



August 11, 2025

New Mexico Oil Conservation Division

1220 South St. Francis Drive
Santa Fe, New Mexico 87505

**Re: Closure Request
Corral Canyon Federal Com #016H
Incident Number nMAP1823050748
Eddy County, New Mexico**

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of XTO Energy, Inc. (XTO), has prepared this *Closure Request* to document excavation and soil sampling activities performed at the Corral Canyon Federal Com #016H (Site). The purpose of the excavation and soil sampling activities was to address impacts to soil following a release of crude oil and produced water at the Site. XTO is submitting this *Closure Request*, describing excavation activities that have occurred and requesting no further remediation for Incident Number nMAP1823050748.

RELEASE BACKGROUND AND SITE SUMMARY

The Site is located in Unit P, Section 5, Township 25 South, Range 29 East, in Eddy County, New Mexico (32.152790°, -104.000422°) and is associated with oil and gas exploration and production operations on Federal land managed by the Bureau of Land Management (BLM).

On August 3, 2018, a fire started from a static spark at the Site. During flowback operations, workers on site noticed a flame coming from the gas buster tank. The master valve was shut and the site evacuated. The fire resulted in the release of 1 barrel (bbl) of crude oil and 95 barrels (bbls) of produced water. A vacuum truck was dispatched to the Site to recover free-standing fluid; approximately 1 bbl of crude oil and 79 bbls of produced water were recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 (Form C-141) on August 17, 2018, and was assigned Remediation Permit (RP) Number 2RP-4929 and Incident Number nMAP1823050748 (Appendix A).

The release was included in the Compliance Agreement for Remediation for Historical Releases (Compliance Agreement) between XTO and the NMOCD effective November 13, 2018. The purpose of the Compliance Agreement was to ensure that 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.

Excavation of impacted soil was completed in 2019. A *Closure Request* was submitted on July 19, 2019. NMOCD denied the *Closure Request* on February 20, 2023, and requested additional depth to water data, due to concerns that laboratory analytical results for confirmation soil sample exceeded the strictest Table I Closure Criteria. XTO's environmental department did not receive the denial email from the NMOCD and inadvertently missed the response deadline. XTO became aware of the denial through

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an audit listing this release, among others, as outstanding. The "XTO 2018 Incidents requiring immediate action" list was sent to XTO by Mr. Cory Smith on May 5, 2023. XTO corresponded with the NMOCD to clarify that all final confirmation soil sample results were in compliance with the strictest Table I Closure Criteria, which was applied to the Site. The discussions resulted in a request for an updated report, which is provided below.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized to determine the applicability of Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC). Results from the characterization desktop review are presented below.

Depth to groundwater at the Site is between 51 and 100 feet below ground surface (bgs) based on the nearest groundwater well data. On July 18 2019, the New Mexico Office of the State Engineer (OSE) permitted temporary monitoring well (C-4324 POD 8) was advanced to a depth of 70 feet bgs via sonic drilling method. The borehole was located approximately 0.1 miles east of the Site. The depth of ground water first encountered is recorded at 65 feet bgs. The monitoring well was subsequently plugged. The Well Record & Log is provided in Appendix A.

The closest continuously flowing or significant watercourse to the Site is a dry wash located 1,820 feet to the southeast. 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 underlain by potentially unstable geology (medium potential karst designation area). Potential Site receptors are identified on Figure 1.

Based on the results of the Site Characterization, the following NMOCD Table I Closure Criteria (Closure Criteria) were applied:

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

EXCAVATION AND SOIL SAMPLING ACTIVITIES

From January 4 through January 21, 2019, LT Environmental, Inc. (LTE) personnel oversaw excavation of impacted soil and collected confirmation soil samples. Excavation activities were performed by the use of heavy equipment. To direct excavation activities, soil was field screened for volatile organic compounds and chloride. Once field screening indicated impacted soil was adequately removed, 5-point composite soil samples were collected every 200 square feet from the floor and sidewalls of the excavation extent. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Confirmation soil samples FS01 through FS56 were collected from the floor of the excavation at depths ranging from 0.5 feet to 10 feet bgs. Confirmation soil samples SW01 through SW08 were collected from the sidewalls of the excavation at depths ranging from ground surface to 5.5 feet bgs. The slope of the excavation, for areas deeper than 5.5 feet bgs, was included in the confirmation floor soil samples. The excavation extent and confirmation soil sample locations are presented on Figure 2. Photographic documentation is included in Appendix B.

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The soil samples were placed directly into precleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were shipped under strict chain-of-custody procedures to Xenco Laboratories (Xenco) in Midland, Texas, for analysis of the following contaminants of concern (COCs): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

The excavation extent measured approximately 10,627 square feet in area. A total of approximately 1,968 cubic yards of impacted soil were removed from the excavation. The impacted soil was transported and properly disposed of at the R360 Landfill Facility located in Orla, Texas. The final excavation extent was backfilled with material purchased locally and recontoured to match pre-existing Site conditions.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for all confirmation soil samples from the excavation indicated all COCs were in compliance with Closure Criteria. Laboratory analytical results indicated TPH and/or chloride concentrations in confirmation floor soil samples FS19, FS28, FS31, and FS53 through FS55 exceeded Closure Criteria which was subsequently excavated. Laboratory analytical results for subsequent confirmation floor soil samples FS19A, FS28B, FS31B, and FS53A through FS55A indicated all COCs were compliant with the Closure Criteria. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included in Appendix C.

CLOSURE REQUEST

Excavation activities were conducted at the Site to address the August 2018 release of crude oil and produced water. Laboratory analytical results for all final excavation soil samples indicated all COC concentrations were compliant with the Closure Criteria. Based on the soil sample laboratory analytical results, no further remediation is required.

Excavation of soil has removed impacted soil from the area. XTO believes these remedial actions are protective of human health, the environment, and groundwater. As such, XTO respectfully requests closure for Incident Number nMAP1823050748, Remediation Permit Number 2RP-4929.

If you have any questions or comments, please contact Ms. Tacoma Morrissey at (337) 257-8307 or tmorrissey@ensolum.com.

Sincerely,
Ensolum, LLC



Kim Thomason
Senior Technician



Tacoma Morrissey, M.S.
Associate Principal

cc: Kaylan Dirkx, XTO
Robert Woodall, XTO
Bureau of Land Management

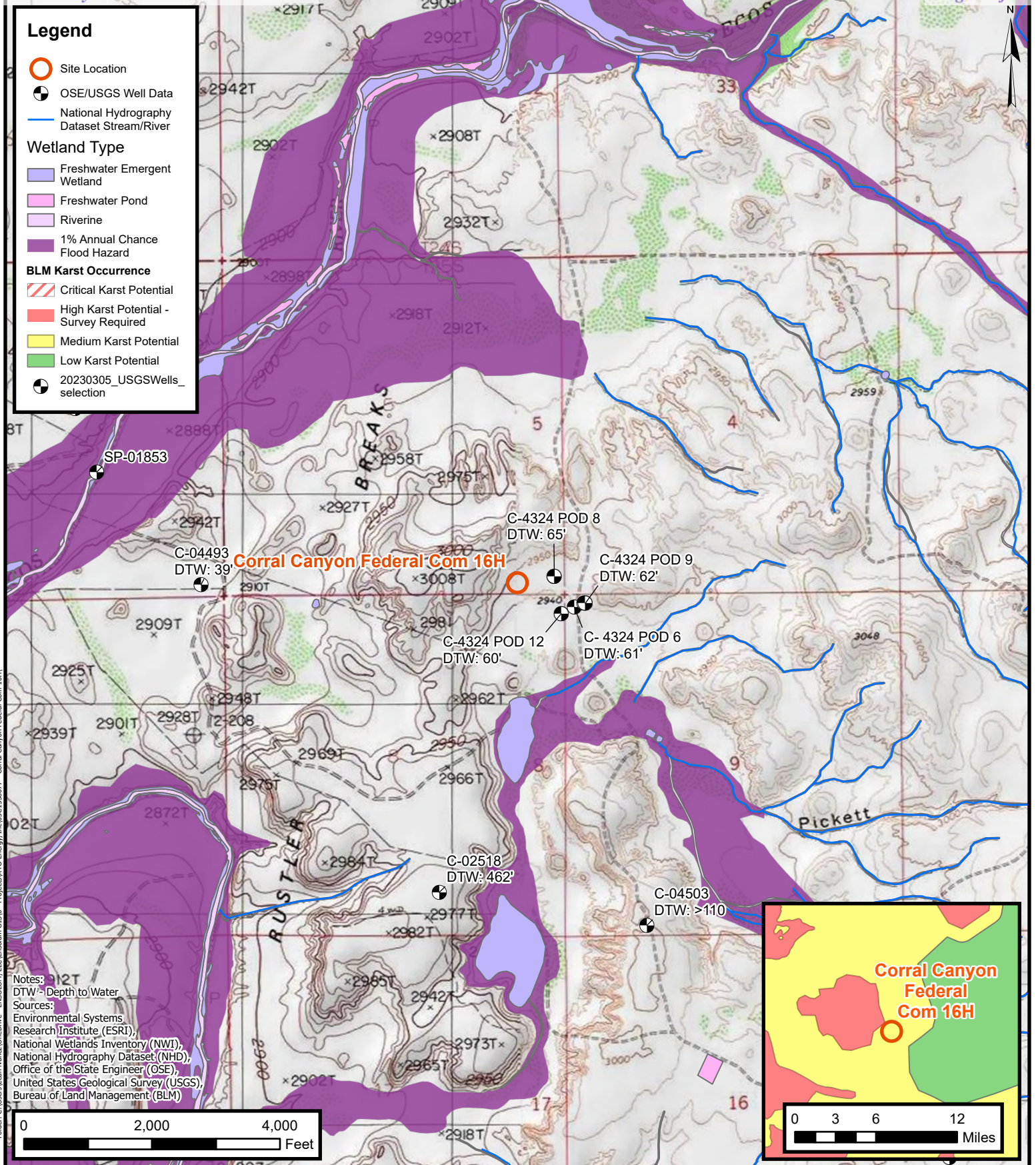
XTO Energy, Inc.
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Appendices:

Figure 1	Site Receptor Map
Figure 2	Confirmation Soil Sample Locations
Table 1	Soil Sample Analytical Results
Appendix A	Referenced Well Record
Appendix B	Photographic Logs
Appendix C	Laboratory Analytical Reports and Chain-of-Custody Documentation



