U	1
Total Xylenes	1330-20-7	<0.000998	0.000998	mg/kg	11.02.19 04.17	U	1
Total BTEX		<0.000998	0.000998	mg/kg	11.02.19 04.17	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	110		%	70-130	11.02.19 04.17	
1,4-Difluorobenzene	540-36-3	98		%	70-130	11.02.19 04.17	



Certificate of Analytical Results 641852

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH01A** Matrix: Soil Date Received: 11.01.19 13.59
 Lab Sample Id: 641852-002 Date Collected: 10.29.19 15.50 Sample Depth: 1 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 11.04.19 11.11 Basis: Wet Weight
 Seq Number: 3106427

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	23.9	10.0	mg/kg	11.04.19 16.18		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 11.04.19 17.00 Basis: Wet Weight
 Seq Number: 3106525

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	11.06.19 01.48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	11.06.19 01.48	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	11.06.19 01.48	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	11.06.19 01.48	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	11.06.19 01.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	11.06.19 01.48	
o-Terphenyl	84-15-1	127	%	70-135	11.06.19 01.48	



Certificate of Analytical Results 641852

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH01A**
Lab Sample Id: 641852-002

Matrix: Soil
Date Collected: 10.29.19 15.50

Date Received: 11.01.19 13.59
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 11.01.19 15.11

Basis: Wet Weight

Seq Number: 3106313

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000996	0.000996	mg/kg	11.02.19 04.38	U	1
Toluene	108-88-3	<0.000996	0.000996	mg/kg	11.02.19 04.38	U	1
Ethylbenzene	100-41-4	<0.000996	0.000996	mg/kg	11.02.19 04.38	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	11.02.19 04.38	U	1
o-Xylene	95-47-6	<0.000996	0.000996	mg/kg	11.02.19 04.38	U	1
Total Xylenes	1330-20-7	<0.000996	0.000996	mg/kg	11.02.19 04.38	U	1
Total BTEX		<0.000996	0.000996	mg/kg	11.02.19 04.38	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	110		%	70-130	11.02.19 04.38	
1,4-Difluorobenzene	540-36-3	99		%	70-130	11.02.19 04.38	



Certificate of Analytical Results 641852

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH01B** Matrix: Soil Date Received: 11.01.19 13.59
 Lab Sample Id: 641852-003 Date Collected: 10.29.19 15.55 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 11.04.19 11.11 Basis: Wet Weight
 Seq Number: 3106427

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	33.5	10.1	mg/kg	11.04.19 16.24		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 11.04.19 17.00 Basis: Wet Weight
 Seq Number: 3106525

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	11.06.19 02.07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	11.06.19 02.07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	11.06.19 02.07	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	11.06.19 02.07	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	11.06.19 02.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	11.06.19 02.07	
o-Terphenyl	84-15-1	115	%	70-135	11.06.19 02.07	



Certificate of Analytical Results 641852

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH01B**
Lab Sample Id: 641852-003

Matrix: Soil
Date Collected: 10.29.19 15.55

Date Received: 11.01.19 13.59
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 11.01.19 15.11

Basis: Wet Weight

Seq Number: 3106313

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000990	0.000990	mg/kg	11.02.19 05.53	U	1
Toluene	108-88-3	<0.000990	0.000990	mg/kg	11.02.19 05.53	U	1
Ethylbenzene	100-41-4	<0.000990	0.000990	mg/kg	11.02.19 05.53	U	1
m,p-Xylenes	179601-23-1	<0.00198	0.00198	mg/kg	11.02.19 05.53	U	1
o-Xylene	95-47-6	<0.000990	0.000990	mg/kg	11.02.19 05.53	U	1
Total Xylenes	1330-20-7	<0.000990	0.000990	mg/kg	11.02.19 05.53	U	1
Total BTEX		<0.000990	0.000990	mg/kg	11.02.19 05.53	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	11.02.19 05.53		
4-Bromofluorobenzene	460-00-4	112	%	70-130	11.02.19 05.53		



Certificate of Analytical Results 641852

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH01C**
Lab Sample Id: 641852-004

Matrix: Soil
Date Collected: 10.29.19 16.00

Date Received: 11.01.19 13.59
Sample Depth: 3 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3106427

Date Prep: 11.04.19 11.11

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	51.7	10.0	mg/kg	11.04.19 16.30		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3106525

Date Prep: 11.04.19 17.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	11.06.19 02.27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	11.06.19 02.27	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	11.06.19 02.27	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	11.06.19 02.27	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	11.06.19 02.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	11.06.19 02.27	
o-Terphenyl	84-15-1	106	%	70-135	11.06.19 02.27	



Certificate of Analytical Results 641852

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH01C**
Lab Sample Id: 641852-004

Matrix: Soil
Date Collected: 10.29.19 16.00

Date Received: 11.01.19 13.59
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 11.01.19 15.11

Basis: Wet Weight

Seq Number: 3106313

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	11.02.19 06.13	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	11.02.19 06.13	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	11.02.19 06.13	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	11.02.19 06.13	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	11.02.19 06.13	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	11.02.19 06.13	U	1
Total BTEX		<0.00100	0.00100	mg/kg	11.02.19 06.13	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	70-130	11.02.19 06.13		
4-Bromofluorobenzene	460-00-4	107	%	70-130	11.02.19 06.13		



Certificate of Analytical Results 641852

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH01D**
Lab Sample Id: 641852-005

Matrix: Soil
Date Collected: 10.29.19 16.15

Date Received: 11.01.19 13.59
Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3106427

Date Prep: 11.04.19 11.11

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	318	10.1	mg/kg	11.04.19 16.36		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3106525

Date Prep: 11.04.19 17.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	11.04.19 22.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	75.5	50.3	mg/kg	11.04.19 22.10		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	11.04.19 22.10	U	1
Total GRO-DRO	PHC628	75.5	50.3	mg/kg	11.04.19 22.10		1
Total TPH	PHC635	75.5	50.3	mg/kg	11.04.19 22.10		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	11.04.19 22.10	
o-Terphenyl	84-15-1	105	%	70-135	11.04.19 22.10	



Certificate of Analytical Results 641852

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH01D**
Lab Sample Id: 641852-005

Matrix: Soil
Date Collected: 10.29.19 16.15

Date Received: 11.01.19 13.59
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 11.01.19 15.11

Basis: Wet Weight

Seq Number: 3106313

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	11.02.19 06.34	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	11.02.19 06.34	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	11.02.19 06.34	U	1
m,p-Xylenes	179601-23-1	<0.00201	0.00201	mg/kg	11.02.19 06.34	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	11.02.19 06.34	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	11.02.19 06.34	U	1
Total BTEX		<0.00100	0.00100	mg/kg	11.02.19 06.34	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	11.02.19 06.34		
4-Bromofluorobenzene	460-00-4	111	%	70-130	11.02.19 06.34		



Certificate of Analytical Results 641852

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH02** Matrix: Soil Date Received: 11.01.19 13.59
 Lab Sample Id: 641852-006 Date Collected: 10.29.19 16.40 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 11.04.19 11.11 Basis: Wet Weight
 Seq Number: 3106427

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.94	9.94	mg/kg	11.04.19 17.41	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 11.04.19 17.00 Basis: Wet Weight
 Seq Number: 3106525

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	11.04.19 22.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	73.3	49.8	mg/kg	11.04.19 22.31		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	11.04.19 22.31	U	1
Total GRO-DRO	PHC628	73.3	49.8	mg/kg	11.04.19 22.31		1
Total TPH	PHC635	73.3	49.8	mg/kg	11.04.19 22.31		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	81	%	70-135	11.04.19 22.31	
o-Terphenyl	84-15-1	87	%	70-135	11.04.19 22.31	



Certificate of Analytical Results 641852

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH02**
Lab Sample Id: 641852-006

Matrix: Soil
Date Collected: 10.29.19 16.40

Date Received: 11.01.19 13.59
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 11.01.19 15.11

Basis: Wet Weight

Seq Number: 3106313

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	11.02.19 06.54	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	11.02.19 06.54	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	11.02.19 06.54	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	11.02.19 06.54	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	11.02.19 06.54	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	11.02.19 06.54	U	1
Total BTEX		<0.00101	0.00101	mg/kg	11.02.19 06.54	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	114	%	70-130	11.02.19 06.54		
1,4-Difluorobenzene	540-36-3	99	%	70-130	11.02.19 06.54		



Certificate of Analytical Results 641852

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH02A** Matrix: Soil Date Received: 11.01.19 13.59
 Lab Sample Id: 641852-007 Date Collected: 10.29.19 16.45 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 11.04.19 11.11 Basis: Wet Weight
 Seq Number: 3106427

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	22.3	9.96	mg/kg	11.04.19 16.59		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 11.04.19 17.00 Basis: Wet Weight
 Seq Number: 3106525

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	11.04.19 22.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	68.0	49.8	mg/kg	11.04.19 22.51		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	11.04.19 22.51	U	1
Total GRO-DRO	PHC628	68.0	49.8	mg/kg	11.04.19 22.51		1
Total TPH	PHC635	68.0	49.8	mg/kg	11.04.19 22.51		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	11.04.19 22.51	
o-Terphenyl	84-15-1	90	%	70-135	11.04.19 22.51	



Certificate of Analytical Results 641852

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH02A**
Lab Sample Id: 641852-007

Matrix: Soil
Date Collected: 10.29.19 16.45

Date Received: 11.01.19 13.59
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 11.01.19 15.11

Basis: Wet Weight

Seq Number: 3106313

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000994	0.000994	mg/kg	11.02.19 07.15	U	1
Toluene	108-88-3	<0.000994	0.000994	mg/kg	11.02.19 07.15	U	1
Ethylbenzene	100-41-4	<0.000994	0.000994	mg/kg	11.02.19 07.15	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	11.02.19 07.15	U	1
o-Xylene	95-47-6	<0.000994	0.000994	mg/kg	11.02.19 07.15	U	1
Total Xylenes	1330-20-7	<0.000994	0.000994	mg/kg	11.02.19 07.15	U	1
Total BTEX		<0.000994	0.000994	mg/kg	11.02.19 07.15	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	114		%	70-130	11.02.19 07.15	
1,4-Difluorobenzene	540-36-3	99		%	70-130	11.02.19 07.15	



Certificate of Analytical Results 641852

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH02B** Matrix: Soil Date Received: 11.01.19 13.59
 Lab Sample Id: 641852-008 Date Collected: 10.29.19 16.50 Sample Depth: 3.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 11.04.19 11.11 Basis: Wet Weight
 Seq Number: 3106427

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	206	10.0	mg/kg	11.04.19 17.05		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 11.04.19 17.00 Basis: Wet Weight
 Seq Number: 3106525

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	11.04.19 23.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	69.6	49.9	mg/kg	11.04.19 23.11		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	11.04.19 23.11	U	1
Total GRO-DRO	PHC628	69.6	49.9	mg/kg	11.04.19 23.11		1
Total TPH	PHC635	69.6	49.9	mg/kg	11.04.19 23.11		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-135	11.04.19 23.11	
o-Terphenyl	84-15-1	92	%	70-135	11.04.19 23.11	



Certificate of Analytical Results 641852

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH02B**
Lab Sample Id: 641852-008

Matrix: Soil
Date Collected: 10.29.19 16.50

Date Received: 11.01.19 13.59
Sample Depth: 3.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3106313

Prep Method: SW5030B

% Moisture:

Date Prep: 11.01.19 15.11

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000996	0.000996	mg/kg	11.02.19 07.35	U	1
Toluene	108-88-3	<0.000996	0.000996	mg/kg	11.02.19 07.35	U	1
Ethylbenzene	100-41-4	<0.000996	0.000996	mg/kg	11.02.19 07.35	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	11.02.19 07.35	U	1
o-Xylene	95-47-6	<0.000996	0.000996	mg/kg	11.02.19 07.35	U	1
Total Xylenes	1330-20-7	<0.000996	0.000996	mg/kg	11.02.19 07.35	U	1
Total BTEX		<0.000996	0.000996	mg/kg	11.02.19 07.35	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100		%	70-130	11.02.19 07.35	
4-Bromofluorobenzene	460-00-4	115		%	70-130	11.02.19 07.35	



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



LT Environmental, Inc.
Corral Canyon 3H

Analytical Method: Chloride by EPA 300

Seq Number: 3106427

MB Sample Id: 7689529-1-BLK

Matrix: Solid

LCS Sample Id: 7689529-1-BKS

Prep Method: E300P

Date Prep: 11.04.19

LCSD Sample Id: 7689529-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	230	92	230	92	90-110	0	20	mg/kg	11.04.19 15:48	

Analytical Method: Chloride by EPA 300

Seq Number: 3106427

Parent Sample Id: 641852-001

Matrix: Soil

MS Sample Id: 641852-001 S

Prep Method: E300P

Date Prep: 11.04.19

MSD Sample Id: 641852-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	3.13	199	247	123	246	121	90-110	0	20	mg/kg	11.04.19 16:06	X

Analytical Method: Chloride by EPA 300

Seq Number: 3106427

Parent Sample Id: 641864-001

Matrix: Soil

MS Sample Id: 641864-001 S

Prep Method: E300P

Date Prep: 11.04.19

MSD Sample Id: 641864-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	229	198	467	120	492	132	90-110	5	20	mg/kg	11.04.19 17:29	X

Analytical Method: TPH by SW8015 Mod

Seq Number: 3106525

MB Sample Id: 7689591-1-BLK

Matrix: Solid

LCS Sample Id: 7689591-1-BKS

Prep Method: SW8015P

Date Prep: 11.04.19

LCSD Sample Id: 7689591-1-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	878	88	807	81	70-135	8	35	mg/kg	11.04.19 15:09	
Diesel Range Organics (DRO)	<50.0	1000	1070	107	938	94	70-135	13	35	mg/kg	11.04.19 15:09	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	96		106		96		70-135	%	11.04.19 15:09
o-Terphenyl	103		108		97		70-135	%	11.04.19 15:09

Analytical Method: TPH by SW8015 Mod

Seq Number: 3106525

Matrix: Solid

MB Sample Id: 7689591-1-BLK

Prep Method: SW8015P

Date Prep: 11.04.19

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	11.04.19 14:48	

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

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

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

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



LT Environmental, Inc.
Corral Canyon 3H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3106525

Parent Sample Id: 641907-019

Matrix: Soil

MS Sample Id: 641907-019 S

Prep Method: SW8015P

Date Prep: 11.04.19

MSD Sample Id: 641907-019 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.1	1000	1150	115	1010	101	70-135	13	35	mg/kg	11.04.19 16:20	
Diesel Range Organics (DRO)	21.8	1000	1350	133	1180	116	70-135	13	35	mg/kg	11.04.19 16:20	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	134		136	**	70-135	%	11.04.19 16:20
o-Terphenyl	123		131		70-135	%	11.04.19 16:20

Analytical Method: BTEX by EPA 8021B

Seq Number: 3106313

MB Sample Id: 7689516-1-BLK

Matrix: Solid

LCS Sample Id: 7689516-1-BKS

Prep Method: SW5030B

Date Prep: 11.01.19

LCSD Sample Id: 7689516-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.100	0.101	101	0.0911	91	70-130	10	35	mg/kg	11.01.19 23:38	
Toluene	<0.00100	0.100	0.101	101	0.0915	92	70-130	10	35	mg/kg	11.01.19 23:38	
Ethylbenzene	<0.00100	0.100	0.104	104	0.0944	94	71-129	10	35	mg/kg	11.01.19 23:38	
m,p-Xylenes	<0.00200	0.200	0.210	105	0.192	96	70-135	9	35	mg/kg	11.01.19 23:38	
o-Xylene	<0.00100	0.100	0.106	106	0.0977	98	71-133	8	35	mg/kg	11.01.19 23:38	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		99		99		70-130	%	11.01.19 23:38
4-Bromofluorobenzene	111		110		111		70-130	%	11.01.19 23:38

Analytical Method: BTEX by EPA 8021B

Seq Number: 3106313

Parent Sample Id: 641842-001

Matrix: Soil

MS Sample Id: 641842-001 S

Prep Method: SW5030B

Date Prep: 11.01.19

MSD Sample Id: 641842-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00101	0.101	0.0815	81	0.0930	93	70-130	13	35	mg/kg	11.02.19 00:19	
Toluene	<0.00101	0.101	0.0807	80	0.0922	92	70-130	13	35	mg/kg	11.02.19 00:19	
Ethylbenzene	<0.00101	0.101	0.0825	82	0.0943	94	71-129	13	35	mg/kg	11.02.19 00:19	
m,p-Xylenes	<0.00202	0.202	0.167	83	0.191	95	70-135	13	35	mg/kg	11.02.19 00:19	
o-Xylene	<0.00101	0.101	0.0844	84	0.0966	97	71-133	13	35	mg/kg	11.02.19 00:19	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		104		70-130	%	11.02.19 00:19
4-Bromofluorobenzene	113		118		70-130	%	11.02.19 00:19

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:

441852

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) 520-2000 West Palm Beach, FL (561) 689-6701

www.xenco.com

Page 1 of 1

Project Manager:	AIMÉE COLE	Bill to: (if different)	KYLE LITRELL
Company Name:	LT ENVIRONMENTAL	Company Name:	XTO
Address:	3300 NORTH A ST	Address:	3104 E. GREENE ST
City, State ZIP:	MIDLAND TX 79705	City, State ZIP:	CARLSBAD NM 88220
Phone:	720 384 7366	Email:	acole@ltenu.com & albyers@ltenu.com

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

Project Name:	CORRAL CANYON SH	Turn Around	☐
Project Number:	012919248	Routine	☐
Project Location:	RURAL EDDY COUNTRY	Rush:	5 DAY
Sampler's Name:	Anna Byers	Due Date:	
PO #:	288-3910	Quote #:	

SAMPLE RECEIPT		Temp Blank:	Yes ☒ No ☐	Wet Ice:	Yes ☒ No ☐	Thermometer ID	7-NK-009
Temperature (°C):	-0.2	Received Intact:	Yes ☒ No ☐	Correction Factor:	-0.2	Total Containers:	8
Cooler Custody Seals:	Yes ☒ No ☐						
Sample Custody Seals:	Yes ☒ No ☐						

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Pres. Code	ANALYSIS REQUEST	Preservative Codes	Sample Comments
PH01		S	10/13/19	1545	0.5'	1		TPH (EPA 8015)	MeOH: Me	
PH01A		S		1550	1'	1		BTEX (EPA 8021)	None: NO	
PH01B		S		1555	2'	1		Chloride (EPA 3000)	HNO3: HN	
PH01C		S		1600	3'	1			H2SO4: H2	
PH01D		S		1615	4'	1			HCL: HL	
PH02		S		1640	0.5'	1			NaOH: Na	
PH02A		S		1645	2'	1			Zn Acetate+ NaOH: Zn	
PH02B		S		1650	3.5'	1			TAT starts the day received by the lab, if received by 4:00pm	

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 \$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	Anna Byers	11/1/19 1209	Anna Byers	Anna Byers	11/1/19 1209



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 11/01/2019 01:59:00 PM

Work Order #: 641852

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist**Comments**

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

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Elizabeth McClellan

Date: 11/01/2019

Checklist reviewed by:

Jessica Kramer

Date: 11/06/2019

Analytical Report 642225

for
LT Environmental, Inc.

Project Manager: Aimee Cole

Corral Canyon 3H

012919248

07-NOV-19

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)

Xenco-Carlsbad (LELAP): Louisiana (05092)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Tampa: Florida (E87429), North Carolina (483)



07-NOV-19

Project Manager: **Aimee Cole**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **642225**

Corral Canyon 3H

Project Address: Rural Eddy County

Aimee Cole:

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) 642225. 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. 642225 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'.

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 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH03	S	11-01-19 15:50	0.5 ft	642225-001
PH03A	S	11-01-19 16:10	2 ft	642225-002
PH03B	S	11-01-19 16:30	4.5 ft	642225-003
PH04	S	11-01-19 16:55	0.5 ft	642225-004
PH04A	S	11-01-19 17:15	2 ft	642225-005
PH04B	S	11-01-19 17:30	4 ft	642225-006
PH05	S	11-01-19 14:10	0.5 ft	642225-007
PH05A	S	11-01-19 14:15	1 ft	642225-008
PH06	S	11-01-19 14:20	0.5 ft	642225-009
PH06A	S	11-01-19 14:25	1 ft	642225-010
PH07	S	11-01-19 14:30	0.5 ft	642225-011
PH07A	S	11-01-19 14:35	1 ft	642225-012
PH08	S	11-01-19 14:40	0.5 ft	642225-013
PH08A	S	11-01-19 14:45	1 ft	642225-014
PH09	S	11-01-19 14:50	0.5 ft	642225-015
PH09A	S	11-01-19 14:55	1 ft	642225-016
PH10	S	11-01-19 15:00	0.5 ft	642225-017
PH10A	S	11-01-19 15:05	1 ft	642225-018
PH11A	S	11-01-19 15:15	1 ft	642225-019
PH11	S	11-01-19 15:10	0.5 ft	642225-020
PH12	S	11-01-19 15:20	0.5 ft	642225-021
PH12A	S	11-01-19 15:25	1 ft	642225-022
PH13	S	11-01-19 15:30	0.5 ft	642225-023
PH13A	S	11-01-19 15:35	1 ft	642225-024
PH14	S	11-01-19 15:40	0.5 ft	642225-025
PH14A	S	11-01-19 15:45	1 ft	642225-026

**CASE NARRATIVE****Client Name: LT Environmental, Inc.****Project Name: Corral Canyon 3H**Project ID: 012919248
Work Order Number(s): 642225Report Date: 07-NOV-19
Date Received: 11/06/2019**Sample receipt non conformances and comments:**

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3106687 BTEX by EPA 8021B

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

Batch: LBA-3106696 BTEX by EPA 8021B

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

Lab Sample ID 642225-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Ethylbenzene, m,p-Xylenes recovered below QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 642225-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013, -014, -015, -016, -017, -018, -019, -020.