FIGURES



Site Receptor Map

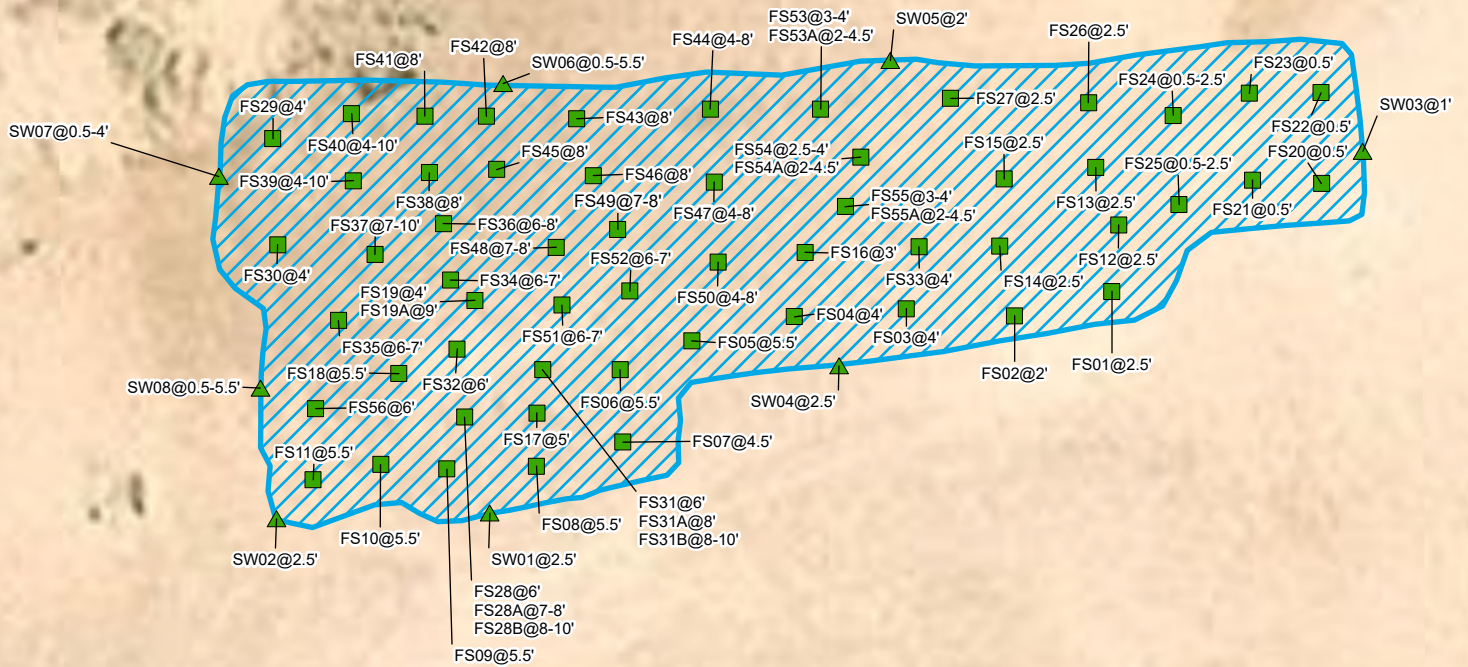
XTO Energy, Inc.
Corral Canyon Federal Com 16H
Incident Number: nMAP1823050748
Unit P, Section 05, T 25S, R 29E
Eddy County, New Mexico

FIGURE

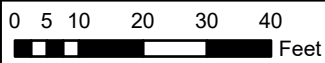
1

Legend

- Confirmation Floor Sample in Compliance with Closure Criteria
- ▲ Confirmation Sidewall Sample in Compliance with Closure Criteria
- ▨ Excavation Extent



Notes:
Sample ID @ Depth Below Ground Surface.



Sources: Environmental Systems Research Institute (ESRI)

Confirmation Soil Sample Location

XTO Energy, Inc.
Corral Canyon Federal Com #016H
Incident Number: nMAP1823050748
Unit P, Section 05, T 25S, R 29E
Eddy County, New Mexico

FIGURE**2**



TABLES



TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
 Corral Canyon Federal Com #016H
 XTO Energy, Inc.
 Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
Confirmation Soil Samples										
FS01	01/04/2019	2.5	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	163
FS02	01/04/2019	2	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	211
FS03	01/04/2019	4	<0.00202	<0.00202	<15.0	45.7	<15.0	45.7	45.7	83.6
FS04	01/04/2019	4	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	148
FS05	01/07/2019	5.5	<0.00200	<0.00200	<15.0	15.6	<15.0	15.6	15.6	132
FS06	01/07/2019	5.5	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	136
FS07	01/07/2019	4.5	<0.00200	<0.00200	16.7	<15.0	<15.0	16.7	16.7	173
FS08	01/08/2019	5.5	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	227
FS09	01/08/2019	5.5	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	318
FS10	01/08/2019	5.5	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	307
FS11	01/08/2019	5.5	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	65.8
FS12	01/08/2019	2.5	<0.0020	<0.0020	<15.0	<15.0	<15.0	<15.0	<15.0	244
FS13	01/08/2019	2.5	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	425
FS14	01/08/2019	2.5	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	149
FS15	01/08/2019	2.5	<0.00202	<0.00202	32.2	<15.0	<15.0	32.2	32.2	240
FS16	01/08/2019	3	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	70.9
FS17	01/08/2019	5	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	228
FS18	01/08/2019	5.5	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	427
FS19A	04/01/2019	9	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	253
FS20	01/11/2019	0.5	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	308
FS21	01/11/2019	0.5	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	357
FS22	01/16/2019	0.5	<0.00201	<0.00201	<14.9	<14.9	<14.9	<14.9	<14.9	322
FS23	01/16/2019	0.5	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	297
FS24	01/16/2019	0.5-2.5	<0.00201	<0.00201	<15.0	18.6	<15.0	18.6	18.6	331
FS25	01/16/2019	0.5-2.5	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	469
FS26	01/16/2019	2.5	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	233
FS27	01/16/2019	2.5	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	212
FS28B	04/30/2019	8-10	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	130
FS29	01/17/2019	4	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	280
FS30	01/17/2019	4	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	274



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Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
FS31B	04/30/2019	8-10	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	129
FS32	01/17/2019	6	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	457
FS33	01/17/2019	4	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	116
FS34	01/21/2019	6-7	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	269
FS35	01/21/2019	6-7	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	361
FS36	01/21/2019	6-8	<0.00201	<0.00201	<15.0	20.9	<15.0	20.9	20.9	242
FS37	01/21/2019	7-10	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	127
FS38	01/21/2019	8	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	133
FS39	01/21/2019	4-10	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	369
FS40	01/21/2019	4-10	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	170
FS41	01/21/2019	8	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	146
FS42	01/21/2019	8	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	178
FS43	01/21/2019	8	<0.00199	<0.00199	<14.9	<14.9	<14.9	<14.9	<14.9	150
FS44	01/21/2019	4-8	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	177
FS45	01/21/2019	8	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	314
FS46	01/21/2019	8	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	236
FS47	01/21/2019	4-8	<0.00200	<0.00200	<15.0	15.9	<15.0	15.9	15.9	358
FS48	01/21/2019	7-8	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	400
FS49	01/21/2019	7-8	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	282
FS50	01/21/2019	4-8	<0.00201	<0.00201	<14.9	<14.9	<14.9	<14.9	<14.9	126
FS51	01/21/2019	6-7	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	435
FS52	01/21/2019	6-7	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	399
FS53A	04/01/2019	2-4.5	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	247
FS54A	04/01/2019	2-4.5	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	375
FS55A	04/01/2019	2-4.5	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	129
FS56	01/18/2019	6	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	351
SW01	01/04/2019	2.5	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	120
SW02	01/04/2019	2.5	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	295
SW03	01/11/2019	1	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	133
SW04	01/07/2019	2.5	<0.00201	<0.00201	17.3	<15.0	<15.0	17.3	17.3	325
SW05	01/11/2019	2	<0.00202	<0.00202	<15.0	20.7	<15.0	20.7	20.7	298



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 Corral Canyon Federal Com #016H
 XTO Energy, Inc.
 Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
SW06	01/16/2019	0.5-5.5	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	203
SW07	01/17/2019	0.5-4	<0.00201	<0.00201	<14.9	<14.9	<14.9	<14.9	<14.9	144
SW08	01/16/2019	0.5-5.5	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	308

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

Concentrations in **bold** exceed the NMOCD Table 1 Closure Criteria or reclamation requirement where applicable.

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

NMAC: New Mexico Administrative Code

Grey text indicates soil sample removed during excavation activities



APPENDIX A

Referenced Well Record



PLUGGING RECORD



NOTE: A Well Plugging Plan of Operations shall be approved by the State Engineer prior to plugging - 19.27.4 NMAC

I. GENERAL / WELL OWNERSHIP:

State Engineer Well Number: G-4323 POD 8 (MW02)

Well owner: XTO Energy, Inc.

Phone No.: 432-221-7331

Mailing address: 522 W Mermod Suit 704

City: Carlsbad

State: NM

Zip code: 88220

II. WELL PLUGGING INFORMATION:

- 1) Name of well drilling company that plugged well: Jackie D. Atkins (Atkins Engineering Associates Inc.)
- 2) New Mexico Well Driller License No.: 1249 Expiration Date: 04/30/23
- 3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Shane Eldridge
- 4) Date well plugging began: 1/05/2022 Date well plugging concluded: 1/05/2022
- 5) GPS Well Location: Latitude: 32 deg, 9 min, 10.01 sec
Longitude: 103 deg, 59 min, 54.38 sec, WGS 84
- 6) Depth of well confirmed at initiation of plugging as: 70.95 ft below ground level (bgl),
by the following manner: weighted tape
- 7) Static water level measured at initiation of plugging: 63.68 ft bgl
- 8) Date well plugging plan of operations was approved by the State Engineer: 2/26/2021
- 9) Were all plugging activities consistent with an approved plugging plan? Yes If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):

OSE DTI JAN 7 2022 PM 1:39

- For each interval plugged, describe within the following columns:**

[illegible]

MULTIPLY		BY	AND OBTAIN
cubic feet	x	7.4805	= gallons
cubic yards	x	201.97	= gallons

OSE DII JAN 7 2022 PM1:39

I, Jackie D. Atkins, say that I am familiar with the rules of the Office of the State Engineer pertaining to the plugging of wells and that each and all of the statements in this Plugging Record and attachments are true to the best of my knowledge and belief.

Jack Atkins

01/07/2022

Date _____

2022-1-7_C-4323-pod8__WD-11 Plugging Record

Final Audit Report

2022-01-07

Created:	2022-01-07
By:	Lucas Middleton (lucas@atkinseng.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAANmYNHH8R5wc4ezc9CnfxGGDfkGmuMWbH

"2022-1-7_C-4323-pod8__WD-11 Plugging Record" History

-  Document created by Lucas Middleton (lucas@atkinseng.com)
2022-01-07 - 5:18:10 PM GMT- IP address: 69.21.248.123
-  Document emailed to Jack Atkins (jack@atkinseng.com) for signature
2022-01-07 - 5:18:35 PM GMT
-  Email viewed by Jack Atkins (jack@atkinseng.com)
2022-01-07 - 5:19:01 PM GMT- IP address: 64.90.153.232
-  Document e-signed by Jack Atkins (jack@atkinseng.com)
Signature Date: 2022-01-07 - 5:19:15 PM GMT - Time Source: server- IP address: 64.90.153.232
-  Agreement completed.
2022-01-07 - 5:19:15 PM GMT

DSE DIT JAN 7 2022 PM 1:39



APPENDIX B

Photographic Log



Photographic Log

XTO Energy, Inc

Corral Canyon Federal Com #016H

Incident Number nMAP1823050748



Photograph 1 Date: 01/02/2019
Description: View of release foot print
View: East



Photograph 2 Date: 04/30/2019
Description: View of excavation
View: West



Photograph 3 Date: 07/14/2025
Description: View of backfilled excavation
View: South



Photograph 4 Date: 07/14/2025
Description: View of backfilled excavation
View: Southeast



APPENDIX C

Laboratory Analytical Reports & Chain of Custody Documentation

Analytical Report 610541

for

LT Environmental, Inc.

Project Manager: Adrian Baker

Corral Canyon Federal Com 16H

11-JAN-19

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-18-28), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)

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

Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)

Xenco-Atlanta (LELAP Lab ID #04176)

Xenco-Tampa: Florida (E87429)

Xenco-Lakeland: Florida (E84098)



11-JAN-19

Project Manager: **Adrian Baker**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **610541**

Corral Canyon Federal Com 16H

Project Address: Delaware Basin

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 610541. 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. 610541 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 610541****LT Environmental, Inc., Arvada, CO**

Corral Canyon Federal Com 16H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	01-04-19 15:30	2.5 ft	610541-001
FS02	S	01-04-19 15:35	2.0 ft	610541-002
FS03	S	01-04-19 15:50	4.0 ft	610541-003
FS04	S	01-04-19 16:00	4,0 ft	610541-004
SW01	S	01-04-19 14:30	2.5 ft	610541-005
SW02	S	01-04-19 16:15	2.5 ft	610541-006
PH01A	S	01-02-19 14:00	2 ft	610541-007
PH01B	S	01-02-19 14:05	4 ft	610541-008



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Corral Canyon Federal Com 16H

Project ID:

Work Order Number(s): 610541

Report Date: 11-JAN-19

Date Received: 01/08/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3075310 BTEX by EPA 8021B

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

Batch: LBA-3075387 TPH by SW8015 Mod

Surrogate 1-Chlorooctane, Surrogate o-Terphenyl recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 610541-001 S, 610541-001 SD.