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

Batch: LBA-3106699 Chloride by EPA 300

Lab Sample ID 642225-011 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: 642225-001, -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.

Batch: LBA-3106701 Chloride by EPA 300

Lab Sample ID 642225-021 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: 642225-021, -022, -023, -024, -025, -026.

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



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Corral Canyon 3H

Project ID: 012919248
Work Order Number(s): 642225

Report Date: 07-NOV-19
Date Received: 11/06/2019

Batch: LBA-3106702 TPH by SW8015 Mod

Surrogate 1-Chlorooctane recovered above QC limits Data confirmed by re-analysis. Samples affected are:
7689800-1-BKS, 7689800-1-BSD, 642225-014 SD.



Certificate of Analysis Summary 642225

LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon 3H

Project Id: 012919248
Contact: Aimee Cole
Project Location: Rural Eddy County

Date Received in Lab: Wed Nov-06-19 10:36 am
Report Date: 07-NOV-19
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	642225-001	642225-002	642225-003	642225-004	642225-005	642225-006
	<i>Field Id:</i>	PH03	PH03A	PH03B	PH04	PH04A	PH04B
	<i>Depth:</i>	0.5- ft	2- ft	4.5- ft	0.5- ft	2- ft	4- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Nov-01-19 15:50	Nov-01-19 16:10	Nov-01-19 16:30	Nov-01-19 16:55	Nov-01-19 17:15	Nov-01-19 17:30
BTEX by EPA 8021B	<i>Extracted:</i>	Nov-06-19 16:11	Nov-06-19 16:11	Nov-06-19 16:11	Nov-06-19 16:11	Nov-06-19 16:11	Nov-06-19 16:11
	<i>Analyzed:</i>	Nov-06-19 23:34	Nov-06-19 23:54	Nov-07-19 00:13	Nov-07-19 00:32	Nov-07-19 00:51	Nov-07-19 01:10
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00100 0.00100	<0.00100 0.00100	<0.000988 0.000988	<0.00100 0.00100	<0.00101 0.00101	<0.00101 0.00101
Toluene		<0.00100 0.00100	<0.00100 0.00100	<0.000988 0.000988	<0.00100 0.00100	<0.00101 0.00101	<0.00101 0.00101
Ethylbenzene		<0.00100 0.00100	<0.00100 0.00100	<0.000988 0.000988	<0.00100 0.00100	<0.00101 0.00101	<0.00101 0.00101
m,p-Xylenes		<0.00200 0.00200	<0.00201 0.00201	<0.00198 0.00198	<0.00201 0.00201	<0.00202 0.00202	<0.00202 0.00202
o-Xylene		<0.00100 0.00100	<0.00100 0.00100	<0.000988 0.000988	<0.00100 0.00100	<0.00101 0.00101	<0.00101 0.00101
Total Xylenes		<0.00100 0.00100	<0.00100 0.00100	<0.000988 0.000988	<0.00100 0.00100	<0.00101 0.00101	<0.00101 0.00101
Total BTEX		<0.00100 0.00100	<0.00100 0.00100	<0.000988 0.000988	<0.00100 0.00100	<0.00101 0.00101	<0.00101 0.00101
Chloride by EPA 300	<i>Extracted:</i>	Nov-06-19 13:11	Nov-06-19 13:11	Nov-06-19 13:11	Nov-06-19 13:11	Nov-06-19 13:11	Nov-06-19 13:11
	<i>Analyzed:</i>	Nov-06-19 13:53	Nov-06-19 14:11	Nov-06-19 14:17	Nov-06-19 14:23	Nov-06-19 14:29	Nov-06-19 14:47
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		146 9.88	133 9.96	205 10.1	16.0 10.1	385 101	810 50.5
TPH by SW8015 Mod	<i>Extracted:</i>	Nov-06-19 16:00	Nov-06-19 16:00	Nov-06-19 16:00	Nov-06-19 16:00	Nov-06-19 16:00	Nov-06-19 16:00
	<i>Analyzed:</i>	Nov-06-19 16:50	Nov-06-19 17:10	Nov-06-19 17:32	Nov-06-19 17:52	Nov-06-19 18:11	Nov-06-19 18:31
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.2 50.2	<49.9 49.9	<50.1 50.1	<50.1 50.1	<50.0 50.0	<50.2 50.2
Diesel Range Organics (DRO)		<50.2 50.2	<49.9 49.9	<50.1 50.1	<50.1 50.1	<50.0 50.0	<50.2 50.2
Motor Oil Range Hydrocarbons (MRO)		<50.2 50.2	<49.9 49.9	<50.1 50.1	<50.1 50.1	<50.0 50.0	<50.2 50.2
Total GRO-DRO		<50.2 50.2	<49.9 49.9	<50.1 50.1	<50.1 50.1	<50.0 50.0	<50.2 50.2
Total TPH		<50.2 50.2	<49.9 49.9	<50.1 50.1	<50.1 50.1	<50.0 50.0	<50.2 50.2

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Jessica Kramer
Project Assistant

Certificate of Analysis Summary 642225



LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon 3H

Project Id: 012919248
Contact: Aimee Cole
Project Location: Rural Eddy County

Date Received in Lab: Wed Nov-06-19 10:36 am
Report Date: 07-NOV-19
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	642225-007	642225-008	642225-009	642225-010	642225-011	642225-012
	<i>Field Id:</i>	PH05	PH05A	PH06	PH06A	PH07	PH07A
	<i>Depth:</i>	0.5- ft	1- ft	0.5- ft	1- ft	0.5- ft	1- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Nov-01-19 14:10	Nov-01-19 14:15	Nov-01-19 14:20	Nov-01-19 14:25	Nov-01-19 14:30	Nov-01-19 14:35
BTEX by EPA 8021B	<i>Extracted:</i>	Nov-06-19 16:11	Nov-06-19 16:11	Nov-06-19 16:11	Nov-06-19 16:11	Nov-06-19 16:11	Nov-06-19 16:11
	<i>Analyzed:</i>	Nov-07-19 01:29	Nov-07-19 01:48	Nov-07-19 02:07	Nov-07-19 02:27	Nov-07-19 03:31	Nov-07-19 03:50
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00101 0.00101	<0.00101 0.00101	<0.000992 0.000992	<0.00100 0.00100	<0.00100 0.00100	<0.00101 0.00101
Toluene		<0.00101 0.00101	<0.00101 0.00101	<0.000992 0.000992	<0.00100 0.00100	<0.00100 0.00100	<0.00101 0.00101
Ethylbenzene		<0.00101 0.00101	<0.00101 0.00101	<0.000992 0.000992	<0.00100 0.00100	<0.00100 0.00100	<0.00101 0.00101
m,p-Xylenes		<0.00202 0.00202	<0.00202 0.00202	<0.00198 0.00198	<0.00201 0.00201	<0.00201 0.00201	<0.00201 0.00201
o-Xylene		<0.00101 0.00101	<0.00101 0.00101	<0.000992 0.000992	<0.00100 0.00100	<0.00100 0.00100	<0.00101 0.00101
Total Xylenes		<0.00101 0.00101	<0.00101 0.00101	<0.000992 0.000992	<0.00100 0.00100	<0.00100 0.00100	<0.00101 0.00101
Total BTEX		<0.00101 0.00101	<0.00101 0.00101	<0.000992 0.000992	<0.00100 0.00100	<0.00100 0.00100	<0.00101 0.00101
Chloride by EPA 300	<i>Extracted:</i>	Nov-06-19 13:11	Nov-06-19 13:11	Nov-06-19 13:11	Nov-06-19 13:11	Nov-06-19 13:11	Nov-06-19 13:11
	<i>Analyzed:</i>	Nov-06-19 14:53	Nov-06-19 14:59	Nov-06-19 15:05	Nov-06-19 15:11	Nov-06-19 15:17	Nov-06-19 15:35
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		107 9.94	118 9.98	28.8 9.96	49.4 9.92	139 9.90	2260 99.8
TPH by SW8015 Mod	<i>Extracted:</i>	Nov-06-19 16:00	Nov-06-19 16:00	Nov-06-19 16:00	Nov-06-19 16:00	Nov-06-19 16:00	Nov-06-19 16:00
	<i>Analyzed:</i>	Nov-06-19 18:51	Nov-06-19 19:11	Nov-06-19 19:31	Nov-06-19 19:50	Nov-06-19 19:11	Nov-06-19 19:31
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<50.2 50.2	<50.0 50.0	<50.0 50.0	<50.1 50.1	<49.8 49.8
Diesel Range Organics (DRO)		<50.0 50.0	<50.2 50.2	<50.0 50.0	<50.0 50.0	<50.1 50.1	<49.8 49.8
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<50.2 50.2	<50.0 50.0	<50.0 50.0	<50.1 50.1	<49.8 49.8
Total GRO-DRO		<50.0 50.0	<50.2 50.2	<50.0 50.0	<50.0 50.0	<50.1 50.1	<49.8 49.8
Total TPH		<50.0 50.0	<50.2 50.2	<50.0 50.0	<50.0 50.0	<50.1 50.1	<49.8 49.8

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Jessica Kramer
Project Assistant



Certificate of Analysis Summary 642225

LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon 3H

Project Id: 012919248
Contact: Aimee Cole
Project Location: Rural Eddy County

Date Received in Lab: Wed Nov-06-19 10:36 am
Report Date: 07-NOV-19
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	642225-013	642225-014	642225-015	642225-016	642225-017	642225-018
	<i>Field Id:</i>	PH08	PH08A	PH09	PH09A	PH10	PH10A
	<i>Depth:</i>	0.5- ft	1- ft	0.5- ft	1- ft	0.5- ft	1- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Nov-01-19 14:40	Nov-01-19 14:45	Nov-01-19 14:50	Nov-01-19 14:55	Nov-01-19 15:00	Nov-01-19 15:05
BTEX by EPA 8021B	<i>Extracted:</i>	Nov-06-19 16:11	Nov-06-19 16:11	Nov-06-19 16:11	Nov-06-19 16:11	Nov-06-19 16:11	Nov-06-19 16:11
	<i>Analyzed:</i>	Nov-07-19 04:09	Nov-07-19 04:28	Nov-07-19 04:47	Nov-07-19 05:06	Nov-07-19 05:25	Nov-07-19 05:44
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00101 0.00101	<0.00100 0.00100	<0.000996 0.000996	<0.000998 0.000998	<0.000988 0.000988	<0.00100 0.00100
Toluene		<0.00101 0.00101	<0.00100 0.00100	<0.000996 0.000996	<0.000998 0.000998	<0.000988 0.000988	<0.00100 0.00100
Ethylbenzene		<0.00101 0.00101	<0.00100 0.00100	<0.000996 0.000996	<0.000998 0.000998	<0.000988 0.000988	<0.00100 0.00100
m,p-Xylenes		<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200
o-Xylene		<0.00101 0.00101	<0.00100 0.00100	<0.000996 0.000996	<0.000998 0.000998	<0.000988 0.000988	<0.00100 0.00100
Total Xylenes		<0.00101 0.00101	<0.00100 0.00100	<0.000996 0.000996	<0.000998 0.000998	<0.000988 0.000988	<0.00100 0.00100
Total BTEX		<0.00101 0.00101	<0.00100 0.00100	<0.000996 0.000996	<0.000998 0.000998	<0.000988 0.000988	<0.00100 0.00100
Chloride by EPA 300	<i>Extracted:</i>	Nov-06-19 13:11	Nov-06-19 13:11	Nov-06-19 13:11	Nov-06-19 13:11	Nov-06-19 13:11	Nov-06-19 13:11
	<i>Analyzed:</i>	Nov-06-19 15:41	Nov-06-19 15:59	Nov-06-19 16:05	Nov-06-19 16:11	Nov-06-19 16:17	Nov-06-19 16:23
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		322 9.82	2010 101	669 50.5	1910 101	1920 100	3290 101
TPH by SW8015 Mod	<i>Extracted:</i>	Nov-06-19 16:00	Nov-06-19 16:30	Nov-06-19 16:30	Nov-06-19 16:30	Nov-06-19 16:30	Nov-06-19 16:30
	<i>Analyzed:</i>	Nov-06-19 19:50	Nov-06-19 21:29	Nov-06-19 22:29	Nov-06-19 22:49	Nov-06-19 23:08	Nov-06-19 23:28
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.3 50.3	<50.1 50.1	<50.2 50.2	<49.8 49.8	<50.1 50.1	<50.0 50.0
Diesel Range Organics (DRO)		<50.3 50.3	<50.1 50.1	<50.2 50.2	<49.8 49.8	<50.1 50.1	<50.0 50.0
Motor Oil Range Hydrocarbons (MRO)		<50.3 50.3	<50.1 50.1	<50.2 50.2	<49.8 49.8	<50.1 50.1	<50.0 50.0
Total GRO-DRO		<50.3 50.3	<50.1 50.1	<50.2 50.2	<49.8 49.8	<50.1 50.1	<50.0 50.0
Total TPH		<50.3 50.3	<50.1 50.1	<50.2 50.2	<49.8 49.8	<50.1 50.1	<50.0 50.0

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Jessica Kramer
Project Assistant

Certificate of Analysis Summary 642225



LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon 3H

Project Id: 012919248
Contact: Aimee Cole
Project Location: Rural Eddy County

Date Received in Lab: Wed Nov-06-19 10:36 am
Report Date: 07-NOV-19
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	642225-019	642225-020	642225-021	642225-022	642225-023	642225-024
	<i>Field Id:</i>	PH11A	PH11	PH12	PH12A	PH13	PH13A
	<i>Depth:</i>	1- ft	0.5- ft	0.5- ft	1- ft	0.5- ft	1- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Nov-01-19 15:15	Nov-01-19 15:10	Nov-01-19 15:20	Nov-01-19 15:25	Nov-01-19 15:30	Nov-01-19 15:35
BTEX by EPA 8021B	<i>Extracted:</i>	Nov-06-19 16:11	Nov-06-19 16:11	Nov-06-19 16:20	Nov-06-19 16:20	Nov-06-19 16:20	Nov-06-19 16:20
	<i>Analyzed:</i>	Nov-07-19 06:04	Nov-07-19 06:23	Nov-06-19 18:16	Nov-06-19 18:37	Nov-06-19 18:57	Nov-06-19 19:18
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00100 0.00100	<0.00100 0.00100	<0.00101 0.00101	<0.0000994 0.0000994	<0.00100 0.00100	<0.000994 0.000994
Toluene		<0.00100 0.00100	<0.00100 0.00100	<0.00101 0.00101	<0.0000994 0.0000994	<0.00100 0.00100	<0.000994 0.000994
Ethylbenzene		<0.00100 0.00100	<0.00100 0.00100	<0.00101 0.00101	<0.0000994 0.0000994	<0.00100 0.00100	<0.000994 0.000994
m,p-Xylenes		<0.00201 0.00201	<0.00201 0.00201	<0.00202 0.00202	<0.000199 0.000199	<0.00201 0.00201	<0.00199 0.00199
o-Xylene		<0.00100 0.00100	<0.00100 0.00100	<0.00101 0.00101	<0.0000994 0.0000994	<0.00100 0.00100	<0.000994 0.000994
Total Xylenes		<0.00100 0.00100	<0.00100 0.00100	<0.00101 0.00101	<0.0000994 0.0000994	<0.00100 0.00100	<0.000994 0.000994
Total BTEX		<0.00100 0.00100	<0.00100 0.00100	<0.00101 0.00101	<0.0000994 0.0000994	<0.00100 0.00100	<0.000994 0.000994
Chloride by EPA 300	<i>Extracted:</i>	Nov-06-19 13:11	Nov-06-19 13:11	Nov-06-19 14:11	Nov-06-19 14:11	Nov-06-19 14:11	Nov-06-19 14:11
	<i>Analyzed:</i>	Nov-06-19 16:29	Nov-06-19 16:35	Nov-06-19 17:11	Nov-06-19 17:28	Nov-06-19 17:34	Nov-06-19 17:40
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		2250 101	169 9.98	59.2 9.98	1510 100	571 50.4	702 49.7
TPH by SW8015 Mod	<i>Extracted:</i>	Nov-06-19 16:30	Nov-06-19 16:30	Nov-06-19 16:30	Nov-06-19 16:30	Nov-06-19 16:30	Nov-06-19 16:30
	<i>Analyzed:</i>	Nov-06-19 23:48	Nov-07-19 00:07	Nov-07-19 00:27	Nov-07-19 00:47	Nov-07-19 01:06	Nov-06-19 21:29
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<50.1 50.1	<50.0 50.0	<50.3 50.3	<50.0 50.0	<50.3 50.3
Diesel Range Organics (DRO)		<50.0 50.0	<50.1 50.1	<50.0 50.0	<50.3 50.3	<50.0 50.0	<50.3 50.3
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<50.1 50.1	<50.0 50.0	<50.3 50.3	<50.0 50.0	<50.3 50.3
Total GRO-DRO		<50.0 50.0	<50.1 50.1	<50.0 50.0	<50.3 50.3	<50.0 50.0	<50.3 50.3
Total TPH		<50.0 50.0	<50.1 50.1	<50.0 50.0	<50.3 50.3	<50.0 50.0	<50.3 50.3

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Jessica Kramer
Project Assistant



Certificate of Analysis Summary 642225

LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon 3H

Project Id: 012919248
Contact: Aimee Cole
Project Location: Rural Eddy County

Date Received in Lab: Wed Nov-06-19 10:36 am
Report Date: 07-NOV-19
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	642225-025	642225-026				
	Field Id:	PH14	PH14A				
	Depth:	0.5- ft	1- ft				
	Matrix:	SOIL	SOIL				
	Sampled:	Nov-01-19 15:40	Nov-01-19 15:45				
BTEX by EPA 8021B	Extracted:	Nov-06-19 16:20	Nov-06-19 16:20				
	Analyzed:	Nov-06-19 19:38	Nov-06-19 19:58				
	Units/RL:	mg/kg RL	mg/kg RL				
Benzene		<0.00100 0.00100	<0.000998 0.000998				
Toluene		<0.00100 0.00100	<0.000998 0.000998				
Ethylbenzene		<0.00100 0.00100	<0.000998 0.000998				
m,p-Xylenes		<0.00200 0.00200	<0.00200 0.00200				
o-Xylene		<0.00100 0.00100	<0.000998 0.000998				
Total Xylenes		<0.00100 0.00100	<0.000998 0.000998				
Total BTEX		<0.00100 0.00100	<0.000998 0.000998				
Chloride by EPA 300	Extracted:	Nov-06-19 14:11	Nov-06-19 14:11				
	Analyzed:	Nov-06-19 17:46	Nov-06-19 18:04				
	Units/RL:	mg/kg RL	mg/kg RL				
Chloride		429 D 101	2560 99.4				
TPH by SW8015 Mod	Extracted:	Nov-06-19 16:30	Nov-06-19 16:30				
	Analyzed:	Nov-06-19 22:29	Nov-06-19 22:49				
	Units/RL:	mg/kg RL	mg/kg RL				
Gasoline Range Hydrocarbons (GRO)		<50.2 50.2	<50.3 50.3				
Diesel Range Organics (DRO)		<50.2 50.2	<50.3 50.3				
Motor Oil Range Hydrocarbons (MRO)		<50.2 50.2	<50.3 50.3				
Total GRO-DRO		<50.2 50.2	<50.3 50.3				
Total TPH		<50.2 50.2	<50.3 50.3				

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Jessica Kramer
Project Assistant



Certificate of Analytical Results 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH03**
Lab Sample Id: 642225-001

Matrix: Soil
Date Collected: 11.01.19 15.50

Date Received: 11.06.19 10.36
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3106699

Date Prep: 11.06.19 13.11

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	146	9.88	mg/kg	11.06.19 13.53		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3106685

Date Prep: 11.06.19 16.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	11.06.19 16.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	11.06.19 16.50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	11.06.19 16.50	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	11.06.19 16.50	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	11.06.19 16.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	11.06.19 16.50	
o-Terphenyl	84-15-1	108	%	70-135	11.06.19 16.50	



Certificate of Analytical Results 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH03**
Lab Sample Id: 642225-001

Matrix: Soil
Date Collected: 11.01.19 15.50

Date Received: 11.06.19 10.36
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 11.06.19 16.11

Basis: Wet Weight

Seq Number: 3106696

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	11.06.19 23.34	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	11.06.19 23.34	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	11.06.19 23.34	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	11.06.19 23.34	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	11.06.19 23.34	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	11.06.19 23.34	U	1
Total BTEX		<0.00100	0.00100	mg/kg	11.06.19 23.34	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	108	%	70-130	11.06.19 23.34		
1,4-Difluorobenzene	540-36-3	101	%	70-130	11.06.19 23.34		



Certificate of Analytical Results 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH03A** Matrix: Soil Date Received: 11.06.19 10.36
 Lab Sample Id: 642225-002 Date Collected: 11.01.19 16.10 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 11.06.19 13.11 Basis: Wet Weight
 Seq Number: 3106699

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	133	9.96	mg/kg	11.06.19 14.11		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 11.06.19 16.00 Basis: Wet Weight
 Seq Number: 3106685

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	11.06.19 17.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	11.06.19 17.10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	11.06.19 17.10	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	11.06.19 17.10	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	11.06.19 17.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	11.06.19 17.10	
o-Terphenyl	84-15-1	104	%	70-135	11.06.19 17.10	



Certificate of Analytical Results 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH03A**
Lab Sample Id: 642225-002

Matrix: Soil
Date Collected: 11.01.19 16.10

Date Received: 11.06.19 10.36
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 11.06.19 16.11

Basis: Wet Weight

Seq Number: 3106696

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	11.06.19 23.54	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	11.06.19 23.54	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	11.06.19 23.54	U	1
m,p-Xylenes	179601-23-1	<0.00201	0.00201	mg/kg	11.06.19 23.54	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	11.06.19 23.54	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	11.06.19 23.54	U	1
Total BTEX		<0.00100	0.00100	mg/kg	11.06.19 23.54	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	103	%	70-130	11.06.19 23.54		
4-Bromofluorobenzene	460-00-4	118	%	70-130	11.06.19 23.54		



Certificate of Analytical Results 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH03B** Matrix: Soil Date Received: 11.06.19 10.36
 Lab Sample Id: 642225-003 Date Collected: 11.01.19 16.30 Sample Depth: 4.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 11.06.19 13.11 Basis: Wet Weight
 Seq Number: 3106699

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	205	10.1	mg/kg	11.06.19 14.17		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 11.06.19 16.00 Basis: Wet Weight
 Seq Number: 3106685

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	11.06.19 17.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	11.06.19 17.32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	11.06.19 17.32	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	11.06.19 17.32	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	11.06.19 17.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	11.06.19 17.32	
o-Terphenyl	84-15-1	107	%	70-135	11.06.19 17.32	



Certificate of Analytical Results 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH03B**
Lab Sample Id: 642225-003

Matrix: Soil
Date Collected: 11.01.19 16.30

Date Received: 11.06.19 10.36
Sample Depth: 4.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3106696

Prep Method: SW5030B

% Moisture:

Date Prep: 11.06.19 16.11

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000988	0.000988	mg/kg	11.07.19 00.13	U	1
Toluene	108-88-3	<0.000988	0.000988	mg/kg	11.07.19 00.13	U	1
Ethylbenzene	100-41-4	<0.000988	0.000988	mg/kg	11.07.19 00.13	U	1
m,p-Xylenes	179601-23-1	<0.00198	0.00198	mg/kg	11.07.19 00.13	U	1
o-Xylene	95-47-6	<0.000988	0.000988	mg/kg	11.07.19 00.13	U	1
Total Xylenes	1330-20-7	<0.000988	0.000988	mg/kg	11.07.19 00.13	U	1
Total BTEX		<0.000988	0.000988	mg/kg	11.07.19 00.13	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	117		%	70-130	11.07.19 00.13	
1,4-Difluorobenzene	540-36-3	104		%	70-130	11.07.19 00.13	



Certificate of Analytical Results 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH04** Matrix: Soil Date Received: 11.06.19 10.36
 Lab Sample Id: 642225-004 Date Collected: 11.01.19 16.55 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 11.06.19 13.11 Basis: Wet Weight
 Seq Number: 3106699

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	16.0	10.1	mg/kg	11.06.19 14.23		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 11.06.19 16.00 Basis: Wet Weight
 Seq Number: 3106685

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	11.06.19 17.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	11.06.19 17.52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	11.06.19 17.52	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	11.06.19 17.52	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	11.06.19 17.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	11.06.19 17.52	
o-Terphenyl	84-15-1	106	%	70-135	11.06.19 17.52	



Certificate of Analytical Results 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH04**
Lab Sample Id: 642225-004

Matrix: Soil
Date Collected: 11.01.19 16.55

Date Received: 11.06.19 10.36
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 11.06.19 16.11

Basis: Wet Weight

Seq Number: 3106696

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	11.07.19 00.32	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	11.07.19 00.32	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	11.07.19 00.32	U	1
m,p-Xylenes	179601-23-1	<0.00201	0.00201	mg/kg	11.07.19 00.32	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	11.07.19 00.32	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	11.07.19 00.32	U	1
Total BTEX		<0.00100	0.00100	mg/kg	11.07.19 00.32	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	11.07.19 00.32		
4-Bromofluorobenzene	460-00-4	120	%	70-130	11.07.19 00.32		



Certificate of Analytical Results 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH04A** Matrix: Soil Date Received: 11.06.19 10.36
 Lab Sample Id: 642225-005 Date Collected: 11.01.19 17.15 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 11.06.19 13.11 Basis: Wet Weight
 Seq Number: 3106699

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	385	101	mg/kg	11.07.19 11.17		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 11.06.19 16.00 Basis: Wet Weight
 Seq Number: 3106685

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	11.06.19 18.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	11.06.19 18.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.06.19 18.11	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	11.06.19 18.11	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	11.06.19 18.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	11.06.19 18.11	
o-Terphenyl	84-15-1	104	%	70-135	11.06.19 18.11	



Certificate of Analytical Results 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH04A**
Lab Sample Id: 642225-005

Matrix: Soil
Date Collected: 11.01.19 17.15

Date Received: 11.06.19 10.36
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 11.06.19 16.11

Basis: Wet Weight

Seq Number: 3106696

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	11.07.19 00.51	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	11.07.19 00.51	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	11.07.19 00.51	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	11.07.19 00.51	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	11.07.19 00.51	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	11.07.19 00.51	U	1
Total BTEX		<0.00101	0.00101	mg/kg	11.07.19 00.51	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	120		%	70-130	11.07.19 00.51	
1,4-Difluorobenzene	540-36-3	103		%	70-130	11.07.19 00.51	



Certificate of Analytical Results 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH04B**
Lab Sample Id: 642225-006

Matrix: Soil
Date Collected: 11.01.19 17.30

Date Received: 11.06.19 10.36
Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3106699

Date Prep: 11.06.19 13.11

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	810	50.5	mg/kg	11.06.19 14.47		5

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3106685

Date Prep: 11.06.19 16.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	11.06.19 18.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	11.06.19 18.31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	11.06.19 18.31	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	11.06.19 18.31	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	11.06.19 18.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	11.06.19 18.31	
o-Terphenyl	84-15-1	104	%	70-135	11.06.19 18.31	



Certificate of Analytical Results 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH04B**
Lab Sample Id: 642225-006

Matrix: Soil
Date Collected: 11.01.19 17.30

Date Received: 11.06.19 10.36
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 11.06.19 16.11

Basis: Wet Weight

Seq Number: 3106696

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	11.07.19 01.10	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	11.07.19 01.10	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	11.07.19 01.10	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	11.07.19 01.10	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	11.07.19 01.10	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	11.07.19 01.10	U	1
Total BTEX		<0.00101	0.00101	mg/kg	11.07.19 01.10	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104		%	70-130	11.07.19 01.10	
4-Bromofluorobenzene	460-00-4	121		%	70-130	11.07.19 01.10	



Certificate of Analytical Results 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH05** Matrix: Soil Date Received: 11.06.19 10.36
 Lab Sample Id: 642225-007 Date Collected: 11.01.19 14.10 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 11.06.19 13.11 Basis: Wet Weight
 Seq Number: 3106699

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	107	9.94	mg/kg	11.06.19 14.53		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 11.06.19 16.00 Basis: Wet Weight
 Seq Number: 3106685

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	11.06.19 18.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	11.06.19 18.51	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.06.19 18.51	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	11.06.19 18.51	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	11.06.19 18.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	11.06.19 18.51	
o-Terphenyl	84-15-1	106	%	70-135	11.06.19 18.51	



Certificate of Analytical Results 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH05**
Lab Sample Id: 642225-007

Matrix: Soil
Date Collected: 11.01.19 14.10

Date Received: 11.06.19 10.36
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 11.06.19 16.11

Basis: Wet Weight

Seq Number: 3106696

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	11.07.19 01.29	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	11.07.19 01.29	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	11.07.19 01.29	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	11.07.19 01.29	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	11.07.19 01.29	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	11.07.19 01.29	U	1
Total BTEX		<0.00101	0.00101	mg/kg	11.07.19 01.29	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103		%	70-130	11.07.19 01.29	
4-Bromofluorobenzene	460-00-4	117		%	70-130	11.07.19 01.29	



Certificate of Analytical Results 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH05A**
Lab Sample Id: 642225-008

Matrix: Soil
Date Collected: 11.01.19 14.15

Date Received: 11.06.19 10.36
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3106699

Date Prep: 11.06.19 13.11

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	118	9.98	mg/kg	11.06.19 14.59		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3106685

Date Prep: 11.06.19 16.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	11.06.19 19.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	11.06.19 19.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	11.06.19 19.11	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	11.06.19 19.11	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	11.06.19 19.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	11.06.19 19.11	
o-Terphenyl	84-15-1	108	%	70-135	11.06.19 19.11	



Certificate of Analytical Results 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH05A**
Lab Sample Id: 642225-008

Matrix: Soil
Date Collected: 11.01.19 14.15

Date Received: 11.06.19 10.36
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 11.06.19 16.11

Basis: Wet Weight

Seq Number: 3106696

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	11.07.19 01.48	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	11.07.19 01.48	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	11.07.19 01.48	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	11.07.19 01.48	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	11.07.19 01.48	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	11.07.19 01.48	U	1
Total BTEX		<0.00101	0.00101	mg/kg	11.07.19 01.48	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	103	%	70-130	11.07.19 01.48		
4-Bromofluorobenzene	460-00-4	117	%	70-130	11.07.19 01.48		



Certificate of Analytical Results 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH06**
Lab Sample Id: 642225-009

Matrix: Soil
Date Collected: 11.01.19 14.20

Date Received: 11.06.19 10.36
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3106699

Date Prep: 11.06.19 13.11

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	28.8	9.96	mg/kg	11.06.19 15.05		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3106685

Date Prep: 11.06.19 16.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	11.06.19 19.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	11.06.19 19.31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.06.19 19.31	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	11.06.19 19.31	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	11.06.19 19.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	11.06.19 19.31	
o-Terphenyl	84-15-1	109	%	70-135	11.06.19 19.31	



Certificate of Analytical Results 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH06**
Lab Sample Id: 642225-009

Matrix: Soil
Date Collected: 11.01.19 14.20

Date Received: 11.06.19 10.36
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 11.06.19 16.11

Basis: Wet Weight

Seq Number: 3106696

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000992	0.000992	mg/kg	11.07.19 02.07	U	1
Toluene	108-88-3	<0.000992	0.000992	mg/kg	11.07.19 02.07	U	1
Ethylbenzene	100-41-4	<0.000992	0.000992	mg/kg	11.07.19 02.07	U	1
m,p-Xylenes	179601-23-1	<0.00198	0.00198	mg/kg	11.07.19 02.07	U	1
o-Xylene	95-47-6	<0.000992	0.000992	mg/kg	11.07.19 02.07	U	1
Total Xylenes	1330-20-7	<0.000992	0.000992	mg/kg	11.07.19 02.07	U	1
Total BTEX		<0.000992	0.000992	mg/kg	11.07.19 02.07	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	11.07.19 02.07		
4-Bromofluorobenzene	460-00-4	127	%	70-130	11.07.19 02.07		



Certificate of Analytical Results 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH06A**
Lab Sample Id: 642225-010

Matrix: Soil
Date Collected: 11.01.19 14.25

Date Received: 11.06.19 10.36
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3106699

Date Prep: 11.06.19 13.11

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	49.4	9.92	mg/kg	11.06.19 15.11		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3106685

Date Prep: 11.06.19 16.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	11.06.19 19.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	11.06.19 19.50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.06.19 19.50	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	11.06.19 19.50	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	11.06.19 19.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	11.06.19 19.50	
o-Terphenyl	84-15-1	107	%	70-135	11.06.19 19.50	



Certificate of Analytical Results 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH06A**
Lab Sample Id: 642225-010

Matrix: Soil
Date Collected: 11.01.19 14.25

Date Received: 11.06.19 10.36
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 11.06.19 16.11

Basis: Wet Weight

Seq Number: 3106696

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	11.07.19 02.27	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	11.07.19 02.27	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	11.07.19 02.27	U	1
m,p-Xylenes	179601-23-1	<0.00201	0.00201	mg/kg	11.07.19 02.27	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	11.07.19 02.27	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	11.07.19 02.27	U	1
Total BTEX		<0.00100	0.00100	mg/kg	11.07.19 02.27	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	11.07.19 02.27		
4-Bromofluorobenzene	460-00-4	123	%	70-130	11.07.19 02.27		



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LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH07**
Lab Sample Id: 642225-011

Matrix: Soil
Date Collected: 11.01.19 14.30

Date Received: 11.06.19 10.36
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3106699

Date Prep: 11.06.19 13.11

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	139	9.90	mg/kg	11.06.19 15.17		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3106741

Date Prep: 11.06.19 16.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	11.06.19 19.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	11.06.19 19.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	11.06.19 19.11	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	11.06.19 19.11	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	11.06.19 19.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	11.06.19 19.11	
o-Terphenyl	84-15-1	109	%	70-135	11.06.19 19.11	



Certificate of Analytical Results 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH07**
Lab Sample Id: 642225-011

Matrix: Soil
Date Collected: 11.01.19 14.30

Date Received: 11.06.19 10.36
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3106696

Prep Method: SW5030B

% Moisture:

Date Prep: 11.06.19 16.11

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	11.07.19 03.31	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	11.07.19 03.31	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	11.07.19 03.31	U	1
m,p-Xylenes	179601-23-1	<0.00201	0.00201	mg/kg	11.07.19 03.31	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	11.07.19 03.31	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	11.07.19 03.31	U	1
Total BTEX		<0.00100	0.00100	mg/kg	11.07.19 03.31	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	100	%	70-130	11.07.19 03.31		
4-Bromofluorobenzene	460-00-4	109	%	70-130	11.07.19 03.31		



Certificate of Analytical Results 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH07A**
Lab Sample Id: 642225-012

Matrix: Soil
Date Collected: 11.01.19 14.35

Date Received: 11.06.19 10.36
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3106699

Date Prep: 11.06.19 13.11

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2260	99.8	mg/kg	11.06.19 15.35		10

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3106741

Date Prep: 11.06.19 16.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	11.06.19 19.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	11.06.19 19.31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	11.06.19 19.31	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	11.06.19 19.31	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	11.06.19 19.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-135	11.06.19 19.31	
o-Terphenyl	84-15-1	94	%	70-135	11.06.19 19.31	



Certificate of Analytical Results 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH07A**
Lab Sample Id: 642225-012

Matrix: Soil
Date Collected: 11.01.19 14.35

Date Received: 11.06.19 10.36
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 11.06.19 16.11

Basis: Wet Weight

Seq Number: 3106696

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	11.07.19 03.50	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	11.07.19 03.50	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	11.07.19 03.50	U	1
m,p-Xylenes	179601-23-1	<0.00201	0.00201	mg/kg	11.07.19 03.50	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	11.07.19 03.50	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	11.07.19 03.50	U	1
Total BTEX		<0.00101	0.00101	mg/kg	11.07.19 03.50	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	94		%	70-130	11.07.19 03.50	
4-Bromofluorobenzene	460-00-4	117		%	70-130	11.07.19 03.50	



Certificate of Analytical Results 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH08**
Lab Sample Id: 642225-013

Matrix: Soil
Date Collected: 11.01.19 14.40

Date Received: 11.06.19 10.36
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3106699

Date Prep: 11.06.19 13.11

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	322	9.82	mg/kg	11.06.19 15.41		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3106741

Date Prep: 11.06.19 16.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	11.06.19 19.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	11.06.19 19.50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	11.06.19 19.50	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	11.06.19 19.50	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	11.06.19 19.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	11.06.19 19.50	
o-Terphenyl	84-15-1	112	%	70-135	11.06.19 19.50	



Certificate of Analytical Results 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH08**
Lab Sample Id: 642225-013

Matrix: Soil
Date Collected: 11.01.19 14.40

Date Received: 11.06.19 10.36
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 11.06.19 16.11

Basis: Wet Weight

Seq Number: 3106696

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	11.07.19 04.09	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	11.07.19 04.09	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	11.07.19 04.09	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	11.07.19 04.09	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	11.07.19 04.09	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	11.07.19 04.09	U	1
Total BTEX		<0.00101	0.00101	mg/kg	11.07.19 04.09	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	117	%	70-130	11.07.19 04.09		
1,4-Difluorobenzene	540-36-3	97	%	70-130	11.07.19 04.09		



Certificate of Analytical Results 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH08A**
Lab Sample Id: 642225-014

Matrix: Soil
Date Collected: 11.01.19 14.45

Date Received: 11.06.19 10.36
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3106699

Date Prep: 11.06.19 13.11

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2010	101	mg/kg	11.06.19 15.59		10

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3106702

Date Prep: 11.06.19 16.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	11.06.19 21.29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	11.06.19 21.29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	11.06.19 21.29	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	11.06.19 21.29	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	11.06.19 21.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	11.06.19 21.29	
o-Terphenyl	84-15-1	106	%	70-135	11.06.19 21.29	



Certificate of Analytical Results 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH08A**
Lab Sample Id: 642225-014

Matrix: Soil
Date Collected: 11.01.19 14.45

Date Received: 11.06.19 10.36
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 11.06.19 16.11

Basis: Wet Weight

Seq Number: 3106696

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	11.07.19 04.28	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	11.07.19 04.28	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	11.07.19 04.28	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	11.07.19 04.28	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	11.07.19 04.28	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	11.07.19 04.28	U	1
Total BTEX		<0.00100	0.00100	mg/kg	11.07.19 04.28	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	115		%	70-130	11.07.19 04.28	
1,4-Difluorobenzene	540-36-3	100		%	70-130	11.07.19 04.28	



Certificate of Analytical Results 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH09**
 Lab Sample Id: 642225-015

Matrix: Soil
 Date Collected: 11.01.19 14.50

Date Received: 11.06.19 10.36
 Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 11.06.19 13.11

Basis: Wet Weight

Seq Number: 3106699

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	669	50.5	mg/kg	11.06.19 16.05		5

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 11.06.19 16.30

Basis: Wet Weight

Seq Number: 3106702

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	11.06.19 22.29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	11.06.19 22.29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	11.06.19 22.29	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	11.06.19 22.29	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	11.06.19 22.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	11.06.19 22.29	
o-Terphenyl	84-15-1	112	%	70-135	11.06.19 22.29	



Certificate of Analytical Results 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH09**
Lab Sample Id: 642225-015

Matrix: Soil
Date Collected: 11.01.19 14.50

Date Received: 11.06.19 10.36
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3106696

Prep Method: SW5030B

% Moisture:

Date Prep: 11.06.19 16.11

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000996	0.000996	mg/kg	11.07.19 04.47	U	1
Toluene	108-88-3	<0.000996	0.000996	mg/kg	11.07.19 04.47	U	1
Ethylbenzene	100-41-4	<0.000996	0.000996	mg/kg	11.07.19 04.47	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	11.07.19 04.47	U	1
o-Xylene	95-47-6	<0.000996	0.000996	mg/kg	11.07.19 04.47	U	1
Total Xylenes	1330-20-7	<0.000996	0.000996	mg/kg	11.07.19 04.47	U	1
Total BTEX		<0.000996	0.000996	mg/kg	11.07.19 04.47	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	119		%	70-130	11.07.19 04.47	
1,4-Difluorobenzene	540-36-3	104		%	70-130	11.07.19 04.47	



Certificate of Analytical Results 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH09A**
Lab Sample Id: 642225-016

Matrix: Soil
Date Collected: 11.01.19 14.55

Date Received: 11.06.19 10.36
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3106699

Date Prep: 11.06.19 13.11

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1910	101	mg/kg	11.06.19 16.11		10

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3106702

Date Prep: 11.06.19 16.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	11.06.19 22.49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	11.06.19 22.49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	11.06.19 22.49	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	11.06.19 22.49	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	11.06.19 22.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	11.06.19 22.49	
o-Terphenyl	84-15-1	106	%	70-135	11.06.19 22.49	



Certificate of Analytical Results 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH09A**
Lab Sample Id: 642225-016

Matrix: Soil
Date Collected: 11.01.19 14.55

Date Received: 11.06.19 10.36
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 11.06.19 16.11

Basis: Wet Weight

Seq Number: 3106696

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000998	0.000998	mg/kg	11.07.19 05.06	U	1
Toluene	108-88-3	<0.000998	0.000998	mg/kg	11.07.19 05.06	U	1
Ethylbenzene	100-41-4	<0.000998	0.000998	mg/kg	11.07.19 05.06	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	11.07.19 05.06	U	1
o-Xylene	95-47-6	<0.000998	0.000998	mg/kg	11.07.19 05.06	U	1
Total Xylenes	1330-20-7	<0.000998	0.000998	mg/kg	11.07.19 05.06	U	1
Total BTEX		<0.000998	0.000998	mg/kg	11.07.19 05.06	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	116		%	70-130	11.07.19 05.06	
1,4-Difluorobenzene	540-36-3	103		%	70-130	11.07.19 05.06	



Certificate of Analytical Results 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH10**
Lab Sample Id: 642225-017

Matrix: Soil
Date Collected: 11.01.19 15.00

Date Received: 11.06.19 10.36
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3106699

Date Prep: 11.06.19 13.11

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1920	100	mg/kg	11.06.19 16.17		10

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3106702

Date Prep: 11.06.19 16.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	11.06.19 23.08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	11.06.19 23.08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	11.06.19 23.08	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	11.06.19 23.08	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	11.06.19 23.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	11.06.19 23.08	
o-Terphenyl	84-15-1	109	%	70-135	11.06.19 23.08	



Certificate of Analytical Results 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH10**
Lab Sample Id: 642225-017

Matrix: Soil
Date Collected: 11.01.19 15.00

Date Received: 11.06.19 10.36
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 11.06.19 16.11

Basis: Wet Weight

Seq Number: 3106696

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000988	0.000988	mg/kg	11.07.19 05.25	U	1
Toluene	108-88-3	<0.000988	0.000988	mg/kg	11.07.19 05.25	U	1
Ethylbenzene	100-41-4	<0.000988	0.000988	mg/kg	11.07.19 05.25	U	1
m,p-Xylenes	179601-23-1	<0.00198	0.00198	mg/kg	11.07.19 05.25	U	1
o-Xylene	95-47-6	<0.000988	0.000988	mg/kg	11.07.19 05.25	U	1
Total Xylenes	1330-20-7	<0.000988	0.000988	mg/kg	11.07.19 05.25	U	1
Total BTEX		<0.000988	0.000988	mg/kg	11.07.19 05.25	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	119		%	70-130	11.07.19 05.25	
1,4-Difluorobenzene	540-36-3	105		%	70-130	11.07.19 05.25	