Certificate of Analysis Summary 610541

LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon Federal Com 16H



Project Id:

Contact: Adrian Baker

Project Location: Delaware Basin

Date Received in Lab: Tue Jan-08-19 01:20 pm

Report Date: 11-JAN-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	610541-001	610541-002	610541-003	610541-004	610541-005	610541-006
	<i>Field Id:</i>	FS01	FS02	FS03	FS04	SW01	SW02
	<i>Depth:</i>	2.5- ft	2.0- ft	4.0- ft	4.0- ft	2.5- ft	2.5- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jan-04-19 15:30	Jan-04-19 15:35	Jan-04-19 15:50	Jan-04-19 16:00	Jan-04-19 14:30	Jan-04-19 16:15
BTEX by EPA 8021B	<i>Extracted:</i>	Jan-09-19 08:15	Jan-09-19 08:15	Jan-09-19 08:15	Jan-09-19 08:15	Jan-09-19 08:15	Jan-09-19 08:15
	<i>Analyzed:</i>	Jan-09-19 10:57	Jan-09-19 11:16	Jan-09-19 11:35	Jan-09-19 11:54	Jan-09-19 12:13	Jan-09-19 12:32
	<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	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200
Toluene		<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200
Ethylbenzene		<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200
m,p-Xylenes		<0.00398 0.00398	<0.00399 0.00399	<0.00403 0.00403	<0.00401 0.00401	<0.00398 0.00398	<0.00399 0.00399
o-Xylene		<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200
Total Xylenes		<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200
Total BTEX		<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200
Inorganic Anions by EPA 300	<i>Extracted:</i>	Jan-10-19 08:30	Jan-10-19 08:30	Jan-10-19 08:30	Jan-10-19 08:30	Jan-10-19 08:30	Jan-10-19 08:30
	<i>Analyzed:</i>	Jan-10-19 14:37	Jan-10-19 14:58	Jan-10-19 15:05	Jan-10-19 15:11	Jan-10-19 15:17	Jan-10-19 15:23
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		163 4.99	211 4.96	83.6 4.96	148 4.96	120 4.96	295 4.96
TPH by SW8015 Mod	<i>Extracted:</i>	Jan-09-19 10:00	Jan-09-19 10:00	Jan-09-19 10:00	Jan-09-19 10:00	Jan-09-19 10:00	Jan-09-19 10:00
	<i>Analyzed:</i>	Jan-09-19 13:11	Jan-09-19 14:50	Jan-09-19 17:07	Jan-09-19 17:27	Jan-09-19 17:47	Jan-09-19 18:07
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0	45.7 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total TPH		<15.0 15.0	<15.0 15.0	45.7 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0

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

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 610541

LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon Federal Com 16H



Project Id:

Contact: Adrian Baker

Project Location: Delaware Basin

Date Received in Lab: Tue Jan-08-19 01:20 pm

Report Date: 11-JAN-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	610541-007	610541-008				
	Field Id:	PH01A	PH01B				
	Depth:	2- ft	4- ft				
	Matrix:	SOIL	SOIL				
	Sampled:	Jan-02-19 14:00	Jan-02-19 14:05				
BTEX by EPA 8021B	Extracted:	Jan-09-19 08:15	Jan-09-19 08:15				
	Analyzed:	Jan-09-19 12:51	Jan-09-19 13:10				
	Units/RL:	mg/kg RL	mg/kg RL				
	Benzene	<0.00201 0.00201	<0.00200 0.00200				
	Toluene	<0.00201 0.00201	<0.00200 0.00200				
Ethylbenzene		<0.00201 0.00201	<0.00200 0.00200				
m,p-Xylenes		<0.00402 0.00402	<0.00400 0.00400				
o-Xylene		<0.00201 0.00201	<0.00200 0.00200				
Total Xylenes		<0.00201 0.00201	<0.00200 0.00200				
Total BTEX		<0.00201 0.00201	<0.00200 0.00200				
Inorganic Anions by EPA 300	Extracted:	Jan-10-19 08:30	Jan-10-19 08:30				
	Analyzed:	Jan-10-19 15:29	Jan-10-19 15:35				
	Units/RL:	mg/kg RL	mg/kg RL				
	Chloride	292 4.98	134 4.97				
TPH by SW8015 Mod	Extracted:	Jan-09-19 10:00	Jan-09-19 10:00				
	Analyzed:	Jan-09-19 18:26	Jan-09-19 18:46				
	Units/RL:	mg/kg RL	mg/kg RL				
	Gasoline Range Hydrocarbons (GRO)	19.3 15.0	<15.0 15.0				
	Diesel Range Organics (DRO)	<15.0 15.0	<15.0 15.0				
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0				
Total TPH		19.3 15.0	<15.0 15.0				

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

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

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analytical Results 610541

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal Com 16H

Sample Id: **FS01**
 Lab Sample Id: 610541-001

Matrix: Soil
 Date Collected: 01.04.19 15.30

Date Received: 01.08.19 13.20
 Sample Depth: 2.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3075437

Date Prep: 01.10.19 08.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	163	4.99	mg/kg	01.10.19 14.37		1

Analytical Method: TPH by SW8015 Mod

Tech: ALJ

Analyst: ALJ

Seq Number: 3075387

Date Prep: 01.09.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.09.19 13.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.09.19 13.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.09.19 13.11	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.09.19 13.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	77	%	70-135	01.09.19 13.11	
o-Terphenyl	84-15-1	78	%	70-135	01.09.19 13.11	



Certificate of Analytical Results 610541



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal Com 16H

Sample Id: **FS01**
Lab Sample Id: 610541-001

Matrix: Soil
Date Collected: 01.04.19 15.30

Date Received: 01.08.19 13.20
Sample Depth: 2.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3075310

Date Prep: 01.09.19 08.15

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.09.19 10.57	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.09.19 10.57	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.09.19 10.57	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.09.19 10.57	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.09.19 10.57	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.09.19 10.57	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.09.19 10.57	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	112	%	70-130	01.09.19 10.57		
4-Bromofluorobenzene	460-00-4	104	%	70-130	01.09.19 10.57		



Certificate of Analytical Results 610541

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal Com 16H

Sample Id: **FS02** Matrix: Soil Date Received: 01.08.19 13.20
 Lab Sample Id: 610541-002 Date Collected: 01.04.19 15.35 Sample Depth: 2.0 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 01.10.19 08.30 Basis: Wet Weight
 Seq Number: 3075437

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	211	4.96	mg/kg	01.10.19 14.58		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ALJ % Moisture:
 Analyst: ALJ Date Prep: 01.09.19 10.00 Basis: Wet Weight
 Seq Number: 3075387

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.09.19 14.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.09.19 14.50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.09.19 14.50	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.09.19 14.50	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	76	%	70-135	01.09.19 14.50		
o-Terphenyl	84-15-1	77	%	70-135	01.09.19 14.50		



Certificate of Analytical Results 610541

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal Com 16H

Sample Id: **FS02**
 Lab Sample Id: 610541-002

Matrix: Soil
 Date Collected: 01.04.19 15.35

Date Received: 01.08.19 13.20
 Sample Depth: 2.0 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3075310

Date Prep: 01.09.19 08.15

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.09.19 11.16	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.09.19 11.16	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.09.19 11.16	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.09.19 11.16	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.09.19 11.16	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.09.19 11.16	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.09.19 11.16	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	114	%	70-130	01.09.19 11.16		
4-Bromofluorobenzene	460-00-4	100	%	70-130	01.09.19 11.16		



Certificate of Analytical Results 610541

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal Com 16H

Sample Id: **FS03**
 Lab Sample Id: 610541-003

Matrix: Soil
 Date Collected: 01.04.19 15.50

Date Received: 01.08.19 13.20
 Sample Depth: 4.0 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3075437

Date Prep: 01.10.19 08.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	83.6	4.96	mg/kg	01.10.19 15.05		1

Analytical Method: TPH by SW8015 Mod

Tech: ALJ

Analyst: ALJ

Seq Number: 3075387

Date Prep: 01.09.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.09.19 17.07	U	1
Diesel Range Organics (DRO)	C10C28DRO	45.7	15.0	mg/kg	01.09.19 17.07		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.09.19 17.07	U	1
Total TPH	PHC635	45.7	15.0	mg/kg	01.09.19 17.07		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	79	%	70-135	01.09.19 17.07	
o-Terphenyl	84-15-1	80	%	70-135	01.09.19 17.07	



Certificate of Analytical Results 610541

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal Com 16H

Sample Id: **FS03**
 Lab Sample Id: 610541-003

Matrix: Soil
 Date Collected: 01.04.19 15.50

Date Received: 01.08.19 13.20
 Sample Depth: 4.0 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3075310

Date Prep: 01.09.19 08.15

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.09.19 11.35	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.09.19 11.35	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.09.19 11.35	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	01.09.19 11.35	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.09.19 11.35	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	01.09.19 11.35	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.09.19 11.35	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	103	%	70-130	01.09.19 11.35		
1,4-Difluorobenzene	540-36-3	115	%	70-130	01.09.19 11.35		



Certificate of Analytical Results 610541

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal Com 16H

Sample Id: **FS04**
 Lab Sample Id: 610541-004

Matrix: Soil
 Date Collected: 01.04.19 16.00

Date Received: 01.08.19 13.20
 Sample Depth: 4,0 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3075437

Date Prep: 01.10.19 08.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	148	4.96	mg/kg	01.10.19 15.11		1

Analytical Method: TPH by SW8015 Mod

Tech: ALJ

Analyst: ALJ

Seq Number: 3075387

Date Prep: 01.09.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.09.19 17.27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.09.19 17.27	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.09.19 17.27	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.09.19 17.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	81	%	70-135	01.09.19 17.27	
o-Terphenyl	84-15-1	82	%	70-135	01.09.19 17.27	



Certificate of Analytical Results 610541

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal Com 16H

Sample Id: **FS04**
 Lab Sample Id: 610541-004

Matrix: Soil
 Date Collected: 01.04.19 16.00

Date Received: 01.08.19 13.20
 Sample Depth: 4.0 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3075310

Date Prep: 01.09.19 08.15

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.09.19 11.54	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.09.19 11.54	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.09.19 11.54	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	01.09.19 11.54	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.09.19 11.54	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.09.19 11.54	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.09.19 11.54	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	115	%	70-130	01.09.19 11.54		
4-Bromofluorobenzene	460-00-4	101	%	70-130	01.09.19 11.54		



Certificate of Analytical Results 610541

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal Com 16H

Sample Id: **SW01**
 Lab Sample Id: 610541-005

Matrix: Soil
 Date Collected: 01.04.19 14.30

Date Received: 01.08.19 13.20
 Sample Depth: 2.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3075437

Date Prep: 01.10.19 08.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	120	4.96	mg/kg	01.10.19 15.17		1

Analytical Method: TPH by SW8015 Mod

Tech: ALJ

Analyst: ALJ

Seq Number: 3075387

Date Prep: 01.09.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.09.19 17.47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.09.19 17.47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.09.19 17.47	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.09.19 17.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	83	%	70-135	01.09.19 17.47	
o-Terphenyl	84-15-1	84	%	70-135	01.09.19 17.47	