Certificate of Analytical Results 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH10A**
Lab Sample Id: 642225-018

Matrix: Soil
Date Collected: 11.01.19 15.05

Date Received: 11.06.19 10.36
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3106699

Date Prep: 11.06.19 13.11

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3290	101	mg/kg	11.06.19 16.23		10

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3106702

Date Prep: 11.06.19 16.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	11.06.19 23.28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	11.06.19 23.28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.06.19 23.28	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	11.06.19 23.28	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	11.06.19 23.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	11.06.19 23.28	
o-Terphenyl	84-15-1	107	%	70-135	11.06.19 23.28	



Certificate of Analytical Results 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH10A**
Lab Sample Id: 642225-018

Matrix: Soil
Date Collected: 11.01.19 15.05

Date Received: 11.06.19 10.36
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 11.06.19 16.11

Basis: Wet Weight

Seq Number: 3106696

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	11.07.19 05.44	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	11.07.19 05.44	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	11.07.19 05.44	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	11.07.19 05.44	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	11.07.19 05.44	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	11.07.19 05.44	U	1
Total BTEX		<0.00100	0.00100	mg/kg	11.07.19 05.44	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	120		%	70-130	11.07.19 05.44	
1,4-Difluorobenzene	540-36-3	102		%	70-130	11.07.19 05.44	



Certificate of Analytical Results 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH11A**
Lab Sample Id: 642225-019

Matrix: Soil
Date Collected: 11.01.19 15.15

Date Received: 11.06.19 10.36
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3106699

Date Prep: 11.06.19 13.11

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2250	101	mg/kg	11.06.19 16.29		10

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3106702

Date Prep: 11.06.19 16.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	11.06.19 23.48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	11.06.19 23.48	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.06.19 23.48	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	11.06.19 23.48	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	11.06.19 23.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	11.06.19 23.48	
o-Terphenyl	84-15-1	106	%	70-135	11.06.19 23.48	



Certificate of Analytical Results 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH11A**
Lab Sample Id: 642225-019

Matrix: Soil
Date Collected: 11.01.19 15.15

Date Received: 11.06.19 10.36
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 11.06.19 16.11

Basis: Wet Weight

Seq Number: 3106696

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	11.07.19 06.04	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	11.07.19 06.04	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	11.07.19 06.04	U	1
m,p-Xylenes	179601-23-1	<0.00201	0.00201	mg/kg	11.07.19 06.04	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	11.07.19 06.04	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	11.07.19 06.04	U	1
Total BTEX		<0.00100	0.00100	mg/kg	11.07.19 06.04	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	128	%	70-130	11.07.19 06.04		
1,4-Difluorobenzene	540-36-3	105	%	70-130	11.07.19 06.04		



Certificate of Analytical Results 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH11** Matrix: Soil Date Received: 11.06.19 10.36
 Lab Sample Id: 642225-020 Date Collected: 11.01.19 15.10 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 11.06.19 13.11 Basis: Wet Weight
 Seq Number: 3106699

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	169	9.98	mg/kg	11.06.19 16.35		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 11.06.19 16.30 Basis: Wet Weight
 Seq Number: 3106702

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	11.07.19 00.07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	11.07.19 00.07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	11.07.19 00.07	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	11.07.19 00.07	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	11.07.19 00.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	11.07.19 00.07	
o-Terphenyl	84-15-1	108	%	70-135	11.07.19 00.07	



Certificate of Analytical Results 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH11**
Lab Sample Id: 642225-020

Matrix: Soil
Date Collected: 11.01.19 15.10

Date Received: 11.06.19 10.36
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3106696

Date Prep: 11.06.19 16.11

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	11.07.19 06.23	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	11.07.19 06.23	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	11.07.19 06.23	U	1
m,p-Xylenes	179601-23-1	<0.00201	0.00201	mg/kg	11.07.19 06.23	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	11.07.19 06.23	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	11.07.19 06.23	U	1
Total BTEX		<0.00100	0.00100	mg/kg	11.07.19 06.23	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	119		%	70-130	11.07.19 06.23	
1,4-Difluorobenzene	540-36-3	95		%	70-130	11.07.19 06.23	



Certificate of Analytical Results 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH12** Matrix: Soil Date Received: 11.06.19 10.36
 Lab Sample Id: 642225-021 Date Collected: 11.01.19 15.20 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 11.06.19 14.11 Basis: Wet Weight
 Seq Number: 3106701

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	59.2	9.98	mg/kg	11.06.19 17.11		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 11.06.19 16.30 Basis: Wet Weight
 Seq Number: 3106702

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	11.07.19 00.27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	11.07.19 00.27	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.07.19 00.27	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	11.07.19 00.27	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	11.07.19 00.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	11.07.19 00.27	
o-Terphenyl	84-15-1	111	%	70-135	11.07.19 00.27	



Certificate of Analytical Results 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH12**
Lab Sample Id: 642225-021

Matrix: Soil
Date Collected: 11.01.19 15.20

Date Received: 11.06.19 10.36
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 11.06.19 16.20

Basis: Wet Weight

Seq Number: 3106687

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	11.06.19 18.16	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	11.06.19 18.16	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	11.06.19 18.16	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	11.06.19 18.16	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	11.06.19 18.16	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	11.06.19 18.16	U	1
Total BTEX		<0.00101	0.00101	mg/kg	11.06.19 18.16	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	70-130	11.06.19 18.16		
1,4-Difluorobenzene	540-36-3	101	%	70-130	11.06.19 18.16		



Certificate of Analytical Results 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH12A**
Lab Sample Id: 642225-022

Matrix: Soil
Date Collected: 11.01.19 15.25

Date Received: 11.06.19 10.36
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3106701

Date Prep: 11.06.19 14.11

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1510	100	mg/kg	11.06.19 17.28		10

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3106702

Date Prep: 11.06.19 16.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	11.07.19 00.47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	11.07.19 00.47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	11.07.19 00.47	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	11.07.19 00.47	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	11.07.19 00.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	11.07.19 00.47	
o-Terphenyl	84-15-1	109	%	70-135	11.07.19 00.47	



Certificate of Analytical Results 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH12A**
Lab Sample Id: 642225-022

Matrix: Soil
Date Collected: 11.01.19 15.25

Date Received: 11.06.19 10.36
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 11.06.19 16.20

Basis: Wet Weight

Seq Number: 3106687

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0000994	0.0000994	mg/kg	11.06.19 18.37	U	1
Toluene	108-88-3	<0.0000994	0.0000994	mg/kg	11.06.19 18.37	U	1
Ethylbenzene	100-41-4	<0.0000994	0.0000994	mg/kg	11.06.19 18.37	U	1
m,p-Xylenes	179601-23-1	<0.000199	0.000199	mg/kg	11.06.19 18.37	U	1
o-Xylene	95-47-6	<0.0000994	0.0000994	mg/kg	11.06.19 18.37	U	1
Total Xylenes	1330-20-7	<0.0000994	0.0000994	mg/kg	11.06.19 18.37	U	1
Total BTEX		<0.0000994	0.0000994	mg/kg	11.06.19 18.37	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101		%	70-130	11.06.19 18.37	
4-Bromofluorobenzene	460-00-4	108		%	70-130	11.06.19 18.37	



Certificate of Analytical Results 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH13** Matrix: Soil Date Received: 11.06.19 10.36
 Lab Sample Id: 642225-023 Date Collected: 11.01.19 15.30 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 11.06.19 14.11 Basis: Wet Weight
 Seq Number: 3106701

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	571	50.4	mg/kg	11.06.19 17.34		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 11.06.19 16.30 Basis: Wet Weight
 Seq Number: 3106702

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	11.07.19 01.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	11.07.19 01.06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.07.19 01.06	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	11.07.19 01.06	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	11.07.19 01.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	11.07.19 01.06	
o-Terphenyl	84-15-1	112	%	70-135	11.07.19 01.06	



Certificate of Analytical Results 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH13**
Lab Sample Id: 642225-023

Matrix: Soil
Date Collected: 11.01.19 15.30

Date Received: 11.06.19 10.36
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 11.06.19 16.20

Basis: Wet Weight

Seq Number: 3106687

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	11.06.19 18.57	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	11.06.19 18.57	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	11.06.19 18.57	U	1
m,p-Xylenes	179601-23-1	<0.00201	0.00201	mg/kg	11.06.19 18.57	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	11.06.19 18.57	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	11.06.19 18.57	U	1
Total BTEX		<0.00100	0.00100	mg/kg	11.06.19 18.57	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	101	%	70-130	11.06.19 18.57		
4-Bromofluorobenzene	460-00-4	114	%	70-130	11.06.19 18.57		



Certificate of Analytical Results 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH13A**
 Lab Sample Id: 642225-024

Matrix: Soil
 Date Collected: 11.01.19 15.35

Date Received: 11.06.19 10.36
 Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 11.06.19 14.11

Basis: Wet Weight

Seq Number: 3106701

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	702	49.7	mg/kg	11.06.19 17.40		5

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 11.06.19 16.30

Basis: Wet Weight

Seq Number: 3106751

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	11.06.19 21.29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	11.06.19 21.29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	11.06.19 21.29	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	11.06.19 21.29	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	11.06.19 21.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	83	%	70-135	11.06.19 21.29	
o-Terphenyl	84-15-1	95	%	70-135	11.06.19 21.29	



Certificate of Analytical Results 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH13A**
Lab Sample Id: 642225-024

Matrix: Soil
Date Collected: 11.01.19 15.35

Date Received: 11.06.19 10.36
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 11.06.19 16.20

Basis: Wet Weight

Seq Number: 3106687

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000994	0.000994	mg/kg	11.06.19 19.18	U	1
Toluene	108-88-3	<0.000994	0.000994	mg/kg	11.06.19 19.18	U	1
Ethylbenzene	100-41-4	<0.000994	0.000994	mg/kg	11.06.19 19.18	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	11.06.19 19.18	U	1
o-Xylene	95-47-6	<0.000994	0.000994	mg/kg	11.06.19 19.18	U	1
Total Xylenes	1330-20-7	<0.000994	0.000994	mg/kg	11.06.19 19.18	U	1
Total BTEX		<0.000994	0.000994	mg/kg	11.06.19 19.18	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	112		%	70-130	11.06.19 19.18	
1,4-Difluorobenzene	540-36-3	99		%	70-130	11.06.19 19.18	



Certificate of Analytical Results 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH14**
Lab Sample Id: 642225-025

Matrix: Soil
Date Collected: 11.01.19 15.40

Date Received: 11.06.19 10.36
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3106701

Date Prep: 11.06.19 14.11

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	429	101	mg/kg	11.07.19 11.23	D	10

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3106751

Date Prep: 11.06.19 16.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	11.06.19 22.29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	11.06.19 22.29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	11.06.19 22.29	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	11.06.19 22.29	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	11.06.19 22.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	11.06.19 22.29	
o-Terphenyl	84-15-1	118	%	70-135	11.06.19 22.29	



Certificate of Analytical Results 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH14**
Lab Sample Id: 642225-025

Matrix: Soil
Date Collected: 11.01.19 15.40

Date Received: 11.06.19 10.36
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 11.06.19 16.20

Basis: Wet Weight

Seq Number: 3106687

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	11.06.19 19.38	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	11.06.19 19.38	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	11.06.19 19.38	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	11.06.19 19.38	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	11.06.19 19.38	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	11.06.19 19.38	U	1
Total BTEX		<0.00100	0.00100	mg/kg	11.06.19 19.38	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	119	%	70-130	11.06.19 19.38		
1,4-Difluorobenzene	540-36-3	101	%	70-130	11.06.19 19.38		



Certificate of Analytical Results 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH14A**
Lab Sample Id: 642225-026

Matrix: Soil
Date Collected: 11.01.19 15.45

Date Received: 11.06.19 10.36
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3106701

Date Prep: 11.06.19 14.11

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2560	99.4	mg/kg	11.06.19 18.04		10

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3106751

Date Prep: 11.06.19 16.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	11.06.19 22.49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	11.06.19 22.49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	11.06.19 22.49	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	11.06.19 22.49	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	11.06.19 22.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	11.06.19 22.49	
o-Terphenyl	84-15-1	115	%	70-135	11.06.19 22.49	



Certificate of Analytical Results 642225

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH14A**
Lab Sample Id: 642225-026

Matrix: Soil
Date Collected: 11.01.19 15.45

Date Received: 11.06.19 10.36
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 11.06.19 16.20

Basis: Wet Weight

Seq Number: 3106687

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000998	0.000998	mg/kg	11.06.19 19.58	U	1
Toluene	108-88-3	<0.000998	0.000998	mg/kg	11.06.19 19.58	U	1
Ethylbenzene	100-41-4	<0.000998	0.000998	mg/kg	11.06.19 19.58	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	11.06.19 19.58	U	1
o-Xylene	95-47-6	<0.000998	0.000998	mg/kg	11.06.19 19.58	U	1
Total Xylenes	1330-20-7	<0.000998	0.000998	mg/kg	11.06.19 19.58	U	1
Total BTEX		<0.000998	0.000998	mg/kg	11.06.19 19.58	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	111		%	70-130	11.06.19 19.58	
1,4-Difluorobenzene	540-36-3	102		%	70-130	11.06.19 19.58	



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



LT Environmental, Inc.
Corral Canyon 3H

Analytical Method: Chloride by EPA 300

Seq Number: 3106699

MB Sample Id: 7689723-1-BLK

Matrix: Solid

LCS Sample Id: 7689723-1-BKS

Prep Method: E300P

Date Prep: 11.06.19

LCSD Sample Id: 7689723-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	234	94	234	94	90-110	0	20	mg/kg	11.06.19 13:41	

Analytical Method: Chloride by EPA 300

Seq Number: 3106701

MB Sample Id: 7689729-1-BLK

Matrix: Solid

LCS Sample Id: 7689729-1-BKS

Prep Method: E300P

Date Prep: 11.06.19

LCSD Sample Id: 7689729-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	269	108	271	108	90-110	1	20	mg/kg	11.06.19 16:59	

Analytical Method: Chloride by EPA 300

Seq Number: 3106699

Parent Sample Id: 642225-001

Matrix: Soil

MS Sample Id: 642225-001 S

Prep Method: E300P

Date Prep: 11.06.19

MSD Sample Id: 642225-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	146	198	386	121	391	123	90-110	1	20	mg/kg	11.06.19 13:59	X

Analytical Method: Chloride by EPA 300

Seq Number: 3106699

Parent Sample Id: 642225-011

Matrix: Soil

MS Sample Id: 642225-011 S

Prep Method: E300P

Date Prep: 11.06.19

MSD Sample Id: 642225-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	139	198	379	121	383	123	90-110	1	20	mg/kg	11.06.19 15:23	X

Analytical Method: Chloride by EPA 300

Seq Number: 3106701

Parent Sample Id: 642225-021

Matrix: Soil

MS Sample Id: 642225-021 S

Prep Method: E300P

Date Prep: 11.06.19

MSD Sample Id: 642225-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	59.2	200	291	116	294	116	90-110	1	20	mg/kg	11.06.19 17:16	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



LT Environmental, Inc.
Corral Canyon 3H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3106685

MB Sample Id: 7689771-1-BLK

Matrix: Solid

LCS Sample Id: 7689771-1-BKS

Prep Method: SW8015P

Date Prep: 11.06.19

LCSD Sample Id: 7689771-1-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	936	94	924	92	70-135	1	35	mg/kg	11.06.19 11:18	
Diesel Range Organics (DRO)	<50.0	1000	1050	105	999	100	70-135	5	35	mg/kg	11.06.19 11:18	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date			
1-Chlorooctane	111		121		134		70-135	%	11.06.19 11:18			
o-Terphenyl	116		120		121		70-135	%	11.06.19 11:18			

Analytical Method: TPH by SW8015 Mod

Seq Number: 3106741

MB Sample Id: 7689772-1-BLK

Matrix: Solid

LCS Sample Id: 7689772-1-BKS

Prep Method: SW8015P

Date Prep: 11.06.19

LCSD Sample Id: 7689772-1-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)	<13.9	1000	815	82	814	81	70-135	0	35	mg/kg	11.06.19 11:18	
Diesel Range Organics (DRO)	<11.5	1000	920	92	886	89	70-135	4	35	mg/kg	11.06.19 11:18	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date			
1-Chlorooctane	97		102		103		70-135	%	11.06.19 11:18			
o-Terphenyl	111		109		105		70-135	%	11.06.19 11:18			

Analytical Method: TPH by SW8015 Mod

Seq Number: 3106702

MB Sample Id: 7689800-1-BLK

Matrix: Solid

LCS Sample Id: 7689800-1-BKS

Prep Method: SW8015P

Date Prep: 11.06.19

LCSD Sample Id: 7689800-1-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	933	93	942	94	70-135	1	35	mg/kg	11.06.19 20:50	
Diesel Range Organics (DRO)	<50.0	1000	1020	102	1010	101	70-135	1	35	mg/kg	11.06.19 20:50	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date			
1-Chlorooctane	108		136	**	139	**	70-135	%	11.06.19 20:50			
o-Terphenyl	113		121		120		70-135	%	11.06.19 20:50			

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



LT Environmental, Inc.

Corral Canyon 3H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3106751

MB Sample Id: 7689818-1-BLK

Matrix: Solid

LCS Sample Id: 7689818-1-BKS

Prep Method: SW8015P

Date Prep: 11.06.19

LCSD Sample Id: 7689818-1-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	711	71	784	78	70-135	10	35	mg/kg	11.06.19 20:50	
Diesel Range Organics (DRO)	<50.0	1000	778	78	812	81	70-135	4	35	mg/kg	11.06.19 20:50	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	74		84		90		70-135	%	11.06.19 20:50
o-Terphenyl	78		84		88		70-135	%	11.06.19 20:50

Analytical Method: TPH by SW8015 Mod

Seq Number: 3106685

Matrix: Solid

MB Sample Id: 7689771-1-BLK

Prep Method: SW8015P

Date Prep: 11.06.19

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	11.06.19 10:58	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3106741

Matrix: Solid

MB Sample Id: 7689772-1-BLK

Prep Method: SW8015P

Date Prep: 11.06.19

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	11.06.19 10:58	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3106702

Matrix: Solid

MB Sample Id: 7689800-1-BLK

Prep Method: SW8015P

Date Prep: 11.06.19

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	11.06.19 20:30	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3106751

Matrix: Solid

MB Sample Id: 7689818-1-BLK

Prep Method: SW8015P

Date Prep: 11.06.19

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	11.06.19 20:30	

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

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

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

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



LT Environmental, Inc.
Corral Canyon 3H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3106685

Parent Sample Id: 642182-001

Matrix: Soil

MS Sample Id: 642182-001 S

Prep Method: SW8015P

Date Prep: 11.06.19

MSD Sample Id: 642182-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	922	92	911	91	70-135	1	35	mg/kg	11.06.19 12:17	
Diesel Range Organics (DRO)	<50.0	1000	1010	101	1000	100	70-135	1	35	mg/kg	11.06.19 12:17	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	135		117		70-135	%	11.06.19 12:17
o-Terphenyl	119		115		70-135	%	11.06.19 12:17

Analytical Method: TPH by SW8015 Mod

Seq Number: 3106741

Parent Sample Id: 642191-001

Matrix: Soil

MS Sample Id: 642191-001 S

Prep Method: SW8015P

Date Prep: 11.06.19

MSD Sample Id: 642191-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	15.9	1000	810	79	883	87	70-135	9	35	mg/kg	11.06.19 12:17	
Diesel Range Organics (DRO)	18.1	1000	884	87	956	94	70-135	8	35	mg/kg	11.06.19 12:17	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	103		109		70-135	%	11.06.19 12:17
o-Terphenyl	103		113		70-135	%	11.06.19 12:17

Analytical Method: TPH by SW8015 Mod

Seq Number: 3106702

Parent Sample Id: 642225-014

Matrix: Soil

MS Sample Id: 642225-014 S

Prep Method: SW8015P

Date Prep: 11.06.19

MSD Sample Id: 642225-014 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.8	996	908	91	916	92	70-135	1	35	mg/kg	11.06.19 21:49	
Diesel Range Organics (DRO)	<49.8	996	980	98	1000	100	70-135	2	35	mg/kg	11.06.19 21:49	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	134		136	**	70-135	%	11.06.19 21:49
o-Terphenyl	121		121		70-135	%	11.06.19 21:49

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

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

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

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



LT Environmental, Inc.
Corral Canyon 3H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3106751

Parent Sample Id: 642225-024

Matrix: Soil

MS Sample Id: 642225-024 S

Prep Method: SW8015P

Date Prep: 11.06.19

MSD Sample Id: 642225-024 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.1	1000	962	96	1000	100	70-135	4	35	mg/kg	11.06.19 21:49	
Diesel Range Organics (DRO)	<50.1	1000	1010	101	1080	108	70-135	7	35	mg/kg	11.06.19 21:49	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	124		125		70-135	%	11.06.19 21:49
o-Terphenyl	127		128		70-135	%	11.06.19 21:49

Analytical Method: BTEX by EPA 8021B

Seq Number: 3106687

MB Sample Id: 7689764-1-BLK

Matrix: Solid

LCS Sample Id: 7689764-1-BKS

Prep Method: SW5030B

Date Prep: 11.06.19

LCSD Sample Id: 7689764-1-BS

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.100	0.0975	98	0.103	103	70-130	5	35	mg/kg	11.06.19 10:46	
Toluene	<0.00100	0.100	0.0975	98	0.104	104	70-130	6	35	mg/kg	11.06.19 10:46	
Ethylbenzene	<0.00100	0.100	0.101	101	0.108	108	71-129	7	35	mg/kg	11.06.19 10:46	
m,p-Xylenes	<0.00200	0.200	0.206	103	0.220	110	70-135	7	35	mg/kg	11.06.19 10:46	
o-Xylene	<0.00100	0.100	0.103	103	0.110	110	71-133	7	35	mg/kg	11.06.19 10:46	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		99		101		70-130	%	11.06.19 10:46
4-Bromofluorobenzene	107		110		113		70-130	%	11.06.19 10:46

Analytical Method: BTEX by EPA 8021B

Seq Number: 3106696

MB Sample Id: 7689768-1-BLK

Matrix: Solid

LCS Sample Id: 7689768-1-BKS

Prep Method: SW5030B

Date Prep: 11.06.19

LCSD Sample Id: 7689768-1-BS

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.100	0.0991	99	0.0933	93	70-130	6	35	mg/kg	11.06.19 21:52	
Toluene	<0.00100	0.100	0.101	101	0.0943	94	70-130	7	35	mg/kg	11.06.19 21:52	
Ethylbenzene	<0.00100	0.100	0.101	101	0.0945	95	71-129	7	35	mg/kg	11.06.19 21:52	
m,p-Xylenes	<0.00200	0.200	0.216	108	0.200	100	70-135	8	35	mg/kg	11.06.19 21:52	
o-Xylene	<0.00100	0.100	0.109	109	0.101	101	71-133	8	35	mg/kg	11.06.19 21:52	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	96		99		99		70-130	%	11.06.19 21:52
4-Bromofluorobenzene	111		113		109		70-130	%	11.06.19 21:52

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

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

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

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



LT Environmental, Inc.
Corral Canyon 3H

Analytical Method: BTEX by EPA 8021B

Seq Number: 3106687

Parent Sample Id: 642191-017

Matrix: Soil

MS Sample Id: 642191-017 S

Prep Method: SW5030B

Date Prep: 11.06.19

MSD Sample Id: 642191-017 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000988	0.0988	0.0988	100	0.0793	79	70-130	22	35	mg/kg	11.06.19 12:42	
Toluene	<0.000988	0.0988	0.101	102	0.0920	92	70-130	9	35	mg/kg	11.06.19 12:42	
Ethylbenzene	<0.000988	0.0988	0.103	104	0.0939	94	71-129	9	35	mg/kg	11.06.19 12:42	
m,p-Xylenes	<0.00198	0.198	0.211	107	0.194	97	70-135	8	35	mg/kg	11.06.19 12:42	
o-Xylene	<0.000988	0.0988	0.105	106	0.0965	97	71-133	8	35	mg/kg	11.06.19 12:42	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		95		70-130	%	11.06.19 12:42
4-Bromofluorobenzene	114		119		70-130	%	11.06.19 12:42

Analytical Method: BTEX by EPA 8021B

Seq Number: 3106696

Parent Sample Id: 642225-001

Matrix: Soil

MS Sample Id: 642225-001 S

Prep Method: SW5030B

Date Prep: 11.06.19

MSD Sample Id: 642225-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000996	0.0996	0.0836	84	0.0774	77	70-130	8	35	mg/kg	11.06.19 22:31	
Toluene	<0.000996	0.0996	0.0852	86	0.0748	75	70-130	13	35	mg/kg	11.06.19 22:31	
Ethylbenzene	<0.000996	0.0996	0.0788	79	0.0657	66	71-129	18	35	mg/kg	11.06.19 22:31	X
m,p-Xylenes	<0.00199	0.199	0.165	83	0.136	68	70-135	19	35	mg/kg	11.06.19 22:31	X
o-Xylene	<0.000996	0.0996	0.0849	85	0.0712	71	71-133	18	35	mg/kg	11.06.19 22:31	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		103		70-130	%	11.06.19 22:31
4-Bromofluorobenzene	120		122		70-130	%	11.06.19 22:31

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: 1042225

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 West Palm Beach, FL (561) 689-6701

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Project Manager:	Aimee Cele	Bill to: (if different)	Kyle Liffell
Company Name:	LT Environmental	Company Name:	XTD
Address:	8300 North A Street	Address:	3104 E. Greene Street
City, State ZIP:	Midland TX 79705	City, State ZIP:	Carlsbad NM 88220
Phone:	720 384 7365	Email:	accele@ltenv.com & akylers@ltenv.com

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

Project Name:	Corral Canyon 3H	Turn Around	☐
Project Number:	012919248	Routine	☐
Project Location:	Rural Eddy County	Rush:	3 day
Sampler's Name:	Anna Byers	Due Date:	
PO #:	2RP-3910	Quote #:	

SAMPLE RECEIPT	Temp Blank:	Temp No	Wet Ice:	Yes ☒ No ☐
Temperature (°C):	2.2	Thermometer ID	T-22A-004	
Received Intact:	Yes ☒ No ☐	Correction Factor:	-0.2	
Cooler Custody Seals:	Yes ☒ No ☐	Total Containers:	24	
Sample Custody Seals:	Yes ☒ No ☐			

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	ANALYSIS REQUEST	Preservative Codes	Sample Comments
PHD3		S	11/1/19	1550	0.5'	1	TPH (EPA 8015)		
PHD3A				1610	2'	1	BTEX (EPA 8021)		
PHD3B				1630	4.5'	1	Chloride (EPA 300.0)		
PHD4				1655	0.5'	1			
PHD4A				1715	2'	1			
PHD4B				1730	4'	1			
PHD5				1410	0.5'	1			
PHD5A				1415	1'	1			
PHD6				1420	0.5'	1			
PHD6A				1425	1'	1			

Total 200.7 / 6010 200.8 / 6020:

Circle Method(s) and Metal(s) to be analyzed

8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Pb Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn

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
Anna Byers	AKL	11/6/19 10:36			



Chain of Custody

Work Order No: 642225

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3394
Midland, TX (432) 704-5440 El Paso, TX (915) 855-3443 Lubbock, TX (806) 794-1296 Casabad, NM (432) 704-5440
Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000 West Palm Beach, FL (561) 689-6700

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Project Manager:	Aimee Cole	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental	Company Name:	XTO
Address:	8300 North A Street	Address:	3104 E Greene Street
City, State ZIP:	Midland TX 79705	City, State ZIP:	Carlsbad NM 88220
Phone:	720 384 7365	Email:	acole@ltenv.com & abayers@ltenv.com
Project Name:	0408010101		

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

Project Name:	Coral Canyon 3H	Turn Around
Project Number:	012919248	Routine ☐
Project Location	Rural Eddy County	Rush: 3 day
Sampler's Name:	Anna Byers	Due Date:
PO #:	2EP-391C	Quote #:

SAMPLE RECEIPT		Temp Blank:	Yes	No	Wet Ice:	Yes	No
Temperature (°C):	2.3	Inframeter ID					
Received intact:	Yes	No					
Cooler Custody Seals:	Yes	No	N/A		Correction Factor:		
Sample Custody Seals:	Yes	No	N/A		Total Containers:		

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth
PH03		S	11/1/19	1430	0.5'
PH07A				1435	1'
PH08				1440	0.5'
PH08A				1445	1'
PH09				1450	0.5'
PH09A				1455	1'
PH10				1500	0.5'
PH10A				1505	1'
PH11A				1515	1'
PH11				1516	0.5'

ANALYSIS REQUEST										Preservative Codes
Pres. Code	Number of Containers									
	TPH (EPA 8015)									MeOH: Me None: NO HNO3: HN H2SO4: H2 HCL: HL NaOH: Na Zn Acetate+ NaOH: Zn TAT starts the day received by the lab, if received by 4:00pm
	BTEX (EPA 8021)									
	Chloride (EPA 300.0)									
Sample Comments										

Total	200.7 / 6010	200.8 / 6020:
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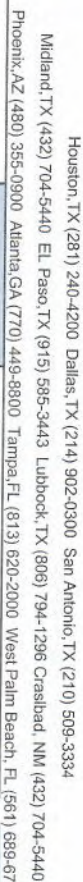
Circle Method(s) and Metal(s) to be analyzed

8RCRA	13PPM	Texas	11	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn
TCLP / SPLP	6010:	8RCRA		Sb	As	Ba	Be	Cd	Cr	Co	Cu	Pb	Mn	Mo	Ni	S	Ag	Ti

1631 / 245.1 / 7470 / 7471 : Hg

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Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
<i>[Signature]</i>	11/16/19 10:34	<i>[Signature]</i>	



Work Order No:

647225

Project Name:		Cerra. Canyon 3H		Turn Around	
Project Number:		013919248		Routine ☐	
Project Location		Rural Eddy County		Rush: 3 day	
Sampler's Name:		Anna Byers		Due Date:	
PO #:		2R2-3910		Quote #:	
SAMPLE RECEIPT		Temp Blank:		Yes No	
Temperature (°C):		2.2		Thermometer ID	
Received Intact:		Yes No		☒	
Cooler Custody Seals:		Yes No N/A		Contraction Factor:	
Sample Custody Seals:		Yes No N/A		Total Containers:	
Pres. Code					
ANALYSIS REQUEST					
(EPA 8015) (EPA 8021) (EPA 300.0)					
MeOH: Me None: NO HNO3: HN H2SO4: H2 HCL: HL NaOH: Na Zn Acetate+ NaOH: Zn					
TAT starts the day received by the lab, if received by 4:00pm					

Total 200.7 / 6010 200.8 / 6020:

Circle Method(s) and Metal(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 SiO₂ Na Sr Ti Sn U V Zn
TCLP / SPLP 6010: 8RCRA Sp As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U

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Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Dawn Byers	[Signature]	11/6/19 403e			



Client: LT Environmental, Inc.

Date/ Time Received: 11/06/2019 10:36:00 AM

Work Order #: 642225

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	2.2
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	No
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Elizabeth McClellan

Date: 11/06/2019

Checklist reviewed by:

Jessica Kramer

Date: 11/06/2019

Analytical Report 649106

for
LT Environmental, Inc.

Project Manager: Dan Moir

Corral Canyon 3H

012919248

16-JAN-20

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)

Xenco-Carlsbad (LELAP): Louisiana (05092)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Tampa: Florida (E87429), North Carolina (483)



16-JAN-20

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **649106**

Corral Canyon 3H

Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 649106. 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. 649106 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 649106****LT Environmental, Inc., Arvada, CO**

Corral Canyon 3H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH15	S	01-14-20 14:50	2 ft	649106-001
PH15A	S	01-14-20 15:00	4.5 ft	649106-002
PH16	S	01-14-20 15:30	2 ft	649106-003
PH16A	S	01-14-20 15:40	4.5 ft	649106-004
PH17	S	01-14-20 15:50	2 ft	649106-005
PH17A	S	01-14-20 16:00	4.5 ft	649106-006



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Corral Canyon 3H

Project ID: 012919248
Work Order Number(s): 649106

Report Date: 16-JAN-20
Date Received: 01/15/2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3113337 Chloride by EPA 300

Lab Sample ID 649113-002 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: 649106-005, -006.

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

Batch: LBA-3113426 BTEX by EPA 8021B

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



Certificate of Analysis Summary 649106

LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon 3H

Project Id: 012919248

Contact: Dan Moir

Project Location:

Date Received in Lab: Wed Jan-15-20 10:15 am

Report Date: 16-JAN-20

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	649106-001	649106-002	649106-003	649106-004	649106-005	649106-006
	<i>Field Id:</i>	PH15	PH15A	PH16	PH16A	PH17	PH17A
	<i>Depth:</i>	2- ft	4.5- ft	2- ft	4.5- ft	2- ft	4.5- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jan-14-20 14:50	Jan-14-20 15:00	Jan-14-20 15:30	Jan-14-20 15:40	Jan-14-20 15:50	Jan-14-20 16:00
BTEX by EPA 8021B	<i>Extracted:</i>	Jan-15-20 11:45	Jan-15-20 11:45	Jan-15-20 11:45	Jan-15-20 11:45	Jan-15-20 11:45	Jan-15-20 11:45
	<i>Analyzed:</i>	Jan-15-20 15:10	Jan-15-20 15:29	Jan-15-20 15:48	Jan-15-20 16:07	Jan-15-20 16:26	Jan-15-20 16:45
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200
Toluene		<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200
Ethylbenzene		<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200
m,p-Xylenes		<0.00399 0.00399	<0.00398 0.00398	<0.00396 0.00396	<0.00396 0.00396	<0.00400 0.00400	<0.00399 0.00399
o-Xylene		<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200
Total Xylenes		<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200
Total BTEX		<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200
Chloride by EPA 300	<i>Extracted:</i>	Jan-15-20 11:00	Jan-15-20 11:00	Jan-15-20 11:00	Jan-15-20 11:00	Jan-15-20 12:00	Jan-15-20 12:00
	<i>Analyzed:</i>	Jan-15-20 11:24	Jan-15-20 11:30	Jan-15-20 11:35	Jan-15-20 11:40	Jan-15-20 12:13	Jan-15-20 12:29
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		2550 99.6	3240 99.8	2860 99.2	3260 99.8	2490 99.2	5230 99.8
TPH by SW8015 Mod	<i>Extracted:</i>	Jan-15-20 18:00	Jan-15-20 18:00	Jan-15-20 18:00	Jan-15-20 18:00	Jan-15-20 18:00	Jan-15-20 18:00
	<i>Analyzed:</i>	Jan-15-20 22:36	Jan-15-20 22:56	Jan-15-20 22:56	Jan-15-20 23:16	Jan-15-20 23:16	Jan-15-20 23:36
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<49.8 49.8	<49.9 49.9	<50.1 50.1	<50.2 50.2	<50.2 50.2	<50.2 50.2
Diesel Range Organics (DRO)		<49.8 49.8	<49.9 49.9	<50.1 50.1	<50.2 50.2	<50.2 50.2	<50.2 50.2
Motor Oil Range Hydrocarbons (MRO)		<49.8 49.8	<49.9 49.9	<50.1 50.1	<50.2 50.2	<50.2 50.2	<50.2 50.2
Total GRO-DRO		<49.8 49.8	<49.9 49.9	<50.1 50.1	<50.2 50.2	<50.2 50.2	<50.2 50.2
Total TPH		<49.8 49.8	<49.9 49.9	<50.1 50.1	<50.2 50.2	<50.2 50.2	<50.2 50.2

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

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

Version: 1.9%

Jessica Kramer
Project Assistant



Certificate of Analytical Results 649106

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH15**
Lab Sample Id: 649106-001

Matrix: Soil
Date Collected: 01.14.20 14.50

Date Received: 01.15.20 10.15
Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3113335

Date Prep: 01.15.20 11.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2550	99.6	mg/kg	01.15.20 11.24		10

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3113407

Date Prep: 01.15.20 18.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	01.15.20 22.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	01.15.20 22.36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	01.15.20 22.36	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	01.15.20 22.36	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	01.15.20 22.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	01.15.20 22.36	
o-Terphenyl	84-15-1	90	%	70-135	01.15.20 22.36	



Certificate of Analytical Results 649106

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH15**
Lab Sample Id: 649106-001

Matrix: Soil
Date Collected: 01.14.20 14.50

Date Received: 01.15.20 10.15
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 01.15.20 11.45

Basis: Wet Weight

Seq Number: 3113426

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.15.20 15.10	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.15.20 15.10	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.15.20 15.10	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.15.20 15.10	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.15.20 15.10	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.15.20 15.10	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.15.20 15.10	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	103	%	70-130	01.15.20 15.10		
4-Bromofluorobenzene	460-00-4	105	%	70-130	01.15.20 15.10		



Certificate of Analytical Results 649106

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH15A** Matrix: Soil Date Received: 01.15.20 10.15
 Lab Sample Id: 649106-002 Date Collected: 01.14.20 15.00 Sample Depth: 4.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 01.15.20 11.00 Basis: Wet Weight
 Seq Number: 3113335

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3240	99.8	mg/kg	01.15.20 11.30		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 01.15.20 18.00 Basis: Wet Weight
 Seq Number: 3113407

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	01.15.20 22.56	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	01.15.20 22.56	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.15.20 22.56	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	01.15.20 22.56	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	01.15.20 22.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	01.15.20 22.56	
o-Terphenyl	84-15-1	95	%	70-135	01.15.20 22.56	



Certificate of Analytical Results 649106

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH15A**
Lab Sample Id: 649106-002

Matrix: Soil
Date Collected: 01.14.20 15.00

Date Received: 01.15.20 10.15
Sample Depth: 4.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 01.15.20 11.45

Basis: Wet Weight

Seq Number: 3113426

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.15.20 15.29	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.15.20 15.29	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.15.20 15.29	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.15.20 15.29	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.15.20 15.29	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.15.20 15.29	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.15.20 15.29	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	106	%	70-130	01.15.20 15.29		
1,4-Difluorobenzene	540-36-3	103	%	70-130	01.15.20 15.29		



Certificate of Analytical Results 649106

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH16** Matrix: Soil Date Received: 01.15.20 10.15
 Lab Sample Id: 649106-003 Date Collected: 01.14.20 15.30 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 01.15.20 11.00 Basis: Wet Weight
 Seq Number: 3113335

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2860	99.2	mg/kg	01.15.20 11.35		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 01.15.20 18.00 Basis: Wet Weight
 Seq Number: 3113407

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	01.15.20 22.56	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	01.15.20 22.56	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	01.15.20 22.56	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	01.15.20 22.56	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	01.15.20 22.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	01.15.20 22.56	
o-Terphenyl	84-15-1	89	%	70-135	01.15.20 22.56	



Certificate of Analytical Results 649106

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH16**
Lab Sample Id: 649106-003

Matrix: Soil
Date Collected: 01.14.20 15.30

Date Received: 01.15.20 10.15
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 01.15.20 11.45

Basis: Wet Weight

Seq Number: 3113426

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	01.15.20 15.48	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	01.15.20 15.48	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	01.15.20 15.48	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	01.15.20 15.48	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	01.15.20 15.48	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	01.15.20 15.48	U	1
Total BTEX		<0.00198	0.00198	mg/kg	01.15.20 15.48	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	108	%	70-130	01.15.20 15.48		
1,4-Difluorobenzene	540-36-3	108	%	70-130	01.15.20 15.48		



Certificate of Analytical Results 649106

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH16A**
Lab Sample Id: 649106-004

Matrix: Soil
Date Collected: 01.14.20 15.40

Date Received: 01.15.20 10.15
Sample Depth: 4.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3113335

Date Prep: 01.15.20 11.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3260	99.8	mg/kg	01.15.20 11.40		10

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3113407

Date Prep: 01.15.20 18.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	01.15.20 23.16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	01.15.20 23.16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	01.15.20 23.16	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	01.15.20 23.16	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	01.15.20 23.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	01.15.20 23.16	
o-Terphenyl	84-15-1	104	%	70-135	01.15.20 23.16	



Certificate of Analytical Results 649106

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH16A**
Lab Sample Id: 649106-004

Matrix: Soil
Date Collected: 01.14.20 15.40

Date Received: 01.15.20 10.15
Sample Depth: 4.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3113426

Date Prep: 01.15.20 11.45

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	01.15.20 16.07	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	01.15.20 16.07	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	01.15.20 16.07	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	01.15.20 16.07	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	01.15.20 16.07	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	01.15.20 16.07	U	1
Total BTEX		<0.00198	0.00198	mg/kg	01.15.20 16.07	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	110	%	70-130	01.15.20 16.07		
1,4-Difluorobenzene	540-36-3	106	%	70-130	01.15.20 16.07		



Certificate of Analytical Results 649106

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH17** Matrix: Soil Date Received: 01.15.20 10.15
 Lab Sample Id: 649106-005 Date Collected: 01.14.20 15.50 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 01.15.20 12.00 Basis: Wet Weight
 Seq Number: 3113337

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2490	99.2	mg/kg	01.15.20 12.13		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 01.15.20 18.00 Basis: Wet Weight
 Seq Number: 3113407

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	01.15.20 23.16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	01.15.20 23.16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	01.15.20 23.16	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	01.15.20 23.16	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	01.15.20 23.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	01.15.20 23.16	
o-Terphenyl	84-15-1	93	%	70-135	01.15.20 23.16	



Certificate of Analytical Results 649106

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH17**
Lab Sample Id: 649106-005

Matrix: Soil
Date Collected: 01.14.20 15.50

Date Received: 01.15.20 10.15
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 01.15.20 11.45

Basis: Wet Weight

Seq Number: 3113426

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.15.20 16.26	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.15.20 16.26	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.15.20 16.26	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.15.20 16.26	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.15.20 16.26	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.15.20 16.26	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.15.20 16.26	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	103	%	70-130	01.15.20 16.26		
4-Bromofluorobenzene	460-00-4	104	%	70-130	01.15.20 16.26		



Certificate of Analytical Results 649106

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH17A** Matrix: Soil Date Received: 01.15.20 10.15
 Lab Sample Id: 649106-006 Date Collected: 01.14.20 16.00 Sample Depth: 4.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 01.15.20 12.00 Basis: Wet Weight
 Seq Number: 3113337

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	5230	99.8	mg/kg	01.15.20 12.29		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 01.15.20 18.00 Basis: Wet Weight
 Seq Number: 3113407

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	01.15.20 23.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	01.15.20 23.36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	01.15.20 23.36	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	01.15.20 23.36	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	01.15.20 23.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	01.15.20 23.36	
o-Terphenyl	84-15-1	91	%	70-135	01.15.20 23.36	



Certificate of Analytical Results 649106

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH17A**
Lab Sample Id: 649106-006

Matrix: Soil
Date Collected: 01.14.20 16.00

Date Received: 01.15.20 10.15
Sample Depth: 4.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 01.15.20 11.45

Basis: Wet Weight

Seq Number: 3113426

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.15.20 16.45	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.15.20 16.45	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.15.20 16.45	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.15.20 16.45	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.15.20 16.45	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.15.20 16.45	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.15.20 16.45	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	107	%	70-130	01.15.20 16.45		
4-Bromofluorobenzene	460-00-4	110	%	70-130	01.15.20 16.45		