Certificate of Analytical Results 610541

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal Com 16H

Sample Id: **SW01**
 Lab Sample Id: 610541-005

Matrix: Soil
 Date Collected: 01.04.19 14.30

Date Received: 01.08.19 13.20
 Sample Depth: 2.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3075310

Date Prep: 01.09.19 08.15

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.09.19 12.13	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.09.19 12.13	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.09.19 12.13	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.09.19 12.13	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.09.19 12.13	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.09.19 12.13	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.09.19 12.13	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	115	%	70-130	01.09.19 12.13		
4-Bromofluorobenzene	460-00-4	102	%	70-130	01.09.19 12.13		



Certificate of Analytical Results 610541

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal Com 16H

Sample Id: **SW02**
 Lab Sample Id: 610541-006

Matrix: Soil
 Date Collected: 01.04.19 16.15

Date Received: 01.08.19 13.20
 Sample Depth: 2.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3075437

Date Prep: 01.10.19 08.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	295	4.96	mg/kg	01.10.19 15.23		1

Analytical Method: TPH by SW8015 Mod

Tech: ALJ

Analyst: ALJ

Seq Number: 3075387

Date Prep: 01.09.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.09.19 18.07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.09.19 18.07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.09.19 18.07	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.09.19 18.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	01.09.19 18.07	
o-Terphenyl	84-15-1	89	%	70-135	01.09.19 18.07	



Certificate of Analytical Results 610541

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal Com 16H

Sample Id: **SW02**
 Lab Sample Id: 610541-006

Matrix: Soil
 Date Collected: 01.04.19 16.15

Date Received: 01.08.19 13.20
 Sample Depth: 2.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3075310

Date Prep: 01.09.19 08.15

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.09.19 12.32	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.09.19 12.32	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.09.19 12.32	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.09.19 12.32	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.09.19 12.32	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.09.19 12.32	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.09.19 12.32	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	102	%	70-130	01.09.19 12.32		
1,4-Difluorobenzene	540-36-3	115	%	70-130	01.09.19 12.32		



Certificate of Analytical Results 610541

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal Com 16H

Sample Id: **PH01A**
 Lab Sample Id: 610541-007

Matrix: Soil
 Date Collected: 01.02.19 14.00

Date Received: 01.08.19 13.20
 Sample Depth: 2 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3075437

Date Prep: 01.10.19 08.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	292	4.98	mg/kg	01.10.19 15.29		1

Analytical Method: TPH by SW8015 Mod

Tech: ALJ

Analyst: ALJ

Seq Number: 3075387

Date Prep: 01.09.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	19.3	15.0	mg/kg	01.09.19 18.26		1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.09.19 18.26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.09.19 18.26	U	1
Total TPH	PHC635	19.3	15.0	mg/kg	01.09.19 18.26		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	81	%	70-135	01.09.19 18.26	
o-Terphenyl	84-15-1	80	%	70-135	01.09.19 18.26	



Certificate of Analytical Results 610541

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal Com 16H

Sample Id: **PH01A**
 Lab Sample Id: 610541-007

Matrix: Soil
 Date Collected: 01.02.19 14.00

Date Received: 01.08.19 13.20
 Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3075310

Date Prep: 01.09.19 08.15

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.09.19 12.51	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.09.19 12.51	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.09.19 12.51	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.09.19 12.51	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.09.19 12.51	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	01.09.19 12.51	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.09.19 12.51	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	102	%	70-130	01.09.19 12.51		
1,4-Difluorobenzene	540-36-3	115	%	70-130	01.09.19 12.51		



Certificate of Analytical Results 610541

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal Com 16H

Sample Id: **PH01B**
 Lab Sample Id: 610541-008

Matrix: Soil
 Date Collected: 01.02.19 14.05

Date Received: 01.08.19 13.20
 Sample Depth: 4 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3075437

Date Prep: 01.10.19 08.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	134	4.97	mg/kg	01.10.19 15.35		1

Analytical Method: TPH by SW8015 Mod

Tech: ALJ

Analyst: ALJ

Seq Number: 3075387

Date Prep: 01.09.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.09.19 18.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.09.19 18.46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.09.19 18.46	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.09.19 18.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	83	%	70-135	01.09.19 18.46	
o-Terphenyl	84-15-1	84	%	70-135	01.09.19 18.46	



Certificate of Analytical Results 610541

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal Com 16H

Sample Id: **PH01B**
 Lab Sample Id: 610541-008

Matrix: Soil
 Date Collected: 01.02.19 14.05

Date Received: 01.08.19 13.20
 Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3075310

Date Prep: 01.09.19 08.15

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.09.19 13.10	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.09.19 13.10	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.09.19 13.10	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.09.19 13.10	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.09.19 13.10	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.09.19 13.10	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.09.19 13.10	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	104	%	70-130	01.09.19 13.10		
1,4-Difluorobenzene	540-36-3	117	%	70-130	01.09.19 13.10		



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 Federal Com 16H

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3075437

MB Sample Id: 7669460-1-BLK

Matrix: Solid

LCS Sample Id: 7669460-1-BKS

Prep Method: E300P

Date Prep: 01.10.19

LCSD Sample Id: 7669460-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	255	102	244	98	90-110	4	20	mg/kg	01.10.19 12:30	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3075437

Parent Sample Id: 610538-006

Matrix: Soil

MS Sample Id: 610538-006 S

Prep Method: E300P

Date Prep: 01.10.19

MSD Sample Id: 610538-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	313	250	540	91	536	89	90-110	1	20	mg/kg	01.10.19 12:49	X

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3075437

Parent Sample Id: 610539-012

Matrix: Soil

MS Sample Id: 610539-012 S

Prep Method: E300P

Date Prep: 01.10.19

MSD Sample Id: 610539-012 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	6.95	249	262	102	247	96	90-110	6	20	mg/kg	01.10.19 14:18	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3075387

MB Sample Id: 7669469-1-BLK

Matrix: Solid

LCS Sample Id: 7669469-1-BKS

Prep Method: TX1005P

Date Prep: 01.09.19

LCSD Sample Id: 7669469-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	804	80	851	85	70-135	6	20	mg/kg	01.09.19 11:32	
Diesel Range Organics (DRO)	<8.13	1000	879	88	935	94	70-135	6	20	mg/kg	01.09.19 11:32	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	78		109		115		70-135	%	01.09.19 11:32
o-Terphenyl	79		107		109		70-135	%	01.09.19 11:32

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 Federal Com 16H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3075387

Parent Sample Id: 610541-001

Matrix: Soil

MS Sample Id: 610541-001 S

Prep Method: TX1005P

Date Prep: 01.09.19

MSD Sample Id: 610541-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	786	79	782	78	70-135	1	20	mg/kg	01.09.19 12:31	
Diesel Range Organics (DRO)	<8.13	1000	863	86	858	86	70-135	1	20	mg/kg	01.09.19 12:31	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	53	**	52	**	70-135	%	01.09.19 12:31
o-Terphenyl	47	**	47	**	70-135	%	01.09.19 12:31

Analytical Method: BTEX by EPA 8021B

Seq Number: 3075310

MB Sample Id: 7669467-1-BLK

Matrix: Solid

LCS Sample Id: 7669467-1-BKS

Prep Method: SW5030B

Date Prep: 01.09.19

LCSD Sample Id: 7669467-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000383	0.0996	0.117	117	0.119	119	70-130	2	35	mg/kg	01.09.19 09:05	
Toluene	<0.000454	0.0996	0.109	109	0.107	107	70-130	2	35	mg/kg	01.09.19 09:05	
Ethylbenzene	<0.000563	0.0996	0.103	103	0.101	101	70-130	2	35	mg/kg	01.09.19 09:05	
m,p-Xylenes	<0.00101	0.199	0.205	103	0.201	101	70-130	2	35	mg/kg	01.09.19 09:05	
o-Xylene	<0.000343	0.0996	0.0996	100	0.0963	96	70-130	3	35	mg/kg	01.09.19 09:05	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	109		104		104		70-130	%	01.09.19 09:05
4-Bromofluorobenzene	88		92		85		70-130	%	01.09.19 09:05

Analytical Method: BTEX by EPA 8021B

Seq Number: 3075310

Parent Sample Id: 610541-001

Matrix: Soil

MS Sample Id: 610541-001 S

Prep Method: SW5030B

Date Prep: 01.09.19

MSD Sample Id: 610541-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000386	0.100	0.105	105	0.0858	86	70-130	20	35	mg/kg	01.09.19 09:43	
Toluene	<0.000457	0.100	0.0932	93	0.100	101	70-130	7	35	mg/kg	01.09.19 09:43	
Ethylbenzene	<0.000566	0.100	0.0864	86	0.103	104	70-130	18	35	mg/kg	01.09.19 09:43	
m,p-Xylenes	<0.00102	0.200	0.171	86	0.189	95	70-130	10	35	mg/kg	01.09.19 09:43	
o-Xylene	<0.000345	0.100	0.0832	83	0.0938	94	70-130	12	35	mg/kg	01.09.19 09:43	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	110		102		70-130	%	01.09.19 09:43
4-Bromofluorobenzene	97		118		70-130	%	01.09.19 09:43

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: 1010541

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

www.xenco.com Page 1 of 1

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

Program: UST/PST	☐ RP	☐ Rowfields	☐ C	☐ Pertund
State of Project:				
Reporting Level II	☐ Level III	☐ BT/UST	☐ RP	☐ Level IV
Deliverables: EDD	☐	ADAPT	☐	Other:

Project Name:	Cerral Canyon Federal Camp 11th	Turn Around	
Project Number:		Routine	☒
P.O. Number:	222	Rush:	
Sampler's Name:	Anna Byers	Due Date:	

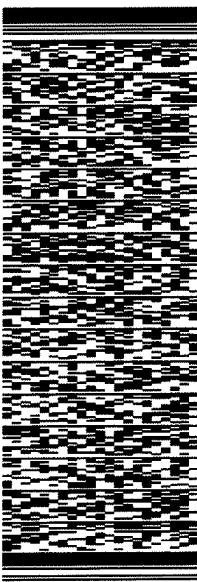
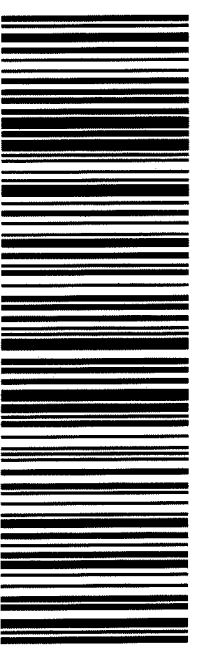
SAMPLE RECEIPT	Temp/Blank	Yes	No	Wet Ice	Yes	No	ANALYSIS REQUEST			Work Order Notes
							TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)	
Temperature (°C):	23.00									
Received Intact:	Yes									
Cooler Custody Seals:	Yes									
Sample Custody Seals:	Yes									

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)	Sample Comments
ES01	S	1/4/19	1530	2.5'	1	X	X	X	
ES02	S	1/4/19	1545	2.0'	1	X	X	X	
ES03	S	1/4/19	1550	4.0'	1	X	X	X	
ES04	S	1/4/19	1600	4.0'	1	X	X	X	
BW01	S	1/4/19	1430	2.5'	1	X	X	X	average depth (6"-4')
BW02	S	1/4/19	1615	2.5'	1	X	X	X	average depth (6"-4')
PH01A	S	1/2/19	1400	2'	1	X	X	X	
PH01B	S	1/2/19	1405	4'	1	X	X	X	

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Anna Byers	Anna Byers	01/07/19 @ 6:30	Anna Byers	Anna Byers	1/19/19

ORIGIN ID:CAOA (575) 887-6245 XENCO PAC N MAIL 910 W PIERCE ST CARLSBAD, NM 88220 UNITED STATES US		SHIP DATE: 07 JAN 19 ACTWGT: 44.00 LB CAD: 1018131091NET14040 DIMS: 26x14x16 IN BILL RECIPIENT
TO HOLD FOR XENCO FEDEX EXPRESS SHIP CENTER FEDEX SHIP CENTER 3600 COUNTY RD 1276 S MIDLAND TX 79711 (806) 794-1296 REF:		
DEPT:		
TRK# 7741 3339 1513 0201 TUE - 08 JAN HOLD STANDARD OVERNIGHT HLD MAFA TX-US LBB 41 MAFA		
 		
		

552J2ID74C/DCA5

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3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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Client: LT Environmental, Inc.