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



LT Environmental, Inc.
Corral Canyon 3H

Analytical Method: Chloride by EPA 300

Seq Number: 3113335

MB Sample Id: 7694377-1-BLK

Matrix: Solid

LCS Sample Id: 7694377-1-BKS

Prep Method: E300P

Date Prep: 01.15.20

LCSD Sample Id: 7694377-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	255	102	254	102	90-110	0	20	mg/kg	01.15.20 08:54	

Analytical Method: Chloride by EPA 300

Seq Number: 3113337

MB Sample Id: 7694408-1-BLK

Matrix: Solid

LCS Sample Id: 7694408-1-BKS

Prep Method: E300P

Date Prep: 01.15.20

LCSD Sample Id: 7694408-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	253	101	255	102	90-110	1	20	mg/kg	01.15.20 12:02	

Analytical Method: Chloride by EPA 300

Seq Number: 3113335

Parent Sample Id: 649021-001

Matrix: Soil

MS Sample Id: 649021-001 S

Prep Method: E300P

Date Prep: 01.15.20

MSD Sample Id: 649021-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	477	200	682	103	685	104	90-110	0	20	mg/kg	01.15.20 09:10	

Analytical Method: Chloride by EPA 300

Seq Number: 3113335

Parent Sample Id: 649021-011

Matrix: Soil

MS Sample Id: 649021-011 S

Prep Method: E300P

Date Prep: 01.15.20

MSD Sample Id: 649021-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	413	201	607	97	609	98	90-110	0	20	mg/kg	01.15.20 10:25	

Analytical Method: Chloride by EPA 300

Seq Number: 3113337

Parent Sample Id: 649106-005

Matrix: Soil

MS Sample Id: 649106-005 S

Prep Method: E300P

Date Prep: 01.15.20

MSD Sample Id: 649106-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2490	196	2750	133	2720	116	90-110	1	20	mg/kg	01.15.20 12:18	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



LT Environmental, Inc.
Corral Canyon 3H

Analytical Method: Chloride by EPA 300

Seq Number: 3113337

Parent Sample Id: 649113-002

Matrix: Soil

MS Sample Id: 649113-002 S

Prep Method: E300P

Date Prep: 01.15.20

MSD Sample Id: 649113-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	11.8	199	213	101	211	100	90-110	1	20	mg/kg	01.15.20 13:37	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3113407

MB Sample Id: 7694481-1-BLK

Matrix: Solid

LCS Sample Id: 7694481-1-BKS

Prep Method: SW8015P

Date Prep: 01.15.20

LCSD Sample Id: 7694481-1-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	712	71	727	73	70-135	2	35	mg/kg	01.15.20 21:16	
Diesel Range Organics (DRO)	<50.0	1000	765	77	750	75	70-135	2	35	mg/kg	01.15.20 21:16	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	128		125		127		70-135	%	01.15.20 21:16
o-Terphenyl	128		123		124		70-135	%	01.15.20 21:16

Analytical Method: TPH by SW8015 Mod

Seq Number: 3113407

Matrix: Solid

MB Sample Id: 7694481-1-BLK

Prep Method: SW8015P

Date Prep: 01.15.20

Parameter

	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	01.15.20 20:56	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3113407

Matrix: Soil

Parent Sample Id: 649140-001

MS Sample Id: 649140-001 S

Prep Method: SW8015P

Date Prep: 01.15.20

MSD Sample Id: 649140-001 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)	<49.9	998	927	93	1090	109	70-135	16	35	mg/kg	01.15.20 21:36	
Diesel Range Organics (DRO)	<49.9	998	1010	101	1170	117	70-135	15	35	mg/kg	01.15.20 21:36	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	128		124		70-135	%	01.15.20 21:36
o-Terphenyl	104		119		70-135	%	01.15.20 21:36

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

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

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

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



LT Environmental, Inc.
Corral Canyon 3H

Analytical Method: BTEX by EPA 8021B

Seq Number: 3113426

MB Sample Id: 7694450-1-BLK

Matrix: Solid

LCS Sample Id: 7694450-1-BKS

Prep Method: SW5030B

Date Prep: 01.15.20

LCSD Sample Id: 7694450-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.107	107	0.113	113	70-130	5	35	mg/kg	01.15.20 13:34	
Toluene	<0.00200	0.100	0.104	104	0.111	111	70-130	7	35	mg/kg	01.15.20 13:34	
Ethylbenzene	<0.00200	0.100	0.105	105	0.111	111	71-129	6	35	mg/kg	01.15.20 13:34	
m,p-Xylenes	<0.00400	0.200	0.208	104	0.222	111	70-135	7	35	mg/kg	01.15.20 13:34	
o-Xylene	<0.00200	0.100	0.103	103	0.110	110	71-133	7	35	mg/kg	01.15.20 13:34	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		103		105		70-130	%	01.15.20 13:34
4-Bromofluorobenzene	107		104		104		70-130	%	01.15.20 13:34

Analytical Method: BTEX by EPA 8021B

Seq Number: 3113426

Parent Sample Id: 649106-001

Matrix: Soil

MS Sample Id: 649106-001 S

Prep Method: SW5030B

Date Prep: 01.15.20

MSD Sample Id: 649106-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.114	115	0.116	116	70-130	2	35	mg/kg	01.15.20 14:12	
Toluene	<0.00199	0.0994	0.108	109	0.111	111	70-130	3	35	mg/kg	01.15.20 14:12	
Ethylbenzene	<0.00199	0.0994	0.106	107	0.110	110	71-129	4	35	mg/kg	01.15.20 14:12	
m,p-Xylenes	<0.00398	0.199	0.209	105	0.218	109	70-135	4	35	mg/kg	01.15.20 14:12	
o-Xylene	<0.00199	0.0994	0.105	106	0.108	108	71-133	3	35	mg/kg	01.15.20 14:12	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		106		70-130	%	01.15.20 14:12
4-Bromofluorobenzene	109		108		70-130	%	01.15.20 14:12

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

$[D] = 100 * (C-A) / B$
 $RPD = 200 * [(C-E) / (C+E)]$
 $[D] = 100 * (C) / [B]$
 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



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) 281-7550
Hobbs, NM (575-392-7550)

Chain of Custody

Work Order No: 649106

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 East Green Street
City, State ZIP:		Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:		(432) 236-3849	Email:	slc@ltenv.com, dmoir@ltenv.com, acolc@ltenv.com

Work Order Comments Program: UST/PST ☐ PRP ☐ Brownfields ☐ RC ☐ Superfund State of Project: Reporting Level II ☐ Level III ☐ ST/UST ☐ RRP ☐ Level IV Deliverables: EDD ☐ ADAPT ☐ Other:				
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Project Name:	Cerritos Canyon 3H	Turn Around	ANALYSIS REQUEST	Work Order Notes
Project Number:	012919248	Routine ☐		
P.O. Number:		Rush: 24H		
Sampler's Name:	Spencer Lo	Due Date:		
SAMPLE RECEIPT				
Temperature (°C):	1.2	Temp Blank: ☒ Yes ☐ No	Wet Ice: ☒ Yes ☐ No	Thermometer ID
Received Intact:	☒ Yes ☐ No	T-NM-004		
Cooler Custody Seals:	Yes ☒ No ☐ N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes ☒ No ☐ N/A	Total Containers:	6	
Number of Containers				
EPA 8015)				
EPA 0=8021)				
e (EPA 300.0)				
TAT starts the day received by the lab, if received by 4:30pm				

[illegible]

Total	200.7 / 6010	200.8 / 6020:	
<i>Circle Method(s) and Metal(s) to be analyzed</i>			
	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 : Hg

service. Xenoco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenoco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenoco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	1/15/2015 10:00 am	<i>[Signature]</i>	<i>[Signature]</i>	1/15/2015

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 01.15.2020 10.15.00 AM

Work Order #: 649106

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)?	1.2
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	No
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

PH Device/Lot#:

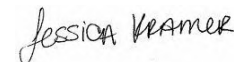
Checklist completed by:



Elizabeth McClellan

Date: 01.15.2020

Checklist reviewed by:



Jessica Kramer

Date: 01.15.2020

Analytical Report 649267

for
LT Environmental, Inc.

Project Manager: Dan Moir

Corral Canyon 3H

012919248

17-JAN-20

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)

Xenco-Carlsbad (LELAP): Louisiana (05092)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Tampa: Florida (E87429), North Carolina (483)



17-JAN-20

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **649267**

Corral Canyon 3H

Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 649267. 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. 649267 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 649267

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH01	S	01-15-20 14:40	2 ft	649267-001
BH01A	S	01-15-20 15:05	4.5 ft	649267-002
BH02	S	01-15-20 15:25	2 ft	649267-003
BH02A	S	01-15-20 15:45	4.5 ft	649267-004



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Corral Canyon 3H

Project ID: 012919248

Work Order Number(s): 649267

Report Date: 17-JAN-20

Date Received: 01/16/2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3113589 BTEX by EPA 8021B

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



Certificate of Analysis Summary 649267

LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon 3H

Project Id: 012919248

Contact: Dan Moir

Project Location:

Date Received in Lab: Thu Jan-16-20 09:37 am

Report Date: 17-JAN-20

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	649267-001	649267-002	649267-003	649267-004		
	<i>Field Id:</i>	BH01	BH01A	BH02	BH02A		
	<i>Depth:</i>	2- ft	4.5- ft	2- ft	4.5- ft		
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	Jan-15-20 14:40	Jan-15-20 15:05	Jan-15-20 15:25	Jan-15-20 15:45		
BTEX by EPA 8021B	<i>Extracted:</i>	Jan-16-20 11:00	Jan-16-20 11:00	Jan-16-20 11:00	Jan-16-20 11:00		
	<i>Analyzed:</i>	Jan-16-20 13:00	Jan-16-20 13:18	Jan-16-20 13:35	Jan-16-20 13:52		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Benzene		<0.00199 0.00199	<0.00198 0.00198	<0.00199 0.00199	<0.00199 0.00199		
Toluene		<0.00199 0.00199	<0.00198 0.00198	<0.00199 0.00199	<0.00199 0.00199		
Ethylbenzene		<0.00199 0.00199	<0.00198 0.00198	<0.00199 0.00199	<0.00199 0.00199		
m,p-Xylenes		<0.00398 0.00398	<0.00397 0.00397	<0.00398 0.00398	<0.00398 0.00398		
o-Xylene		<0.00199 0.00199	<0.00198 0.00198	<0.00199 0.00199	<0.00199 0.00199		
Total Xylenes		<0.00199 0.00199	<0.00198 0.00198	<0.00199 0.00199	<0.00199 0.00199		
Total BTEX		<0.00199 0.00199	<0.00198 0.00198	<0.00199 0.00199	<0.00199 0.00199		
Chloride by EPA 300	<i>Extracted:</i>	Jan-16-20 11:45	Jan-16-20 11:45	Jan-16-20 11:45	Jan-16-20 11:45		
	<i>Analyzed:</i>	Jan-16-20 16:20	Jan-16-20 16:26	Jan-16-20 16:31	Jan-16-20 16:37		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		10.4 10.0	1480 100	218 10.0	1260 49.9		
TPH by SW8015 Mod	<i>Extracted:</i>	Jan-16-20 13:45	Jan-16-20 13:45	Jan-16-20 13:45	Jan-16-20 13:45		
	<i>Analyzed:</i>	Jan-16-20 17:59	Jan-16-20 18:38	Jan-16-20 18:38	Jan-16-20 18:58		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Gasoline Range Hydrocarbons (GRO)		<49.8 49.8	<50.1 50.1	<50.3 50.3	<49.8 49.8		
Diesel Range Organics (DRO)		<49.8 49.8	<50.1 50.1	<50.3 50.3	<49.8 49.8		
Motor Oil Range Hydrocarbons (MRO)		<49.8 49.8	<50.1 50.1	<50.3 50.3	<49.8 49.8		
Total GRO-DRO		<49.8 49.8	<50.1 50.1	<50.3 50.3	<49.8 49.8		
Total TPH		<49.8 49.8	<50.1 50.1	<50.3 50.3	<49.8 49.8		

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

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

Jessica Kramer
Project Assistant



Certificate of Analytical Results 649267

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **BH01**
Lab Sample Id: 649267-001

Matrix: Soil
Date Collected: 01.15.20 14.40

Date Received: 01.16.20 09.37
Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3113519

Date Prep: 01.16.20 11.45

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	10.4	10.0	mg/kg	01.16.20 16.20		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3113564

Date Prep: 01.16.20 13.45

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	01.16.20 17.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	01.16.20 17.59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	01.16.20 17.59	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	01.16.20 17.59	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	01.16.20 17.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-135	01.16.20 17.59	
o-Terphenyl	84-15-1	113	%	70-135	01.16.20 17.59	



Certificate of Analytical Results 649267

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **BH01**
Lab Sample Id: 649267-001

Matrix: Soil
Date Collected: 01.15.20 14.40

Date Received: 01.16.20 09.37
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 01.16.20 11.00

Basis: Wet Weight

Seq Number: 3113589

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.16.20 13.00	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.16.20 13.00	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.16.20 13.00	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.16.20 13.00	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.16.20 13.00	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.16.20 13.00	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.16.20 13.00	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	97	%	70-130	01.16.20 13.00		
4-Bromofluorobenzene	460-00-4	99	%	70-130	01.16.20 13.00		



Certificate of Analytical Results 649267

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **BH01A**
 Lab Sample Id: 649267-002

Matrix: Soil
 Date Collected: 01.15.20 15.05

Date Received: 01.16.20 09.37
 Sample Depth: 4.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 01.16.20 11.45

Basis: Wet Weight

Seq Number: 3113519

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1480	100	mg/kg	01.16.20 16.26		10

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 01.16.20 13.45

Basis: Wet Weight

Seq Number: 3113564

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	01.16.20 18.38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	01.16.20 18.38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	01.16.20 18.38	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	01.16.20 18.38	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	01.16.20 18.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	01.16.20 18.38	
o-Terphenyl	84-15-1	100	%	70-135	01.16.20 18.38	



Certificate of Analytical Results 649267

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **BH01A**
Lab Sample Id: 649267-002

Matrix: Soil
Date Collected: 01.15.20 15.05

Date Received: 01.16.20 09.37
Sample Depth: 4.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 01.16.20 11.00

Basis: Wet Weight

Seq Number: 3113589

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	01.16.20 13.18	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	01.16.20 13.18	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	01.16.20 13.18	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	01.16.20 13.18	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	01.16.20 13.18	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	01.16.20 13.18	U	1
Total BTEX		<0.00198	0.00198	mg/kg	01.16.20 13.18	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	100	%	70-130	01.16.20 13.18		
4-Bromofluorobenzene	460-00-4	98	%	70-130	01.16.20 13.18		



Certificate of Analytical Results 649267

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **BH02**
 Lab Sample Id: 649267-003

Matrix: Soil
 Date Collected: 01.15.20 15.25

Date Received: 01.16.20 09.37
 Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 01.16.20 11.45

Basis: Wet Weight

Seq Number: 3113519

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	218	10.0	mg/kg	01.16.20 16.31		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 01.16.20 13.45

Basis: Wet Weight

Seq Number: 3113564

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	01.16.20 18.38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	01.16.20 18.38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	01.16.20 18.38	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	01.16.20 18.38	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	01.16.20 18.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	01.16.20 18.38	
o-Terphenyl	84-15-1	98	%	70-135	01.16.20 18.38	



Certificate of Analytical Results 649267

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **BH02**
Lab Sample Id: 649267-003

Matrix: Soil
Date Collected: 01.15.20 15.25

Date Received: 01.16.20 09.37
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 01.16.20 11.00

Basis: Wet Weight

Seq Number: 3113589

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.16.20 13.35	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.16.20 13.35	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.16.20 13.35	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.16.20 13.35	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.16.20 13.35	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.16.20 13.35	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.16.20 13.35	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	101	%	70-130	01.16.20 13.35		
4-Bromofluorobenzene	460-00-4	103	%	70-130	01.16.20 13.35		



Certificate of Analytical Results 649267

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **BH02A**
Lab Sample Id: 649267-004

Matrix: Soil
Date Collected: 01.15.20 15.45

Date Received: 01.16.20 09.37
Sample Depth: 4.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3113519

Date Prep: 01.16.20 11.45

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1260	49.9	mg/kg	01.16.20 16.37		5

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3113564

Date Prep: 01.16.20 13.45

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	01.16.20 18.58	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	01.16.20 18.58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	01.16.20 18.58	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	01.16.20 18.58	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	01.16.20 18.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	01.16.20 18.58	
o-Terphenyl	84-15-1	97	%	70-135	01.16.20 18.58	



Certificate of Analytical Results 649267

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **BH02A**
Lab Sample Id: 649267-004

Matrix: Soil
Date Collected: 01.15.20 15.45

Date Received: 01.16.20 09.37
Sample Depth: 4.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 01.16.20 11.00

Basis: Wet Weight

Seq Number: 3113589

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.16.20 13.52	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.16.20 13.52	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.16.20 13.52	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.16.20 13.52	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.16.20 13.52	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.16.20 13.52	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.16.20 13.52	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	101	%	70-130	01.16.20 13.52		
4-Bromofluorobenzene	460-00-4	102	%	70-130	01.16.20 13.52		



Flagging Criteria

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

****** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



LT Environmental, Inc.
Corral Canyon 3H

Analytical Method: Chloride by EPA 300

Seq Number: 3113519

MB Sample Id: 7694535-1-BLK

Matrix: Solid

LCS Sample Id: 7694535-1-BKS

Prep Method: E300P

Date Prep: 01.16.20

LCSD Sample Id: 7694535-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	260	104	261	104	90-110	0	20	mg/kg	01.16.20 14:06	

Analytical Method: Chloride by EPA 300

Seq Number: 3113519

Parent Sample Id: 649269-001

Matrix: Soil

MS Sample Id: 649269-001 S

Prep Method: E300P

Date Prep: 01.16.20

MSD Sample Id: 649269-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Chloride	199	201	410	105	412	106	90-110	0	20	mg/kg	01.16.20 14:27	

Analytical Method: Chloride by EPA 300

Seq Number: 3113519

Parent Sample Id: 649269-011

Matrix: Soil

MS Sample Id: 649269-011 S

Prep Method: E300P

Date Prep: 01.16.20

MSD Sample Id: 649269-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Chloride	1330	200	1540	105	1550	110	90-110	1	20	mg/kg	01.16.20 15:43	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3113564

MB Sample Id: 7694526-1-BLK

Matrix: Solid

LCS Sample Id: 7694526-1-BKS

Prep Method: SW8015P

Date Prep: 01.16.20

LCSD Sample Id: 7694526-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1100	110	930	93	70-135	17	35	mg/kg	01.16.20 17:39	
Diesel Range Organics (DRO)	<50.0	1000	1120	112	1040	104	70-135	7	35	mg/kg	01.16.20 17:39	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	92		131		112		70-135	%	01.16.20 17:39
o-Terphenyl	93		126		108		70-135	%	01.16.20 17:39

Analytical Method: TPH by SW8015 Mod

Seq Number: 3113564

Matrix: Solid

MB Sample Id: 7694526-1-BLK

Prep Method: SW8015P

Date Prep: 01.16.20

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	01.16.20 17:39	

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 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



LT Environmental, Inc.
Corral Canyon 3H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3113564

Parent Sample Id: 649267-001

Matrix: Soil

MS Sample Id: 649267-001 S

Prep Method: SW8015P

Date Prep: 01.16.20

MSD Sample Id: 649267-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.2	1000	1020	102	990	99	70-135	3	35	mg/kg	01.16.20 18:18	
Diesel Range Organics (DRO)	<50.2	1000	1120	112	1140	114	70-135	2	35	mg/kg	01.16.20 18:18	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	124		119		70-135	%	01.16.20 18:18
o-Terphenyl	112		115		70-135	%	01.16.20 18:18

Analytical Method: BTEX by EPA 8021B

Seq Number: 3113589

MB Sample Id: 7694539-1-BLK

Matrix: Solid

LCS Sample Id: 7694539-1-BKS

Prep Method: SW5030B

Date Prep: 01.16.20

LCSD Sample Id: 7694539-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0881	88	0.0946	95	70-130	7	35	mg/kg	01.16.20 10:58	
Toluene	<0.00200	0.100	0.0890	89	0.0954	95	70-130	7	35	mg/kg	01.16.20 10:58	
Ethylbenzene	<0.00200	0.100	0.0875	88	0.0940	94	71-129	7	35	mg/kg	01.16.20 10:58	
m,p-Xylenes	<0.00400	0.200	0.181	91	0.195	98	70-135	7	35	mg/kg	01.16.20 10:58	
o-Xylene	<0.00200	0.100	0.0882	88	0.0948	95	71-133	7	35	mg/kg	01.16.20 10:58	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		97		98		70-130	%	01.16.20 10:58
4-Bromofluorobenzene	95		96		97		70-130	%	01.16.20 10:58

Analytical Method: BTEX by EPA 8021B

Seq Number: 3113589

Parent Sample Id: 649113-001

Matrix: Soil

MS Sample Id: 649113-001 S

Prep Method: SW5030B

Date Prep: 01.16.20

MSD Sample Id: 649113-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.0974	98	0.0959	97	70-130	2	35	mg/kg	01.16.20 11:33	
Toluene	<0.00199	0.0994	0.0970	98	0.0959	97	70-130	1	35	mg/kg	01.16.20 11:33	
Ethylbenzene	<0.00199	0.0994	0.0939	94	0.0932	94	71-129	1	35	mg/kg	01.16.20 11:33	
m,p-Xylenes	<0.00398	0.199	0.193	97	0.192	97	70-135	1	35	mg/kg	01.16.20 11:33	
o-Xylene	<0.00199	0.0994	0.0941	95	0.0935	94	71-133	1	35	mg/kg	01.16.20 11:33	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	97		97		70-130	%	01.16.20 11:33
4-Bromofluorobenzene	95		94		70-130	%	01.16.20 11:33

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



Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 505-3334
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) 281-2400
Hobbs, NM (575-392-7550)

Work Order No. 2720

Page 1 of 2

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Chain of Custody

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

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

Project Name:	Coral Canyon 3H	Turn Around	ANALYSIS REQUEST						Work Order Notes
Project Number:	012919748	Routine ☐							
P.O. Number:		Rush: 244							
Sampler's Name:	Spencer Lo	Due Date:							

SAMPLE RECEIPT		Temp Blank:	Yes	No	Wet Ice:	Yes	No
Temperature (°C):	1.2	Thermometer ID					
Received Intact:	Yes No	T-NM-007					
Cooler Custody Seals:	Yes No	Correction Factor:		-0.2			
Sample Custody Seals:	Yes No	Total Containers:		4			

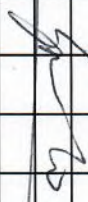
Number of Containers

(EPA 8015)

(EPA 0=8021)

(EPA 300.0)

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number	TPH (E)	BTEX	Chloride	Sample Comments									
BH01	S	1.15.20	1440	2'	1	X	X	X										
BH01A	S	1.15.20	1505	4.5'	1	X	X	X										
BH02	S	1.15.20	1525	2'	1	X	X	X										
BH02A	S	1.15.20	1545	4.5'	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
SiO ₂	Na	Sr	II
Sn	U	V	Zn
TCLP / SPLP 6010:		8RCRA	Sb
As	Ba	Be	Cd
Cr	Co	Cu	Pb
Mn	Mo	Ni	Se
Ag	Ti	U	
1631 / 245.1 / 7470 / 7471 :		Hg	

office. 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 may 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
		1/6/20 9:00 am			1/6/20 0930

Revised Date 05/14/15 Rev. 2016

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 01.16.2020 09.37.00 AM

Work Order #: 649267

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)?	1.2
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	No
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

PH Device/Lot#:

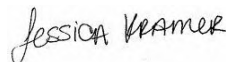
Checklist completed by:



Elizabeth McClellan

Date: 01.16.2020

Checklist reviewed by:



Jessica Kramer

Date: 01.16.2020

Analytical Report 653331

for
LT Environmental, Inc.

Project Manager: Dan Moir

Corral Canyon 3H

012919248

26-FEB-20

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)

Xenco-Carlsbad (LELAP): Louisiana (05092)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Tampa: Florida (E87429), North Carolina (483)



26-FEB-20

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **653331**

Corral Canyon 3H

Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 653331. 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. 653331 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 653331****LT Environmental, Inc., Arvada, CO**

Corral Canyon 3H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BG01	S	02-20-20 14:45	0.5 ft	653331-001
BG01A	S	02-20-20 15:00	2 ft	653331-002
BG01B	S	02-20-20 15:20	4.5 ft	653331-003
BG02	S	02-20-20 15:30	0.5 ft	653331-004
BG02A	S	02-20-20 15:45	2 ft	653331-005
BG02B	S	02-20-20 16:05	4.5 ft	653331-006



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *Corral Canyon 3H*

Project ID: 012919248
Work Order Number(s): 653331

Report Date: 26-FEB-20
Date Received: 02/21/2020

Sample receipt non conformances and comments:

V1.001 Revision - Corrected sample names from BH to BG (client email) JK 02/26/20

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3117364 BTEX by EPA 8021B

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



Certificate of Analysis Summary 653331

LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon 3H

Project Id: 012919248

Contact: Dan Moir

Project Location:

Date Received in Lab: Fri Feb-21-20 01:45 pm

Report Date: 26-FEB-20

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	653331-001	653331-002	653331-003	653331-004	653331-005	653331-006
	Field Id:	BG01	BG01A	BG01B	BG02	BG02A	BG02B
	Depth:	0.5- ft	2- ft	4.5- ft	0.5- ft	2- ft	4.5- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Feb-20-20 14:45	Feb-20-20 15:00	Feb-20-20 15:20	Feb-20-20 15:30	Feb-20-20 15:45	Feb-20-20 16:05
BTEX by EPA 8021B	Extracted:	*** ** *	*** ** *	*** ** *	*** ** *	*** ** *	*** ** *
	Analyzed:	Feb-22-20 02:15	Feb-22-20 02:35	Feb-22-20 02:55	Feb-22-20 03:16	Feb-22-20 03:36	Feb-22-20 03:56
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200
Toluene		<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200
Ethylbenzene		<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200
m,p-Xylenes		<0.00401 0.00401	<0.00398 0.00398	<0.00396 0.00396	<0.00397 0.00397	<0.00401 0.00401	<0.00399 0.00399
o-Xylene		<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200
Total Xylenes		<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200
Total BTEX		<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200
Chloride by EPA 300	Extracted:	Feb-21-20 14:25	Feb-21-20 14:25	Feb-21-20 14:25	Feb-21-20 14:25	Feb-21-20 14:25	Feb-21-20 14:25
	Analyzed:	Feb-21-20 20:40	Feb-21-20 20:46	Feb-21-20 20:52	Feb-21-20 20:58	Feb-21-20 21:04	Feb-21-20 21:10
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		1840 49.8	2580 49.9	2150 50.1	1100 50.4	2110 50.1	2290 49.7
TPH by SW8015 Mod	Extracted:	Feb-21-20 17:30	Feb-21-20 17:30	Feb-21-20 17:30	Feb-21-20 17:30	Feb-21-20 17:30	Feb-21-20 17:30
	Analyzed:	Feb-22-20 08:52	Feb-22-20 08:52	Feb-22-20 09:11	Feb-22-20 09:11	Feb-22-20 09:30	Feb-22-20 09:50
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.8 49.8	<50.0 50.0	<49.8 49.8
Diesel Range Organics (DRO)		<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.8 49.8	<50.0 50.0	<49.8 49.8
Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.8 49.8	<50.0 50.0	<49.8 49.8
Total GRO-DRO		<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.8 49.8	<50.0 50.0	<49.8 49.8
Total TPH		<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.8 49.8	<50.0 50.0	<49.8 49.8

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

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

Version: 1.9%

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analytical Results 653331

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **BG01**
Lab Sample Id: 653331-001

Matrix: Soil
Date Collected: 02.20.20 14.45

Date Received: 02.21.20 13.45
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117383

Date Prep: 02.21.20 14.25

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1840	49.8	mg/kg	02.21.20 20.40		5

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117413

Date Prep: 02.21.20 17.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	02.22.20 08.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	02.22.20 08.52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	02.22.20 08.52	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	02.22.20 08.52	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	02.22.20 08.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	02.22.20 08.52	
o-Terphenyl	84-15-1	105	%	70-135	02.22.20 08.52	



Certificate of Analytical Results 653331

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **BG01**
Lab Sample Id: 653331-001

Matrix: Soil
Date Collected: 02.20.20 14.45

Date Received: 02.21.20 13.45
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.21.20 13.03

Basis: Wet Weight

Seq Number: 3117364

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.22.20 02.15	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.22.20 02.15	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.22.20 02.15	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	02.22.20 02.15	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.22.20 02.15	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.22.20 02.15	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.22.20 02.15	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	93	%	70-130	02.22.20 02.15		
1,4-Difluorobenzene	540-36-3	106	%	70-130	02.22.20 02.15		



Certificate of Analytical Results 653331

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **BG01A**
Lab Sample Id: 653331-002

Matrix: Soil
Date Collected: 02.20.20 15.00

Date Received: 02.21.20 13.45
Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117383

Date Prep: 02.21.20 14.25

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2580	49.9	mg/kg	02.21.20 20.46		5

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117413

Date Prep: 02.21.20 17.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	02.22.20 08.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	02.22.20 08.52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	02.22.20 08.52	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	02.22.20 08.52	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	02.22.20 08.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	02.22.20 08.52	
o-Terphenyl	84-15-1	114	%	70-135	02.22.20 08.52	



Certificate of Analytical Results 653331

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **BG01A**
Lab Sample Id: 653331-002

Matrix: Soil
Date Collected: 02.20.20 15.00

Date Received: 02.21.20 13.45
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.21.20 13.03

Basis: Wet Weight

Seq Number: 3117364

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.22.20 02.35	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.22.20 02.35	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.22.20 02.35	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.22.20 02.35	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.22.20 02.35	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	02.22.20 02.35	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.22.20 02.35	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	105	%	70-130	02.22.20 02.35		
4-Bromofluorobenzene	460-00-4	90	%	70-130	02.22.20 02.35		



Certificate of Analytical Results 653331

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **BG01B** Matrix: Soil Date Received: 02.21.20 13.45
 Lab Sample Id: 653331-003 Date Collected: 02.20.20 15.20 Sample Depth: 4.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.21.20 14.25 Basis: Wet Weight
 Seq Number: 3117383

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2150	50.1	mg/kg	02.21.20 20.52		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.21.20 17.30 Basis: Wet Weight
 Seq Number: 3117413

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	02.22.20 09.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	02.22.20 09.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	02.22.20 09.11	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	02.22.20 09.11	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	02.22.20 09.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	02.22.20 09.11	
o-Terphenyl	84-15-1	108	%	70-135	02.22.20 09.11	



Certificate of Analytical Results 653331

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **BG01B**
Lab Sample Id: 653331-003

Matrix: Soil
Date Collected: 02.20.20 15.20

Date Received: 02.21.20 13.45
Sample Depth: 4.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.21.20 13.03

Basis: Wet Weight

Seq Number: 3117364

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	02.22.20 02.55	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	02.22.20 02.55	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	02.22.20 02.55	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	02.22.20 02.55	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	02.22.20 02.55	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	02.22.20 02.55	U	1
Total BTEX		<0.00198	0.00198	mg/kg	02.22.20 02.55	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	113	%	70-130	02.22.20 02.55		
4-Bromofluorobenzene	460-00-4	95	%	70-130	02.22.20 02.55		



Certificate of Analytical Results 653331

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **BG02** Matrix: Soil Date Received: 02.21.20 13.45
 Lab Sample Id: 653331-004 Date Collected: 02.20.20 15.30 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.21.20 14.25 Basis: Wet Weight
 Seq Number: 3117383

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1100	50.4	mg/kg	02.21.20 20.58		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.21.20 17.30 Basis: Wet Weight
 Seq Number: 3117413

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	02.22.20 09.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	02.22.20 09.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	02.22.20 09.11	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	02.22.20 09.11	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	02.22.20 09.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	02.22.20 09.11	
o-Terphenyl	84-15-1	114	%	70-135	02.22.20 09.11	



Certificate of Analytical Results 653331

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **BG02**
Lab Sample Id: 653331-004

Matrix: Soil
Date Collected: 02.20.20 15.30

Date Received: 02.21.20 13.45
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117364

Date Prep: 02.21.20 13.03

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	02.22.20 03.16	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	02.22.20 03.16	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	02.22.20 03.16	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	02.22.20 03.16	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	02.22.20 03.16	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	02.22.20 03.16	U	1
Total BTEX		<0.00198	0.00198	mg/kg	02.22.20 03.16	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	112	%	70-130	02.22.20 03.16		
4-Bromofluorobenzene	460-00-4	92	%	70-130	02.22.20 03.16		



Certificate of Analytical Results 653331

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **BG02A**
Lab Sample Id: 653331-005

Matrix: Soil
Date Collected: 02.20.20 15.45

Date Received: 02.21.20 13.45
Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117383

Date Prep: 02.21.20 14.25

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2110	50.1	mg/kg	02.21.20 21.04		5

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117413

Date Prep: 02.21.20 17.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	02.22.20 09.30	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	02.22.20 09.30	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	02.22.20 09.30	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	02.22.20 09.30	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	02.22.20 09.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	02.22.20 09.30	
o-Terphenyl	84-15-1	114	%	70-135	02.22.20 09.30	



Certificate of Analytical Results 653331

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **BG02A**
Lab Sample Id: 653331-005

Matrix: Soil
Date Collected: 02.20.20 15.45

Date Received: 02.21.20 13.45
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.21.20 13.03

Basis: Wet Weight

Seq Number: 3117364

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.22.20 03.36	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.22.20 03.36	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.22.20 03.36	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	02.22.20 03.36	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.22.20 03.36	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.22.20 03.36	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.22.20 03.36	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	112	%	70-130	02.22.20 03.36		
4-Bromofluorobenzene	460-00-4	88	%	70-130	02.22.20 03.36		



Certificate of Analytical Results 653331

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **BG02B**
Lab Sample Id: 653331-006

Matrix: Soil
Date Collected: 02.20.20 16.05

Date Received: 02.21.20 13.45
Sample Depth: 4.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117383

Date Prep: 02.21.20 14.25

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2290	49.7	mg/kg	02.21.20 21.10		5

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117413

Date Prep: 02.21.20 17.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	02.22.20 09.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	02.22.20 09.50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	02.22.20 09.50	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	02.22.20 09.50	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	02.22.20 09.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	02.22.20 09.50	
o-Terphenyl	84-15-1	105	%	70-135	02.22.20 09.50	



Certificate of Analytical Results 653331

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **BG02B**
Lab Sample Id: 653331-006

Matrix: Soil
Date Collected: 02.20.20 16.05

Date Received: 02.21.20 13.45
Sample Depth: 4.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117364

Date Prep: 02.21.20 13.03

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	02.22.20 03.56	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.22.20 03.56	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.22.20 03.56	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.22.20 03.56	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.22.20 03.56	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.22.20 03.56	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.22.20 03.56	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	113	%	70-130	02.22.20 03.56		
4-Bromofluorobenzene	460-00-4	96	%	70-130	02.22.20 03.56		



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



LT Environmental, Inc.
Corral Canyon 3H

Analytical Method: Chloride by EPA 300

Seq Number: 3117383

MB Sample Id: 7697200-1-BLK

Matrix: Solid

LCS Sample Id: 7697200-1-BKS

Prep Method: E300P

Date Prep: 02.21.20

LCSD Sample Id: 7697200-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	256	102	260	104	90-110	2	20	mg/kg	02.21.20 18:33	

Analytical Method: Chloride by EPA 300

Seq Number: 3117383

Parent Sample Id: 653254-001

Matrix: Soil

MS Sample Id: 653254-001 S

Prep Method: E300P

Date Prep: 02.21.20

MSD Sample Id: 653254-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	4.46	200	209	102	211	103	90-110	1	20	mg/kg	02.21.20 18:50	

Analytical Method: Chloride by EPA 300

Seq Number: 3117383

Parent Sample Id: 653318-001

Matrix: Soil

MS Sample Id: 653318-001 S

Prep Method: E300P

Date Prep: 02.21.20

MSD Sample Id: 653318-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	118	200	333	108	336	109	90-110	1	20	mg/kg	02.21.20 20:10	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3117413

MB Sample Id: 7697318-1-BLK

Matrix: Solid

LCS Sample Id: 7697318-1-BKS

Prep Method: SW8015P

Date Prep: 02.21.20

LCSD Sample Id: 7697318-1-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	836	84	915	92	70-135	9	35	mg/kg	02.22.20 07:14	
Diesel Range Organics (DRO)	<50.0	1000	917	92	1000	100	70-135	9	35	mg/kg	02.22.20 07:14	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	110		111		122		70-135	%	02.22.20 07:14
o-Terphenyl	116		113		120		70-135	%	02.22.20 07:14

Analytical Method: TPH by SW8015 Mod

Seq Number: 3117413

Matrix: Solid

MB Sample Id: 7697318-1-BLK

Prep Method: SW8015P

Date Prep: 02.21.20

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	02.22.20 06:55	

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



LT Environmental, Inc.
Corral Canyon 3H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3117413

Parent Sample Id: 653209-013

Matrix: Soil

MS Sample Id: 653209-013 S

Prep Method: SW8015P

Date Prep: 02.21.20

MSD Sample Id: 653209-013 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)	<50.2	1000	963	96	858	86	70-135	12	35	mg/kg	02.22.20 07:34	
Diesel Range Organics (DRO)	<50.2	1000	1050	105	955	96	70-135	9	35	mg/kg	02.22.20 07:34	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	129		114		70-135	%	02.22.20 07:34
o-Terphenyl	127		115		70-135	%	02.22.20 07:34

Analytical Method: BTEX by EPA 8021B

Seq Number: 3117364

MB Sample Id: 7697195-1-BLK

Matrix: Solid

LCS Sample Id: 7697195-1-BKS

Prep Method: SW5030B

Date Prep: 02.21.20

LCSD Sample Id: 7697195-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.114	114	0.105	105	70-130	8	35	mg/kg	02.21.20 19:06	
Toluene	<0.00200	0.100	0.105	105	0.0972	97	70-130	8	35	mg/kg	02.21.20 19:06	
Ethylbenzene	<0.00200	0.100	0.100	100	0.0934	93	71-129	7	35	mg/kg	02.21.20 19:06	
m,p-Xylenes	<0.00400	0.200	0.195	98	0.183	92	70-135	6	35	mg/kg	02.21.20 19:06	
o-Xylene	<0.00200	0.100	0.0995	100	0.0929	93	71-133	7	35	mg/kg	02.21.20 19:06	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	112		111		109		70-130	%	02.21.20 19:06
4-Bromofluorobenzene	92		88		88		70-130	%	02.21.20 19:06

Analytical Method: BTEX by EPA 8021B

Seq Number: 3117364

Parent Sample Id: 653209-001

Matrix: Soil

MS Sample Id: 653209-001 S

Prep Method: SW5030B

Date Prep: 02.21.20

MSD Sample Id: 653209-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.117	117	0.112	111	70-130	4	35	mg/kg	02.21.20 19:47	
Toluene	<0.00200	0.100	0.107	107	0.102	101	70-130	5	35	mg/kg	02.21.20 19:47	
Ethylbenzene	<0.00200	0.100	0.101	101	0.0951	94	71-129	6	35	mg/kg	02.21.20 19:47	
m,p-Xylenes	<0.00400	0.200	0.194	97	0.183	91	70-135	6	35	mg/kg	02.21.20 19:47	
o-Xylene	<0.00200	0.100	0.0983	98	0.0930	92	71-133	6	35	mg/kg	02.21.20 19:47	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	111		110		70-130	%	02.21.20 19:47
4-Bromofluorobenzene	92		92		70-130	%	02.21.20 19:47

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

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

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

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



Chain of Custody

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

Work Order No: 653331

www.xenco.com Page 1 of 1

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 East Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	slit@ltenv.com, dmoir@ltenv.com, acoll@ltenv.com

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

Project Name:	Corral Canyon 3H	Turn Around	
Project Number:	012919248	Routine ☐	
P.O. Number:		Rush: 24H	
Sampler's Name:	Spencer Lo	Due Date:	

SAMPLE RECEIPT	Temp Blank:	Yes ☐ No ☒	Wet Ice:	Yes ☐ No ☒
	Temperature (°C):	0.2	Thermometer ID	TN1007
	Received Intact:	Yes ☒ No ☐	Correction Factor:	-0.2
	Cooler Custody Seals:	Yes ☒ No ☐	Total Containers:	6
	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	
BH03	S	2-20-20	1445	0.5'	1	✓	✓	✓												
BH03A				1500																
BH03B				1520																
BH04				1530																
BH04A				1545																
BH04B				1605																

Total 200.7 / 6070 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 6070: 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 service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	2/21/20 11:00pm	<i>[Signature]</i>	<i>[Signature]</i>	2/21/20 13:45



Analytical Report 659235

for

LT Environmental, Inc.

Project Manager: Dan Moir

Corral Canyon 3H

012919248

04.21.2020

Collected By: Client

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

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



04.21.2020

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **659235**

Corral Canyon 3H

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) 659235. 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. 659235 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'.

Jessica Kramer

Project Manager

A Small Business and Minority Company

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

**Sample Cross Reference 659235****LT Environmental, Inc., Arvada, CO**

Corral Canyon 3H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH07B	S	04.16.2020 12:05	2 ft	659235-001
PH07C	S	04.16.2020 12:10	4 ft	659235-002
PH08B	S	04.16.2020 12:18	2 ft	659235-003
PH08C	S	04.16.2020 12:24	4 ft	659235-004
PH10B	S	04.16.2020 12:53	2 ft	659235-005
PH10C	S	04.16.2020 13:00	4 ft	659235-006
PH11B	S	04.16.2020 13:10	2 ft	659235-007
PH11C	S	04.16.2020 13:16	4 ft	659235-008



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *Corral Canyon 3H*

Project ID: 012919248
Work Order Number(s): 659235

Report Date: 04.21.2020
Date Received: 04.20.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3123538 BTEX by EPA 8021B

Soil samples received in bulk containers.