Date/ Time Received: 01/08/2019 01:20:00 PM

Work Order #: 610541

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist

Comments

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

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Brianna Teel

Date: 01/08/2019

Checklist reviewed by:

Jessica Kramer

Date: 01/08/2019

Analytical Report 610728

for

LT Environmental, Inc.

Project Manager: Adrian Baker

Corral Canyon Federal Comm 16H

14-JAN-19

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-18-28), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)

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

Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)

Xenco-Atlanta (LELAP Lab ID #04176)

Xenco-Tampa: Florida (E87429)

Xenco-Lakeland: Florida (E84098)



14-JAN-19

Project Manager: **Adrian Baker**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **610728**

Corral Canyon Federal Comm 16H

Project Address: Delaware Basin

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 610728. 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. 610728 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 610728****LT Environmental, Inc., Arvada, CO**

Corral Canyon Federal Comm 16H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS05	S	01-07-19 14:50	5.5 ft	610728-001
FS06	S	01-07-19 15:15	5.5 ft	610728-002
FS07	S	01-07-19 12:55	4.5 ft	610728-003
SW04	S	01-07-19 14:50	2.5 ft	610728-004



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Corral Canyon Federal Comm 16H

Project ID:

Work Order Number(s): 610728

Report Date: 14-JAN-19

Date Received: 01/09/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3075636 BTEX by EPA 8021B

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



Certificate of Analysis Summary 610728

LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon Federal Comm 16H



Project Id:

Contact: Adrian Baker

Project Location: Delaware Basin

Date Received in Lab: Wed Jan-09-19 12:47 pm

Report Date: 14-JAN-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	610728-001	610728-002	610728-003	610728-004		
	<i>Field Id:</i>	FS05	FS06	FS07	SW04		
	<i>Depth:</i>	5.5- ft	5.5- ft	4.5- ft	2.5- ft		
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	Jan-07-19 14:50	Jan-07-19 15:15	Jan-07-19 12:55	Jan-07-19 14:50		
BTEX by EPA 8021B	<i>Extracted:</i>	Jan-11-19 14:30	Jan-11-19 14:30	Jan-11-19 14:30	Jan-11-19 14:30		
	<i>Analyzed:</i>	Jan-11-19 22:04	Jan-11-19 22:23	Jan-11-19 22:42	Jan-11-19 23:01		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Benzene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201		
Toluene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201		
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201		
m,p-Xylenes		<0.00400 0.00400	<0.00401 0.00401	<0.00399 0.00399	<0.00402 0.00402		
o-Xylene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201		
Total Xylenes		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201		
Total BTEX		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201		
Inorganic Anions by EPA 300	<i>Extracted:</i>	Jan-11-19 09:00	Jan-11-19 09:00	Jan-11-19 09:00	Jan-11-19 09:00		
	<i>Analyzed:</i>	Jan-11-19 11:20	Jan-11-19 11:39	Jan-11-19 11:45	Jan-11-19 12:07		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		132 5.00	136 4.95	173 4.95	325 5.00		
TPH by SW8015 Mod	<i>Extracted:</i>	Jan-10-19 17:00	Jan-10-19 17:00	Jan-10-19 17:00	Jan-10-19 17:00		
	<i>Analyzed:</i>	Jan-11-19 03:02	Jan-11-19 03:22	Jan-11-19 03:42	Jan-11-19 04:02		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0	16.7 15.0	17.3 15.0		
Diesel Range Organics (DRO)		15.6 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0		
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0		
Total TPH		15.6 15.0	<15.0 15.0	16.7 15.0	17.3 15.0		

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

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

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analytical Results 610728

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal Comm 16H

Sample Id: **FS05**
Lab Sample Id: 610728-001

Matrix: Soil
Date Collected: 01.07.19 14.50

Date Received: 01.09.19 12.47
Sample Depth: 5.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3075613

Date Prep: 01.11.19 09.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	132	5.00	mg/kg	01.11.19 11.20		1

Analytical Method: TPH by SW8015 Mod

Tech: ALJ

Analyst: ALJ

Seq Number: 3075461

Date Prep: 01.10.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.11.19 03.02	U	1
Diesel Range Organics (DRO)	C10C28DRO	15.6	15.0	mg/kg	01.11.19 03.02		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.11.19 03.02	U	1
Total TPH	PHC635	15.6	15.0	mg/kg	01.11.19 03.02		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	01.11.19 03.02	
o-Terphenyl	84-15-1	93	%	70-135	01.11.19 03.02	



Certificate of Analytical Results 610728

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal Comm 16H

Sample Id: **FS05**
 Lab Sample Id: 610728-001

Matrix: Soil
 Date Collected: 01.07.19 14.50

Date Received: 01.09.19 12.47
 Sample Depth: 5.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 01.11.19 14.30

Basis: Wet Weight

Seq Number: 3075636

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.11.19 22.04	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.11.19 22.04	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.11.19 22.04	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.11.19 22.04	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.11.19 22.04	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.11.19 22.04	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.11.19 22.04	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	117	%	70-130	01.11.19 22.04		
4-Bromofluorobenzene	460-00-4	102	%	70-130	01.11.19 22.04		



Certificate of Analytical Results 610728

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal Comm 16H

Sample Id: **FS06**
 Lab Sample Id: 610728-002

Matrix: Soil
 Date Collected: 01.07.19 15.15

Date Received: 01.09.19 12.47
 Sample Depth: 5.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3075613

Date Prep: 01.11.19 09.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	136	4.95	mg/kg	01.11.19 11.39		1

Analytical Method: TPH by SW8015 Mod

Tech: ALJ

Analyst: ALJ

Seq Number: 3075461

Date Prep: 01.10.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.11.19 03.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.11.19 03.22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.11.19 03.22	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.11.19 03.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	01.11.19 03.22	
o-Terphenyl	84-15-1	94	%	70-135	01.11.19 03.22	



Certificate of Analytical Results 610728

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal Comm 16H

Sample Id: **FS06**
 Lab Sample Id: 610728-002

Matrix: Soil
 Date Collected: 01.07.19 15.15

Date Received: 01.09.19 12.47
 Sample Depth: 5.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3075636

Date Prep: 01.11.19 14.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.11.19 22.23	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.11.19 22.23	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.11.19 22.23	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	01.11.19 22.23	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.11.19 22.23	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.11.19 22.23	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.11.19 22.23	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	116	%	70-130	01.11.19 22.23		
4-Bromofluorobenzene	460-00-4	101	%	70-130	01.11.19 22.23		



Certificate of Analytical Results 610728

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal Comm 16H

Sample Id: **FS07**
 Lab Sample Id: 610728-003

Matrix: Soil
 Date Collected: 01.07.19 12.55

Date Received: 01.09.19 12.47
 Sample Depth: 4.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3075613

Date Prep: 01.11.19 09.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	173	4.95	mg/kg	01.11.19 11.45		1

Analytical Method: TPH by SW8015 Mod

Tech: ALJ

Analyst: ALJ

Seq Number: 3075461

Date Prep: 01.10.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	16.7	15.0	mg/kg	01.11.19 03.42		1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.11.19 03.42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.11.19 03.42	U	1
Total TPH	PHC635	16.7	15.0	mg/kg	01.11.19 03.42		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	01.11.19 03.42	
o-Terphenyl	84-15-1	91	%	70-135	01.11.19 03.42	



Certificate of Analytical Results 610728

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal Comm 16H

Sample Id: **FS07**
 Lab Sample Id: 610728-003

Matrix: Soil
 Date Collected: 01.07.19 12.55

Date Received: 01.09.19 12.47
 Sample Depth: 4.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3075636

Date Prep: 01.11.19 14.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.11.19 22.42	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.11.19 22.42	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.11.19 22.42	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.11.19 22.42	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.11.19 22.42	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.11.19 22.42	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.11.19 22.42	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	117	%	70-130	01.11.19 22.42		
4-Bromofluorobenzene	460-00-4	100	%	70-130	01.11.19 22.42		



Certificate of Analytical Results 610728

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal Comm 16H

Sample Id: **SW04**
 Lab Sample Id: 610728-004

Matrix: Soil
 Date Collected: 01.07.19 14.50

Date Received: 01.09.19 12.47
 Sample Depth: 2.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3075613

Date Prep: 01.11.19 09.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	325	5.00	mg/kg	01.11.19 12.07		1

Analytical Method: TPH by SW8015 Mod

Tech: ALJ

Analyst: ALJ

Seq Number: 3075461

Date Prep: 01.10.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	17.3	15.0	mg/kg	01.11.19 04.02		1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.11.19 04.02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.11.19 04.02	U	1
Total TPH	PHC635	17.3	15.0	mg/kg	01.11.19 04.02		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	01.11.19 04.02	
o-Terphenyl	84-15-1	104	%	70-135	01.11.19 04.02	



Certificate of Analytical Results 610728

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal Comm 16H

Sample Id: **SW04**
 Lab Sample Id: 610728-004

Matrix: Soil
 Date Collected: 01.07.19 14.50

Date Received: 01.09.19 12.47
 Sample Depth: 2.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3075636

Prep Method: SW5030B

% Moisture:

Date Prep: 01.11.19 14.30

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.11.19 23.01	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.11.19 23.01	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.11.19 23.01	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.11.19 23.01	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.11.19 23.01	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	01.11.19 23.01	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.11.19 23.01	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	102	%	70-130	01.11.19 23.01		
1,4-Difluorobenzene	540-36-3	117	%	70-130	01.11.19 23.01		



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 Federal Comm 16H

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3075613

MB Sample Id: 7669639-1-BLK

Matrix: Solid

LCS Sample Id: 7669639-1-BKS

Prep Method: E300P

Date Prep: 01.11.19

LCSD Sample Id: 7669639-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	232	93	241	96	90-110	4	20	mg/kg	01.11.19 09:34	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3075613

Parent Sample Id: 610670-006

Matrix: Soil

MS Sample Id: 610670-006 S

Prep Method: E300P

Date Prep: 01.11.19

MSD Sample Id: 610670-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	62.4	249	293	93	295	93	90-110	1	20	mg/kg	01.11.19 09:57	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3075613

Parent Sample Id: 610728-001

Matrix: Soil

MS Sample Id: 610728-001 S

Prep Method: E300P

Date Prep: 01.11.19

MSD Sample Id: 610728-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	132	250	368	94	388	102	90-110	5	20	mg/kg	01.11.19 11:26	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3075461

MB Sample Id: 7669546-1-BLK

Matrix: Solid

LCS Sample Id: 7669546-1-BKS

Prep Method: TX1005P

Date Prep: 01.10.19

LCSD Sample Id: 7669546-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	846	85	845	85	70-135	0	20	mg/kg	01.10.19 19:42	
Diesel Range Organics (DRO)	<8.13	1000	947	95	938	94	70-135	1	20	mg/kg	01.10.19 19:42	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	126		115		117		70-135	%	01.10.19 19:42
o-Terphenyl	131		110		117		70-135	%	01.10.19 19:42

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 Federal Comm 16H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3075461