Certificate of Analysis Summary 659235

LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon 3H

Project Id: 012919248

Contact: Dan Moir

Project Location: Eddy County

Date Received in Lab: Mon 04.20.2020 08:21

Report Date: 04.21.2020 13:29

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	659235-001	659235-002	659235-003	659235-004	659235-005	659235-006
	<i>Field Id:</i>	PH07B	PH07C	PH08B	PH08C	PH10B	PH10C
	<i>Depth:</i>	2- ft	4- ft	2- ft	4- ft	2- ft	4- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	04.16.2020 12:05	04.16.2020 12:10	04.16.2020 12:18	04.16.2020 12:24	04.16.2020 12:53	04.16.2020 13:00
BTEX by EPA 8021B	<i>Extracted:</i>	04.20.2020 10:30	04.20.2020 10:30	04.20.2020 10:30	04.20.2020 10:30	04.20.2020 10:30	04.20.2020 10:30
	<i>Analyzed:</i>	04.20.2020 13:31	04.20.2020 13:51	04.20.2020 14:12	04.20.2020 14:32	04.20.2020 14:52	04.20.2020 15:13
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00199 0.00199	<0.00201 0.00201	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201
Toluene		<0.00199 0.00199	<0.00201 0.00201	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201
Ethylbenzene		<0.00199 0.00199	<0.00201 0.00201	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201
m,p-Xylenes		<0.00398 0.00398	<0.00402 0.00402	<0.00404 0.00404	<0.00399 0.00399	<0.00401 0.00401	<0.00402 0.00402
o-Xylene		<0.00199 0.00199	<0.00201 0.00201	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201
Total Xylenes		<0.00199 0.00199	<0.00201 0.00201	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201
Total BTEX		<0.00199 0.00199	<0.00201 0.00201	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201
Chloride by EPA 300	<i>Extracted:</i>	04.20.2020 13:20	04.20.2020 13:20	04.20.2020 13:20	04.20.2020 13:20	04.20.2020 13:20	04.20.2020 13:20
	<i>Analyzed:</i>	04.20.2020 16:02	04.20.2020 16:31	04.20.2020 16:36	04.20.2020 16:41	04.20.2020 16:47	04.20.2020 17:03
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		3300 99.4	2580 50.4	2550 50.1	3220 50.2	2010 50.2	2620 49.9
TPH by SW8015 Mod	<i>Extracted:</i>	04.20.2020 13:00	04.20.2020 13:00	04.20.2020 13:00	04.20.2020 13:00	04.20.2020 13:00	04.20.2020 13:00
	<i>Analyzed:</i>	04.20.2020 14:31	04.20.2020 14:52	04.20.2020 15:12	04.20.2020 15:32	04.20.2020 15:53	04.20.2020 16:13
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<49.9 49.9	<49.9 49.9	<50.0 50.0	<49.8 49.8	<50.2 50.2	<50.2 50.2
Diesel Range Organics (DRO)		<49.9 49.9	<49.9 49.9	<50.0 50.0	<49.8 49.8	<50.2 50.2	<50.2 50.2
Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9	<49.9 49.9	<50.0 50.0	<49.8 49.8	<50.2 50.2	<50.2 50.2
Total GRO-DRO		<49.9 49.9	<49.9 49.9	<50.0 50.0	<49.8 49.8	<50.2 50.2	<50.2 50.2
Total TPH		<49.9 49.9	<49.9 49.9	<50.0 50.0	<49.8 49.8	<50.2 50.2	<50.2 50.2

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

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

Jessica Kramer
Project Manager



Certificate of Analysis Summary 659235

LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon 3H

Project Id: 012919248

Contact: Dan Moir

Project Location: Eddy County

Date Received in Lab: Mon 04.20.2020 08:21

Report Date: 04.21.2020 13:29

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	659235-007	659235-008				
	Field Id:	PH11B	PH11C				
	Depth:	2- ft	4- ft				
	Matrix:	SOIL	SOIL				
	Sampled:	04.16.2020 13:10	04.16.2020 13:16				
BTEX by EPA 8021B	Extracted:	04.20.2020 10:30	04.20.2020 10:30				
	Analyzed:	04.20.2020 15:33	04.20.2020 15:53				
	Units/RL:	mg/kg RL	mg/kg RL				
Benzene		<0.00202 0.00202	<0.00201 0.00201				
Toluene		<0.00202 0.00202	<0.00201 0.00201				
Ethylbenzene		<0.00202 0.00202	<0.00201 0.00201				
m,p-Xylenes		<0.00403 0.00403	<0.00402 0.00402				
o-Xylene		<0.00202 0.00202	<0.00201 0.00201				
Total Xylenes		<0.00202 0.00202	<0.00201 0.00201				
Total BTEX		<0.00202 0.00202	<0.00201 0.00201				
Chloride by EPA 300	Extracted:	04.20.2020 13:20	04.20.2020 13:20				
	Analyzed:	04.20.2020 17:09	04.20.2020 17:14				
	Units/RL:	mg/kg RL	mg/kg RL				
Chloride		3490 49.8	3710 50.5				
TPH by SW8015 Mod	Extracted:	04.20.2020 13:00	04.20.2020 13:00				
	Analyzed:	04.20.2020 16:33	04.20.2020 16:54				
	Units/RL:	mg/kg RL	mg/kg RL				
Gasoline Range Hydrocarbons (GRO)		<49.8 49.8	<50.3 50.3				
Diesel Range Organics (DRO)		<49.8 49.8	<50.3 50.3				
Motor Oil Range Hydrocarbons (MRO)		<49.8 49.8	<50.3 50.3				
Total GRO-DRO		<49.8 49.8	<50.3 50.3				
Total TPH		<49.8 49.8	<50.3 50.3				

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

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

Jessica Kramer
Project Manager



Certificate of Analytical Results 659235

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH07B**
Lab Sample Id: 659235-001

Matrix: Soil
Date Collected: 04.16.2020 12:05

Date Received: 04.20.2020 08:21
Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3123545

Date Prep: 04.20.2020 13:20

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3300	99.4	mg/kg	04.20.2020 16:02		10

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3123601

Date Prep: 04.20.2020 13:00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	04.20.2020 14:31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	04.20.2020 14:31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	04.20.2020 14:31	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	04.20.2020 14:31	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	04.20.2020 14:31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	04.20.2020 14:31	
o-Terphenyl	84-15-1	98	%	70-135	04.20.2020 14:31	



Certificate of Analytical Results 659235

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH07B**
Lab Sample Id: 659235-001

Matrix: Soil
Date Collected: 04.16.2020 12:05

Date Received: 04.20.2020 08:21
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3123538

Prep Method: SW5030B

% Moisture:

Date Prep: 04.20.2020 10:30

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.20.2020 13:31	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.20.2020 13:31	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.20.2020 13:31	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.20.2020 13:31	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.20.2020 13:31	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.20.2020 13:31	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.20.2020 13:31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	04.20.2020 13:31	
4-Bromofluorobenzene	460-00-4	94	%	70-130	04.20.2020 13:31	



Certificate of Analytical Results 659235

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH07C**
Lab Sample Id: 659235-002

Matrix: Soil
Date Collected: 04.16.2020 12:10

Date Received: 04.20.2020 08:21
Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3123545

Date Prep: 04.20.2020 13:20

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2580	50.4	mg/kg	04.20.2020 16:31		5

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3123601

Date Prep: 04.20.2020 13:00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	04.20.2020 14:52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	04.20.2020 14:52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	04.20.2020 14:52	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	04.20.2020 14:52	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	04.20.2020 14:52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	04.20.2020 14:52	
o-Terphenyl	84-15-1	102	%	70-135	04.20.2020 14:52	



Certificate of Analytical Results 659235

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH07C**
Lab Sample Id: 659235-002

Matrix: Soil
Date Collected: 04.16.2020 12:10

Date Received: 04.20.2020 08:21
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.20.2020 10:30

Basis: Wet Weight

Seq Number: 3123538

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.20.2020 13:51	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.20.2020 13:51	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.20.2020 13:51	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.20.2020 13:51	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.20.2020 13:51	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.20.2020 13:51	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.20.2020 13:51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	96	%	70-130	04.20.2020 13:51	
1,4-Difluorobenzene	540-36-3	107	%	70-130	04.20.2020 13:51	



Certificate of Analytical Results 659235

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH08B**
Lab Sample Id: 659235-003

Matrix: Soil
Date Collected: 04.16.2020 12:18

Date Received: 04.20.2020 08:21
Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3123545

Date Prep: 04.20.2020 13:20

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2550	50.1	mg/kg	04.20.2020 16:36		5

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3123601

Date Prep: 04.20.2020 13:00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	04.20.2020 15:12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	04.20.2020 15:12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	04.20.2020 15:12	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	04.20.2020 15:12	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	04.20.2020 15:12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	04.20.2020 15:12	
o-Terphenyl	84-15-1	95	%	70-135	04.20.2020 15:12	



Certificate of Analytical Results 659235

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH08B**
Lab Sample Id: 659235-003

Matrix: Soil
Date Collected: 04.16.2020 12:18

Date Received: 04.20.2020 08:21
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.20.2020 10:30

Basis: Wet Weight

Seq Number: 3123538

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	04.20.2020 14:12	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	04.20.2020 14:12	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	04.20.2020 14:12	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	04.20.2020 14:12	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	04.20.2020 14:12	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	04.20.2020 14:12	U	1
Total BTEX		<0.00202	0.00202	mg/kg	04.20.2020 14:12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	04.20.2020 14:12	
4-Bromofluorobenzene	460-00-4	96	%	70-130	04.20.2020 14:12	



Certificate of Analytical Results 659235

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH08C**
Lab Sample Id: 659235-004

Matrix: Soil
Date Collected: 04.16.2020 12:24

Date Received: 04.20.2020 08:21
Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3123545

Date Prep: 04.20.2020 13:20

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3220	50.2	mg/kg	04.20.2020 16:41		5

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3123601

Date Prep: 04.20.2020 13:00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	04.20.2020 15:32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	04.20.2020 15:32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	04.20.2020 15:32	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	04.20.2020 15:32	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	04.20.2020 15:32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	04.20.2020 15:32	
o-Terphenyl	84-15-1	102	%	70-135	04.20.2020 15:32	



Certificate of Analytical Results 659235

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH08C**
Lab Sample Id: 659235-004

Matrix: Soil
Date Collected: 04.16.2020 12:24

Date Received: 04.20.2020 08:21
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.20.2020 10:30

Basis: Wet Weight

Seq Number: 3123538

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.20.2020 14:32	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.20.2020 14:32	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.20.2020 14:32	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	04.20.2020 14:32	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.20.2020 14:32	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.20.2020 14:32	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.20.2020 14:32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	89	%	70-130	04.20.2020 14:32	
1,4-Difluorobenzene	540-36-3	104	%	70-130	04.20.2020 14:32	



Certificate of Analytical Results 659235

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH10B** Matrix: Soil Date Received: 04.20.2020 08:21
 Lab Sample Id: 659235-005 Date Collected: 04.16.2020 12:53 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 04.20.2020 13:20 Basis: Wet Weight
 Seq Number: 3123545

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2010	50.2	mg/kg	04.20.2020 16:47		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 04.20.2020 13:00 Basis: Wet Weight
 Seq Number: 3123601

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	04.20.2020 15:53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	04.20.2020 15:53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	04.20.2020 15:53	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	04.20.2020 15:53	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	04.20.2020 15:53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	04.20.2020 15:53	
o-Terphenyl	84-15-1	95	%	70-135	04.20.2020 15:53	



Certificate of Analytical Results 659235

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH10B**
Lab Sample Id: 659235-005

Matrix: Soil
Date Collected: 04.16.2020 12:53

Date Received: 04.20.2020 08:21
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.20.2020 10:30

Basis: Wet Weight

Seq Number: 3123538

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.20.2020 14:52	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.20.2020 14:52	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.20.2020 14:52	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	04.20.2020 14:52	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.20.2020 14:52	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.20.2020 14:52	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.20.2020 14:52	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	90	%	70-130	04.20.2020 14:52		
1,4-Difluorobenzene	540-36-3	106	%	70-130	04.20.2020 14:52		



Certificate of Analytical Results 659235

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH10C**
Lab Sample Id: 659235-006

Matrix: Soil
Date Collected: 04.16.2020 13:00

Date Received: 04.20.2020 08:21
Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3123545

Date Prep: 04.20.2020 13:20

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2620	49.9	mg/kg	04.20.2020 17:03		5

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3123601

Date Prep: 04.20.2020 13:00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	04.20.2020 16:13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	04.20.2020 16:13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	04.20.2020 16:13	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	04.20.2020 16:13	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	04.20.2020 16:13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	04.20.2020 16:13	
o-Terphenyl	84-15-1	100	%	70-135	04.20.2020 16:13	



Certificate of Analytical Results 659235

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH10C**
Lab Sample Id: 659235-006

Matrix: Soil
Date Collected: 04.16.2020 13:00

Date Received: 04.20.2020 08:21
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.20.2020 10:30

Basis: Wet Weight

Seq Number: 3123538

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.20.2020 15:13	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.20.2020 15:13	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.20.2020 15:13	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.20.2020 15:13	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.20.2020 15:13	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.20.2020 15:13	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.20.2020 15:13	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	88	%	70-130	04.20.2020 15:13		
1,4-Difluorobenzene	540-36-3	105	%	70-130	04.20.2020 15:13		



Certificate of Analytical Results 659235

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH11B**
Lab Sample Id: 659235-007

Matrix: Soil
Date Collected: 04.16.2020 13:10

Date Received: 04.20.2020 08:21
Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3123545

Date Prep: 04.20.2020 13:20

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3490	49.8	mg/kg	04.20.2020 17:09		5

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3123601

Date Prep: 04.20.2020 13:00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	04.20.2020 16:33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	04.20.2020 16:33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	04.20.2020 16:33	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	04.20.2020 16:33	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	04.20.2020 16:33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	04.20.2020 16:33	
o-Terphenyl	84-15-1	96	%	70-135	04.20.2020 16:33	



Certificate of Analytical Results 659235

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH11B**
Lab Sample Id: 659235-007

Matrix: Soil
Date Collected: 04.16.2020 13:10

Date Received: 04.20.2020 08:21
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.20.2020 10:30

Basis: Wet Weight

Seq Number: 3123538

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	04.20.2020 15:33	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	04.20.2020 15:33	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	04.20.2020 15:33	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	04.20.2020 15:33	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	04.20.2020 15:33	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	04.20.2020 15:33	U	1
Total BTEX		<0.00202	0.00202	mg/kg	04.20.2020 15:33	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	90	%	70-130	04.20.2020 15:33		
1,4-Difluorobenzene	540-36-3	106	%	70-130	04.20.2020 15:33		



Certificate of Analytical Results 659235

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH11C** Matrix: Soil Date Received: 04.20.2020 08:21
 Lab Sample Id: 659235-008 Date Collected: 04.16.2020 13:16 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 04.20.2020 13:20 Basis: Wet Weight
 Seq Number: 3123545

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3710	50.5	mg/kg	04.20.2020 17:14		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 04.20.2020 13:00 Basis: Wet Weight
 Seq Number: 3123601

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	04.20.2020 16:54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	04.20.2020 16:54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	04.20.2020 16:54	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	04.20.2020 16:54	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	04.20.2020 16:54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	04.20.2020 16:54	
o-Terphenyl	84-15-1	100	%	70-135	04.20.2020 16:54	



Certificate of Analytical Results 659235

LT Environmental, Inc., Arvada, CO

Corral Canyon 3H

Sample Id: **PH11C**
Lab Sample Id: 659235-008

Matrix: Soil
Date Collected: 04.16.2020 13:16

Date Received: 04.20.2020 08:21
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3123538

Prep Method: SW5030B

% Moisture:

Date Prep: 04.20.2020 10:30

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.20.2020 15:53	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.20.2020 15:53	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.20.2020 15:53	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.20.2020 15:53	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.20.2020 15:53	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.20.2020 15:53	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.20.2020 15:53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	04.20.2020 15:53	
4-Bromofluorobenzene	460-00-4	94	%	70-130	04.20.2020 15:53	



Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



LT Environmental, Inc.
Corral Canyon 3H

Analytical Method: Chloride by EPA 300

Seq Number: 3123545

MB Sample Id: 7701591-1-BLK

Matrix: Solid

LCS Sample Id: 7701591-1-BKS

Prep Method: E300P

Date Prep: 04.20.2020

LCSD Sample Id: 7701591-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	264	106	264	106	90-110	0	20	mg/kg	04.20.2020 15:23	

Analytical Method: Chloride by EPA 300

Seq Number: 3123545

Parent Sample Id: 659235-001

Matrix: Soil

MS Sample Id: 659235-001 S

Prep Method: E300P

Date Prep: 04.20.2020

MSD Sample Id: 659235-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	3300	201	3510	104	3520	110	90-110	0	20	mg/kg	04.20.2020 16:07	

Analytical Method: Chloride by EPA 300

Seq Number: 3123545

Parent Sample Id: 659236-003

Matrix: Soil

MS Sample Id: 659236-003 S

Prep Method: E300P

Date Prep: 04.20.2020

MSD Sample Id: 659236-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	88.3	199	302	107	306	108	90-110	1	20	mg/kg	04.20.2020 17:36	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3123601

MB Sample Id: 7701657-1-BLK

Matrix: Solid

LCS Sample Id: 7701657-1-BKS

Prep Method: SW8015P

Date Prep: 04.20.2020

LCSD Sample Id: 7701657-1-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	955	96	909	91	70-135	5	35	mg/kg	04.20.2020 12:30	
Diesel Range Organics (DRO)	<50.0	1000	1100	110	1040	104	70-135	6	35	mg/kg	04.20.2020 12:30	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	90		111		103		70-135	%	04.20.2020 12:30
o-Terphenyl	95		109		100		70-135	%	04.20.2020 12:30

Analytical Method: TPH by SW8015 Mod

Seq Number: 3123601

Matrix: Solid

MB Sample Id: 7701657-1-BLK

Prep Method: SW8015P

Date Prep: 04.20.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	04.20.2020 12:09	

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

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

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

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



LT Environmental, Inc.
Corral Canyon 3H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3123601

Parent Sample Id: 659150-016

Matrix: Soil

MS Sample Id: 659150-016 S

Prep Method: SW8015P

Date Prep: 04.20.2020

MSD Sample Id: 659150-016 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	999	1080	108	1050	105	70-135	3	35	mg/kg	04.20.2020 13:30	
Diesel Range Organics (DRO)	<50.0	999	1140	114	1090	109	70-135	4	35	mg/kg	04.20.2020 13:30	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	121		115		70-135	%	04.20.2020 13:30
o-Terphenyl	113		112		70-135	%	04.20.2020 13:30

Analytical Method: BTEX by EPA 8021B

Seq Number: 3123538

MB Sample Id: 7701580-1-BLK

Matrix: Solid

LCS Sample Id: 7701580-1-BKS

Prep Method: SW5030B

Date Prep: 04.20.2020

LCSD Sample Id: 7701580-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.114	114	0.112	112	70-130	2	35	mg/kg	04.20.2020 10:27	
Toluene	<0.00200	0.100	0.108	108	0.108	108	70-130	0	35	mg/kg	04.20.2020 10:27	
Ethylbenzene	<0.00200	0.100	0.0979	98	0.0992	99	71-129	1	35	mg/kg	04.20.2020 10:27	
m,p-Xylenes	<0.00400	0.200	0.199	100	0.201	101	70-135	1	35	mg/kg	04.20.2020 10:27	
o-Xylene	<0.00200	0.100	0.102	102	0.103	103	71-133	1	35	mg/kg	04.20.2020 10:27	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		104		105		70-130	%	04.20.2020 10:27
4-Bromofluorobenzene	93		91		92		70-130	%	04.20.2020 10:27

Analytical Method: BTEX by EPA 8021B

Seq Number: 3123538

Parent Sample Id: 659235-001

Matrix: Soil

MS Sample Id: 659235-001 S

Prep Method: SW5030B

Date Prep: 04.20.2020

MSD Sample Id: 659235-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0981	98	0.0946	95	70-130	4	35	mg/kg	04.20.2020 12:30	
Toluene	<0.00200	0.100	0.0927	93	0.0895	90	70-130	4	35	mg/kg	04.20.2020 12:30	
Ethylbenzene	<0.00200	0.100	0.0849	85	0.0824	83	71-129	3	35	mg/kg	04.20.2020 12:30	
m,p-Xylenes	<0.00400	0.200	0.172	86	0.169	85	70-135	2	35	mg/kg	04.20.2020 12:30	
o-Xylene	<0.00200	0.100	0.0863	86	0.0843	85	71-133	2	35	mg/kg	04.20.2020 12:30	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		103		70-130	%	04.20.2020 12:30
4-Bromofluorobenzene	93		92		70-130	%	04.20.2020 12:30

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 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: 1659235

Project Manager: Dan Mori		Bill to: (if different) Kyle Little	
Company Name: LT Environmental, Inc. Pembroke		Company Name: XTO Energy	
Address: 3300 North A Street		Address: 522 W. McPhail St.	
City, State ZIP: Midland, TX 79705		City, State ZIP: Carlsbad, NM 88220	
Phone: (432) 236-3849		Email: emorano@ltenv.com, dmori@ltenv.com	
Project Name: Carral Canyon 3H		Turn Around	
Project Number: 012919248		Routine ☐	
Project Location: Eddy County		Rush: 24 hrs	
Sampler's Name: Ezequiel Moreno		Due Date:	
PO #:		Quote #:	

SAMPLE RECEIPT				ANALYSIS REQUEST												Preservative Codes							
Temperature (°C):	Temp Blank:	Yes	No	Wet Ice:	Yes	No													MeOH: Me				
Received Intact:	Yes	No	Thermometer ID													None: NO							
Cooler Custody Seals:	Yes	No	Correction Factor:													HNO ₃ : HN							
Sample Custody Seals:	Yes	No	Total Containers:													H ₂ SO ₄ : H2							
																HCL: HL							
																NaOH: Na							
																Zn Acetate+ NaOH: Zn							
																TAT starts the day received by the lab, if received by 4:00pm							
Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers													Sample Comments				
	PH07B	5	4/16/20	1205	2'	1	X	TPH (EPA 8015)	X	BTEX (EPA 0-8021)	X	Chloride (EPA 300.0)											
	PH07C			1210	4'																		
	PH08B			1218	2'																		
	PH08C			1224	4'																		
	PH10B			1253	2'																		
	PH10C			1300	4'																		
	PH11B			1310	2'																		
	PH11C			1316	4'																		

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 Xenenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenenco 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 Xenenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>Ezequiel Moreno</i>	<i>Christy</i>	4/16/20 7:00 am	<i>Christy</i>	<i>Christy</i>	04/20/20 8:21

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 04.20.2020 08.21.00 AM

Work Order #: 659235

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)?	1.6
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	No
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

PH Device/Lot#:

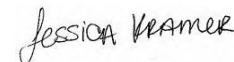
Checklist completed by:



Elizabeth McClellan

Date: 04.20.2020

Checklist reviewed by:



Jessica Kramer

Date: 04.21.2020

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 8299

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 8299
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jnobui	In future get pre-approved background locations for samples.	1/19/2022