Parent Sample Id: 610941-006

Matrix: Soil

MS Sample Id: 610941-006 S

Prep Method: TX1005P

Date Prep: 01.10.19

MSD Sample Id: 610941-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	879	88	891	89	70-135	1	20	mg/kg	01.10.19 20:42	
Diesel Range Organics (DRO)	<8.13	1000	979	98	991	99	70-135	1	20	mg/kg	01.10.19 20:42	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	116		117		70-135	%	01.10.19 20:42
o-Terphenyl	110		112		70-135	%	01.10.19 20:42

Analytical Method: BTEX by EPA 8021B

Seq Number: 3075636

MB Sample Id: 7669654-1-BLK

Matrix: Solid

LCS Sample Id: 7669654-1-BKS

Prep Method: SW5030B

Date Prep: 01.11.19

LCSD Sample Id: 7669654-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000386	0.100	0.115	115	0.112	112	70-130	3	35	mg/kg	01.11.19 14:13	
Toluene	<0.000457	0.100	0.105	105	0.103	103	70-130	2	35	mg/kg	01.11.19 14:13	
Ethylbenzene	<0.000566	0.100	0.0967	97	0.0948	95	70-130	2	35	mg/kg	01.11.19 14:13	
m,p-Xylenes	<0.00102	0.200	0.192	96	0.188	94	70-130	2	35	mg/kg	01.11.19 14:13	
o-Xylene	<0.000345	0.100	0.0934	93	0.0925	93	70-130	1	35	mg/kg	01.11.19 14:13	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	110		106		108		70-130	%	01.11.19 14:13
4-Bromofluorobenzene	87		88		93		70-130	%	01.11.19 14:13

Analytical Method: BTEX by EPA 8021B

Seq Number: 3075636

Parent Sample Id: 611110-001

Matrix: Soil

MS Sample Id: 611110-001 S

Prep Method: SW5030B

Date Prep: 01.11.19

MSD Sample Id: 611110-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000383	0.0996	0.116	116	0.0884	88	70-130	27	35	mg/kg	01.11.19 14:51	
Toluene	<0.000454	0.0996	0.101	101	0.0789	79	70-130	25	35	mg/kg	01.11.19 14:51	
Ethylbenzene	<0.000563	0.0996	0.0915	92	0.0705	71	70-130	26	35	mg/kg	01.11.19 14:51	
m,p-Xylenes	<0.00101	0.199	0.180	90	0.141	71	70-130	24	35	mg/kg	01.11.19 14:51	
o-Xylene	<0.000343	0.0996	0.0879	88	0.0688	69	70-130	24	35	mg/kg	01.11.19 14:51	X

Surrogate

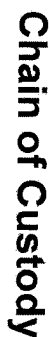
	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	110		109		70-130	%	01.11.19 14:51
4-Bromofluorobenzene	95		97		70-130	%	01.11.19 14:51

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



010728

Page 1 of 1

Work Order Comments									
Program: UST/PST ☐ RP ☐ Brownfields ☐ C ☐ Superfund ☐									
State of Project:									
Reporting Level: I ☐ Level III ☐ ST/UST ☐ RP ☐ Level IV ☐									
Deliverables: EDD ☐ ADAPT ☐ Other:									

[illegible]

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number	TPH (EPA)	BTEX (EPA)	Chloride	Sample Comments
FS05	S	1/7/19	14:50	5.5'	1	X	X	X	
FS06	S	1/7/19	15:15	5.5'	1	X	X	X	
FS07	S	1/7/19	18:15	4.5'	1	X	X	X	
SW04	S	1/7/19	12:55	2.5'	1	X	X	X	average depth (6"-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
TCLP / SPLP 6010:	8RCRA	Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U
Circle Method(s) and Metal(s) to be analyzed		1631 / 245.1 / 7470 / 7471 : Hg

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$6 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 <i>David Brown</i>	<i>[Signature]</i>	1/8/19 06:30	2 <i>[Signature]</i>	<i>[Signature]</i>	1/8/19 14:12
3 <i>David Brown</i>	<i>[Signature]</i>	1/8/19 15:50	4 <i>[Signature]</i>	<i>[Signature]</i>	1/9/19 12:25
5			6		

470525198810



Client: LT Environmental, Inc.

Date/ Time Received: 01/09/2019 12:47:00 PM

Work Order #: 610728

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist

Comments

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

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Katie Lowe

Date: 01/09/2019

Checklist reviewed by:

Date: 01/09/2019

Analytical Report 610941

for
LT Environmental, Inc.

Project Manager: Adrian Baker
Corral Canyon federal 16H

11-JAN-19

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

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

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

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



11-JAN-19

Project Manager: **Adrian Baker**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **610941**

Corral Canyon federal 16H

Project Address: Delaware Basin

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 610941. 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. 610941 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 610941****LT Environmental, Inc., Arvada, CO**

Corral Canyon federal 16H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS08	S	01-08-19 10:55	5.5 ft	610941-001
FS09	S	01-08-19 10:45	5.5 ft	610941-002
FS10	S	01-08-19 10:40	5.5 ft	610941-003
FS11	S	01-08-19 10:35	5.5 ft	610941-004
FS12	S	01-08-19 11:30	2.5 ft	610941-005
FS13	S	01-08-19 11:35	2.5 ft	610941-006
FS14	S	01-08-19 11:40	2.5 ft	610941-007
FS15	S	01-08-19 11:45	2.5 ft	610941-008
FS16	S	01-08-19 15:50	3 ft	610941-009
FS17	S	01-08-19 16:10	5 ft	610941-010
FS18	S	01-08-19 16:20	5.5 ft	610941-011
FS19	S	01-08-19 16:30	4 ft	610941-012

**CASE NARRATIVE****Client Name: LT Environmental, Inc.****Project Name: Corral Canyon federal 16H**

Project ID:
Work Order Number(s): 610941

Report Date: 11-JAN-19
Date Received: 01/10/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3075388 TPH by SW8015 Mod

Surrogate o-Terphenyl recovered above QC limits Data confirmed by re-analysis. Samples affected are: 7669524-1-BLK.

Batch: LBA-3075448 Inorganic Anions by EPA 300

Lab Sample ID 610941-011 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 610941-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012.

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

Batch: LBA-3075488 BTEX by EPA 8021B

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



Certificate of Analysis Summary 610941

LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon federal 16H



Project Id:

Contact: Adrian Baker

Project Location: Delaware Basin

Date Received in Lab: Thu Jan-10-19 12:50 pm

Report Date: 11-JAN-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	610941-001	610941-002	610941-003	610941-004	610941-005	610941-006
	<i>Field Id:</i>	FS08	FS09	FS10	FS11	FS12	FS13
	<i>Depth:</i>	5.5- ft	5.5- ft	5.5- ft	5.5- ft	2.5- ft	2.5- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jan-08-19 10:55	Jan-08-19 10:45	Jan-08-19 10:40	Jan-08-19 10:35	Jan-08-19 11:30	Jan-08-19 11:35
BTEX by EPA 8021B	<i>Extracted:</i>	Jan-10-19 13:00	Jan-10-19 13:00	Jan-10-19 13:00	Jan-10-19 13:00	Jan-10-19 13:00	Jan-10-19 13:00
	<i>Analyzed:</i>	Jan-10-19 16:35	Jan-10-19 16:54	Jan-10-19 17:13	Jan-10-19 17:32	Jan-10-19 17:51	Jan-10-19 18:10
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Toluene		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Ethylbenzene		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
m,p-Xylenes		<0.00398 0.00398	<0.00399 0.00399	<0.00399 0.00399	<0.00400 0.00400	<0.00400 0.00400	<0.00401 0.00401
o-Xylene		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Total Xylenes		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Total BTEX		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Inorganic Anions by EPA 300	<i>Extracted:</i>	Jan-10-19 15:00	Jan-10-19 15:00	Jan-10-19 15:00	Jan-10-19 15:00	Jan-10-19 15:00	Jan-10-19 15:00
	<i>Analyzed:</i>	Jan-10-19 17:24	Jan-10-19 17:55	Jan-10-19 18:06	Jan-10-19 18:16	Jan-10-19 18:26	Jan-10-19 18:57
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		227 4.99	318 4.96	307 4.63	65.8 4.95	244 4.96	425 4.98
TPH by SW8015 Mod	<i>Extracted:</i>	Jan-10-19 17:00	Jan-10-19 17:00	Jan-10-19 17:00	Jan-10-19 17:00	Jan-10-19 17:00	Jan-10-19 17:00
	<i>Analyzed:</i>	Jan-10-19 17:24	Jan-10-19 17:44	Jan-10-19 18:03	Jan-10-19 18:23	Jan-10-19 18:43	Jan-10-19 20:22
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total TPH		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0

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

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

Version: 1.9%

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 610941

LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon federal 16H



Project Id:

Contact: Adrian Baker

Project Location: Delaware Basin

Date Received in Lab: Thu Jan-10-19 12:50 pm

Report Date: 11-JAN-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	610941-007	610941-008	610941-009	610941-010	610941-011	610941-012
	<i>Field Id:</i>	FS14	FS15	FS16	FS17	FS18	FS19
	<i>Depth:</i>	2.5- ft	2.5- ft	3- ft	5- ft	5.5- ft	4- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jan-08-19 11:40	Jan-08-19 11:45	Jan-08-19 15:50	Jan-08-19 16:10	Jan-08-19 16:20	Jan-08-19 16:30
BTEX by EPA 8021B	<i>Extracted:</i>	Jan-10-19 13:00	Jan-10-19 13:00	Jan-10-19 13:00	Jan-10-19 13:00	Jan-10-19 13:00	Jan-10-19 13:00
	<i>Analyzed:</i>	Jan-10-19 18:29	Jan-10-19 18:48	Jan-10-19 19:07	Jan-10-19 19:26	Jan-10-19 20:40	Jan-10-19 20:59
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00201 0.00201	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Toluene		<0.00201 0.00201	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Ethylbenzene		<0.00201 0.00201	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
m,p-Xylenes		<0.00402 0.00402	<0.00403 0.00403	<0.00401 0.00401	<0.00400 0.00400	<0.00400 0.00400	<0.00399 0.00399
o-Xylene		<0.00201 0.00201	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Total Xylenes		<0.00201 0.00201	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Total BTEX		<0.00201 0.00201	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Inorganic Anions by EPA 300	<i>Extracted:</i>	Jan-10-19 15:00	Jan-10-19 15:00	Jan-10-19 15:00	Jan-10-19 15:00	Jan-10-19 15:00	Jan-10-19 15:00
	<i>Analyzed:</i>	Jan-10-19 19:08	Jan-10-19 19:18	Jan-10-19 19:28	Jan-10-19 19:39	Jan-10-19 19:49	Jan-10-19 20:20
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		149 4.98	240 4.95	70.9 5.00	228 4.96	427 4.97	689 5.00
TPH by SW8015 Mod	<i>Extracted:</i>	Jan-10-19 17:00	Jan-10-19 17:00	Jan-10-19 17:00	Jan-10-19 17:00	Jan-10-19 17:00	Jan-10-19 17:00
	<i>Analyzed:</i>	Jan-10-19 21:22	Jan-10-19 21:42	Jan-10-19 22:02	Jan-10-19 22:23	Jan-10-19 22:43	Jan-10-19 23:03
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	32.2 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	132 15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total TPH		<15.0 15.0	32.2 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	132 15.0

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Version: 1.9%

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analytical Results 610941

LT Environmental, Inc., Arvada, CO

Corral Canyon federal 16H

Sample Id: **FS08**
 Lab Sample Id: 610941-001

Matrix: Soil
 Date Collected: 01.08.19 10.55

Date Received: 01.10.19 12.50
 Sample Depth: 5.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3075448

Date Prep: 01.10.19 15.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	227	4.99	mg/kg	01.10.19 17.24		1

Analytical Method: TPH by SW8015 Mod

Tech: ALJ

Analyst: ALJ

Seq Number: 3075388

Date Prep: 01.10.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.10.19 17.24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.10.19 17.24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.10.19 17.24	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.10.19 17.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	01.10.19 17.24	
o-Terphenyl	84-15-1	109	%	70-135	01.10.19 17.24	



Certificate of Analytical Results 610941

LT Environmental, Inc., Arvada, CO

Corral Canyon federal 16H

Sample Id: **FS08**
 Lab Sample Id: 610941-001

Matrix: Soil
 Date Collected: 01.08.19 10.55

Date Received: 01.10.19 12.50
 Sample Depth: 5.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 01.10.19 13.00

Basis: Wet Weight

Seq Number: 3075488

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.10.19 16.35	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.10.19 16.35	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.10.19 16.35	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.10.19 16.35	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.10.19 16.35	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.10.19 16.35	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.10.19 16.35	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	103	%	70-130	01.10.19 16.35		
1,4-Difluorobenzene	540-36-3	112	%	70-130	01.10.19 16.35		



Certificate of Analytical Results 610941

LT Environmental, Inc., Arvada, CO

Corral Canyon federal 16H

Sample Id: **FS09**
 Lab Sample Id: 610941-002

Matrix: Soil
 Date Collected: 01.08.19 10.45

Date Received: 01.10.19 12.50
 Sample Depth: 5.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3075448

Date Prep: 01.10.19 15.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	318	4.96	mg/kg	01.10.19 17.55		1

Analytical Method: TPH by SW8015 Mod

Tech: ALJ

Analyst: ALJ

Seq Number: 3075388

Date Prep: 01.10.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.10.19 17.44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.10.19 17.44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.10.19 17.44	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.10.19 17.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	01.10.19 17.44	
o-Terphenyl	84-15-1	93	%	70-135	01.10.19 17.44	



Certificate of Analytical Results 610941

LT Environmental, Inc., Arvada, CO

Corral Canyon federal 16H

Sample Id: **FS09**
 Lab Sample Id: 610941-002

Matrix: Soil
 Date Collected: 01.08.19 10.45

Date Received: 01.10.19 12.50
 Sample Depth: 5.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 01.10.19 13.00

Basis: Wet Weight

Seq Number: 3075488

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.10.19 16.54	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.10.19 16.54	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.10.19 16.54	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.10.19 16.54	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.10.19 16.54	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.10.19 16.54	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.10.19 16.54	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	105	%	70-130	01.10.19 16.54		
1,4-Difluorobenzene	540-36-3	117	%	70-130	01.10.19 16.54		



Certificate of Analytical Results 610941

LT Environmental, Inc., Arvada, CO

Corral Canyon federal 16H

Sample Id: **FS10**
 Lab Sample Id: 610941-003

Matrix: Soil
 Date Collected: 01.08.19 10.40

Date Received: 01.10.19 12.50
 Sample Depth: 5.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3075448

Date Prep: 01.10.19 15.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	307	4.63	mg/kg	01.10.19 18.06		1

Analytical Method: TPH by SW8015 Mod

Tech: ALJ

Analyst: ALJ

Seq Number: 3075388

Date Prep: 01.10.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.10.19 18.03	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.10.19 18.03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.10.19 18.03	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.10.19 18.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	01.10.19 18.03	
o-Terphenyl	84-15-1	94	%	70-135	01.10.19 18.03	



Certificate of Analytical Results 610941

LT Environmental, Inc., Arvada, CO

Corral Canyon federal 16H

Sample Id: **FS10**
 Lab Sample Id: 610941-003

Matrix: Soil
 Date Collected: 01.08.19 10.40

Date Received: 01.10.19 12.50
 Sample Depth: 5.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3075488

Date Prep: 01.10.19 13.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.10.19 17.13	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.10.19 17.13	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.10.19 17.13	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.10.19 17.13	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.10.19 17.13	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.10.19 17.13	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.10.19 17.13	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	102	%	70-130	01.10.19 17.13		
1,4-Difluorobenzene	540-36-3	116	%	70-130	01.10.19 17.13		



Certificate of Analytical Results 610941

LT Environmental, Inc., Arvada, CO

Corral Canyon federal 16H

Sample Id: **FS11**
 Lab Sample Id: 610941-004

Matrix: Soil
 Date Collected: 01.08.19 10.35

Date Received: 01.10.19 12.50
 Sample Depth: 5.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3075448

Date Prep: 01.10.19 15.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	65.8	4.95	mg/kg	01.10.19 18.16		1

Analytical Method: TPH by SW8015 Mod

Tech: ALJ

Analyst: ALJ

Seq Number: 3075388

Date Prep: 01.10.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.10.19 18.23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.10.19 18.23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.10.19 18.23	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.10.19 18.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	01.10.19 18.23	
o-Terphenyl	84-15-1	95	%	70-135	01.10.19 18.23	



Certificate of Analytical Results 610941

LT Environmental, Inc., Arvada, CO

Corral Canyon federal 16H

Sample Id: **FS11**
 Lab Sample Id: 610941-004

Matrix: Soil
 Date Collected: 01.08.19 10.35

Date Received: 01.10.19 12.50
 Sample Depth: 5.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 01.10.19 13.00

Basis: Wet Weight

Seq Number: 3075488

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.10.19 17.32	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.10.19 17.32	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.10.19 17.32	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.10.19 17.32	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.10.19 17.32	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.10.19 17.32	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.10.19 17.32	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	104	%	70-130	01.10.19 17.32		
1,4-Difluorobenzene	540-36-3	116	%	70-130	01.10.19 17.32		



Certificate of Analytical Results 610941

LT Environmental, Inc., Arvada, CO

Corral Canyon federal 16H

Sample Id: FS12
 Lab Sample Id: 610941-005

Matrix: Soil
 Date Collected: 01.08.19 11.30

Date Received: 01.10.19 12.50
 Sample Depth: 2.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3075448

Date Prep: 01.10.19 15.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	244	4.96	mg/kg	01.10.19 18.26		1

Analytical Method: TPH by SW8015 Mod

Tech: ALJ

Analyst: ALJ

Seq Number: 3075388

Date Prep: 01.10.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.10.19 18.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.10.19 18.43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.10.19 18.43	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.10.19 18.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	01.10.19 18.43	
o-Terphenyl	84-15-1	104	%	70-135	01.10.19 18.43	



Certificate of Analytical Results 610941



LT Environmental, Inc., Arvada, CO

Corral Canyon federal 16H

Sample Id: **FS12**
Lab Sample Id: 610941-005

Matrix: Soil
Date Collected: 01.08.19 11.30

Date Received: 01.10.19 12.50
Sample Depth: 2.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3075488

Date Prep: 01.10.19 13.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.10.19 17.51	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.10.19 17.51	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.10.19 17.51	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.10.19 17.51	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.10.19 17.51	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.10.19 17.51	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.10.19 17.51	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	116	%	70-130	01.10.19 17.51		
4-Bromofluorobenzene	460-00-4	101	%	70-130	01.10.19 17.51		



Certificate of Analytical Results 610941

LT Environmental, Inc., Arvada, CO

Corral Canyon federal 16H

Sample Id: **FS13**
 Lab Sample Id: 610941-006

Matrix: Soil
 Date Collected: 01.08.19 11.35

Date Received: 01.10.19 12.50
 Sample Depth: 2.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3075448

Date Prep: 01.10.19 15.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	425	4.98	mg/kg	01.10.19 18.57		1

Analytical Method: TPH by SW8015 Mod

Tech: ALJ

Analyst: ALJ

Seq Number: 3075461

Date Prep: 01.10.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.10.19 20.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.10.19 20.22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.10.19 20.22	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.10.19 20.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	01.10.19 20.22	
o-Terphenyl	84-15-1	87	%	70-135	01.10.19 20.22	



Certificate of Analytical Results 610941

LT Environmental, Inc., Arvada, CO

Corral Canyon federal 16H

Sample Id: **FS13**
 Lab Sample Id: 610941-006

Matrix: Soil
 Date Collected: 01.08.19 11.35

Date Received: 01.10.19 12.50
 Sample Depth: 2.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3075488

Date Prep: 01.10.19 13.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.10.19 18.10	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.10.19 18.10	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.10.19 18.10	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	01.10.19 18.10	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.10.19 18.10	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.10.19 18.10	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.10.19 18.10	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	116	%	70-130	01.10.19 18.10		
4-Bromofluorobenzene	460-00-4	101	%	70-130	01.10.19 18.10		



Certificate of Analytical Results 610941

LT Environmental, Inc., Arvada, CO

Corral Canyon federal 16H

Sample Id: **FS14**
 Lab Sample Id: 610941-007

Matrix: Soil
 Date Collected: 01.08.19 11.40

Date Received: 01.10.19 12.50
 Sample Depth: 2.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3075448

Date Prep: 01.10.19 15.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	149	4.98	mg/kg	01.10.19 19.08		1

Analytical Method: TPH by SW8015 Mod

Tech: ALJ

Analyst: ALJ

Seq Number: 3075461

Date Prep: 01.10.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.10.19 21.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.10.19 21.22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.10.19 21.22	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.10.19 21.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	01.10.19 21.22	
o-Terphenyl	84-15-1	102	%	70-135	01.10.19 21.22	



Certificate of Analytical Results 610941



LT Environmental, Inc., Arvada, CO

Corral Canyon federal 16H

Sample Id: **FS14**
Lab Sample Id: 610941-007

Matrix: Soil
Date Collected: 01.08.19 11.40

Date Received: 01.10.19 12.50
Sample Depth: 2.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3075488

Date Prep: 01.10.19 13.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.10.19 18.29	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.10.19 18.29	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.10.19 18.29	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.10.19 18.29	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.10.19 18.29	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	01.10.19 18.29	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.10.19 18.29	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	102	%	70-130	01.10.19 18.29		
1,4-Difluorobenzene	540-36-3	116	%	70-130	01.10.19 18.29		



Certificate of Analytical Results 610941

LT Environmental, Inc., Arvada, CO

Corral Canyon federal 16H

Sample Id: **FS15**
 Lab Sample Id: 610941-008

Matrix: Soil
 Date Collected: 01.08.19 11.45

Date Received: 01.10.19 12.50
 Sample Depth: 2.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3075448

Date Prep: 01.10.19 15.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	240	4.95	mg/kg	01.10.19 19.18		1

Analytical Method: TPH by SW8015 Mod

Tech: ALJ

Analyst: ALJ

Seq Number: 3075461

Date Prep: 01.10.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	32.2	15.0	mg/kg	01.10.19 21.42		1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.10.19 21.42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.10.19 21.42	U	1
Total TPH	PHC635	32.2	15.0	mg/kg	01.10.19 21.42		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	01.10.19 21.42	
o-Terphenyl	84-15-1	94	%	70-135	01.10.19 21.42	



Certificate of Analytical Results 610941

LT Environmental, Inc., Arvada, CO

Corral Canyon federal 16H

Sample Id: **FS15**
 Lab Sample Id: 610941-008

Matrix: Soil
 Date Collected: 01.08.19 11.45

Date Received: 01.10.19 12.50
 Sample Depth: 2.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 01.10.19 13.00

Basis: Wet Weight

Seq Number: 3075488

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.10.19 18.48	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.10.19 18.48	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.10.19 18.48	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	01.10.19 18.48	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.10.19 18.48	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	01.10.19 18.48	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.10.19 18.48	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	101	%	70-130	01.10.19 18.48		
1,4-Difluorobenzene	540-36-3	116	%	70-130	01.10.19 18.48		



Certificate of Analytical Results 610941

LT Environmental, Inc., Arvada, CO

Corral Canyon federal 16H

Sample Id: **FS16**
 Lab Sample Id: 610941-009

Matrix: Soil
 Date Collected: 01.08.19 15.50

Date Received: 01.10.19 12.50
 Sample Depth: 3 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3075448

Date Prep: 01.10.19 15.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	70.9	5.00	mg/kg	01.10.19 19.28		1

Analytical Method: TPH by SW8015 Mod

Tech: ALJ

Analyst: ALJ

Seq Number: 3075461

Date Prep: 01.10.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.10.19 22.02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.10.19 22.02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.10.19 22.02	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.10.19 22.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	01.10.19 22.02	
o-Terphenyl	84-15-1	100	%	70-135	01.10.19 22.02	



Certificate of Analytical Results 610941

LT Environmental, Inc., Arvada, CO

Corral Canyon federal 16H

Sample Id: **FS16**
 Lab Sample Id: 610941-009

Matrix: Soil
 Date Collected: 01.08.19 15.50

Date Received: 01.10.19 12.50
 Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 01.10.19 13.00

Basis: Wet Weight

Seq Number: 3075488

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.10.19 19.07	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.10.19 19.07	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.10.19 19.07	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	01.10.19 19.07	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.10.19 19.07	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.10.19 19.07	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.10.19 19.07	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	101	%	70-130	01.10.19 19.07		
1,4-Difluorobenzene	540-36-3	116	%	70-130	01.10.19 19.07		



Certificate of Analytical Results 610941

LT Environmental, Inc., Arvada, CO

Corral Canyon federal 16H

Sample Id: **FS17**
 Lab Sample Id: 610941-010

Matrix: Soil
 Date Collected: 01.08.19 16.10

Date Received: 01.10.19 12.50
 Sample Depth: 5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3075448

Date Prep: 01.10.19 15.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	228	4.96	mg/kg	01.10.19 19.39		1

Analytical Method: TPH by SW8015 Mod

Tech: ALJ

Analyst: ALJ

Seq Number: 3075461

Date Prep: 01.10.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.10.19 22.23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.10.19 22.23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.10.19 22.23	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.10.19 22.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	01.10.19 22.23	
o-Terphenyl	84-15-1	101	%	70-135	01.10.19 22.23	



Certificate of Analytical Results 610941

LT Environmental, Inc., Arvada, CO

Corral Canyon federal 16H

Sample Id: **FS17**
 Lab Sample Id: 610941-010

Matrix: Soil
 Date Collected: 01.08.19 16.10

Date Received: 01.10.19 12.50
 Sample Depth: 5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 01.10.19 13.00

Basis: Wet Weight

Seq Number: 3075488

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.10.19 19.26	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.10.19 19.26	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.10.19 19.26	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.10.19 19.26	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.10.19 19.26	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.10.19 19.26	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.10.19 19.26	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	103	%	70-130	01.10.19 19.26		
1,4-Difluorobenzene	540-36-3	116	%	70-130	01.10.19 19.26		



Certificate of Analytical Results 610941

LT Environmental, Inc., Arvada, CO

Corral Canyon federal 16H

Sample Id: **FS18**
 Lab Sample Id: 610941-011

Matrix: Soil
 Date Collected: 01.08.19 16.20

Date Received: 01.10.19 12.50
 Sample Depth: 5.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3075448

Date Prep: 01.10.19 15.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	427	4.97	mg/kg	01.10.19 19.49		1

Analytical Method: TPH by SW8015 Mod

Tech: ALJ

Analyst: ALJ

Seq Number: 3075461

Date Prep: 01.10.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.10.19 22.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.10.19 22.43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.10.19 22.43	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.10.19 22.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	01.10.19 22.43	
o-Terphenyl	84-15-1	91	%	70-135	01.10.19 22.43	



Certificate of Analytical Results 610941

LT Environmental, Inc., Arvada, CO

Corral Canyon federal 16H

Sample Id: **FS18**
 Lab Sample Id: 610941-011

Matrix: Soil
 Date Collected: 01.08.19 16.20

Date Received: 01.10.19 12.50
 Sample Depth: 5.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3075488

Prep Method: SW5030B

% Moisture:

Date Prep: 01.10.19 13.00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.10.19 20.40	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.10.19 20.40	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.10.19 20.40	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.10.19 20.40	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.10.19 20.40	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.10.19 20.40	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.10.19 20.40	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	101	%	70-130	01.10.19 20.40		
1,4-Difluorobenzene	540-36-3	114	%	70-130	01.10.19 20.40		



Certificate of Analytical Results 610941

LT Environmental, Inc., Arvada, CO

Corral Canyon federal 16H

Sample Id: **FS19**
 Lab Sample Id: 610941-012

Matrix: Soil
 Date Collected: 01.08.19 16.30

Date Received: 01.10.19 12.50
 Sample Depth: 4 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3075448

Date Prep: 01.10.19 15.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	689	5.00	mg/kg	01.10.19 20.20		1

Analytical Method: TPH by SW8015 Mod

Tech: ALJ

Analyst: ALJ

Seq Number: 3075461

Date Prep: 01.10.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.10.19 23.03	U	1
Diesel Range Organics (DRO)	C10C28DRO	132	15.0	mg/kg	01.10.19 23.03		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.10.19 23.03	U	1
Total TPH	PHC635	132	15.0	mg/kg	01.10.19 23.03		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	01.10.19 23.03	
o-Terphenyl	84-15-1	94	%	70-135	01.10.19 23.03	



Certificate of Analytical Results 610941

LT Environmental, Inc., Arvada, CO

Corral Canyon federal 16H

Sample Id: **FS19**
 Lab Sample Id: 610941-012

Matrix: Soil
 Date Collected: 01.08.19 16.30

Date Received: 01.10.19 12.50
 Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 01.10.19 13.00

Basis: Wet Weight

Seq Number: 3075488

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.10.19 20.59	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.10.19 20.59	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.10.19 20.59	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.10.19 20.59	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.10.19 20.59	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.10.19 20.59	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.10.19 20.59	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	108	%	70-130	01.10.19 20.59		
1,4-Difluorobenzene	540-36-3	114	%	70-130	01.10.19 20.59		



Flagging Criteria



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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



LT Environmental, Inc.

Corral Canyon federal 16H

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3075448

MB Sample Id: 7669550-1-BLK

Matrix: Solid

LCS Sample Id: 7669550-1-BKS

Prep Method: E300P

Date Prep: 01.10.19

LCSD Sample Id: 7669550-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	226	90	226	90	90-110	0	20	mg/kg	01.10.19 17:03	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3075448

Parent Sample Id: 610941-001

Matrix: Soil

MS Sample Id: 610941-001 S

Prep Method: E300P

Date Prep: 01.10.19

MSD Sample Id: 610941-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	227	250	459	93	454	91	90-110	1	20	mg/kg	01.10.19 17:34	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3075448

Parent Sample Id: 610941-011

Matrix: Soil

MS Sample Id: 610941-011 S

Prep Method: E300P

Date Prep: 01.10.19

MSD Sample Id: 610941-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	427	249	649	89	652	90	90-110	0	20	mg/kg	01.10.19 19:59	X

Analytical Method: TPH by SW8015 Mod

Seq Number: 3075388

MB Sample Id: 7669524-1-BLK

Matrix: Solid

LCS Sample Id: 7669524-1-BKS

Prep Method: TX1005P

Date Prep: 01.10.19

LCSD Sample Id: 7669524-1-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)	<7.99	998	824	83	853	85	70-135	3	20	mg/kg	01.10.19 10:30	
Diesel Range Organics (DRO)	<8.11	998	917	92	945	95	70-135	3	20	mg/kg	01.10.19 10:30	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	134		112		115		70-135	%	01.10.19 10:30
o-Terphenyl	140	**	107		110		70-135	%	01.10.19 10:30

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 federal 16H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3075461

MB Sample Id: 7669546-1-BLK

Matrix: Solid

LCS Sample Id: 7669546-1-BKS

Prep Method: TX1005P

Date Prep: 01.10.19

LCSD Sample Id: 7669546-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	846	85	845	85	70-135	0	20	mg/kg	01.10.19 19:42	
Diesel Range Organics (DRO)	<8.13	1000	947	95	938	94	70-135	1	20	mg/kg	01.10.19 19:42	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date			
1-Chlorooctane	126		115		117		70-135	%	01.10.19 19:42			
o-Terphenyl	131		110		117		70-135	%	01.10.19 19:42			

Analytical Method: TPH by SW8015 Mod

Seq Number: 3075388

Parent Sample Id: 610712-001

Matrix: Soil

MS Sample Id: 610712-001 S

Prep Method: TX1005P

Date Prep: 01.10.19

MSD Sample Id: 610712-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<7.98	997	1040	104	1080	108	70-135	4	20	mg/kg	01.10.19 11:30	
Diesel Range Organics (DRO)	<8.10	997	1180	118	1240	124	70-135	5	20	mg/kg	01.10.19 11:30	
Surrogate			MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date			
1-Chlorooctane			120		125		70-135	%	01.10.19 11:30			
o-Terphenyl			106		109		70-135	%	01.10.19 11:30			

Analytical Method: TPH by SW8015 Mod

Seq Number: 3075461

Parent Sample Id: 610941-006

Matrix: Soil

MS Sample Id: 610941-006 S

Prep Method: TX1005P

Date Prep: 01.10.19

MSD Sample Id: 610941-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	879	88	891	89	70-135	1	20	mg/kg	01.10.19 20:42	
Diesel Range Organics (DRO)	<8.13	1000	979	98	991	99	70-135	1	20	mg/kg	01.10.19 20:42	
Surrogate			MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date			
1-Chlorooctane			116		117		70-135	%	01.10.19 20:42			
o-Terphenyl			110		112		70-135	%	01.10.19 20:42			

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 federal 16H

Analytical Method: BTEX by EPA 8021B

Seq Number: 3075488

MB Sample Id: 7669578-1-BLK

Matrix: Solid

LCS Sample Id: 7669578-1-BKS

Prep Method: SW5030B

Date Prep: 01.10.19

LCSD Sample Id: 7669578-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000384	0.0998	0.127	127	0.128	128	70-130	1	35	mg/kg	01.10.19 14:43	
Toluene	<0.000455	0.0998	0.112	112	0.111	111	70-130	1	35	mg/kg	01.10.19 14:43	
Ethylbenzene	<0.000564	0.0998	0.103	103	0.103	103	70-130	0	35	mg/kg	01.10.19 14:43	
m,p-Xylenes	<0.00101	0.200	0.204	102	0.203	102	70-130	0	35	mg/kg	01.10.19 14:43	
o-Xylene	<0.000344	0.0998	0.0998	100	0.0993	99	70-130	1	35	mg/kg	01.10.19 14:43	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		109		109		70-130	%	01.10.19 14:43
4-Bromofluorobenzene	87		93		91		70-130	%	01.10.19 14:43

Analytical Method: BTEX by EPA 8021B

Seq Number: 3075488

Parent Sample Id: 610941-001

Matrix: Soil

MS Sample Id: 610941-001 S

Prep Method: SW5030B

Date Prep: 01.10.19

MSD Sample Id: 610941-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000383	0.0994	0.0900	91	0.100	100	70-130	11	35	mg/kg	01.10.19 15:21	
Toluene	<0.000453	0.0994	0.0894	90	0.0889	89	70-130	1	35	mg/kg	01.10.19 15:21	
Ethylbenzene	<0.000561	0.0994	0.0831	84	0.0808	81	70-130	3	35	mg/kg	01.10.19 15:21	
m,p-Xylenes	<0.00101	0.199	0.169	85	0.161	81	70-130	5	35	mg/kg	01.10.19 15:21	
o-Xylene	<0.000342	0.0994	0.0830	84	0.0788	79	70-130	5	35	mg/kg	01.10.19 15:21	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		109		70-130	%	01.10.19 15:21
4-Bromofluorobenzene	100		94		70-130	%	01.10.19 15:21

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: 1610941

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

www.xenco.com Page 1 of 2

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

Project Name:	Coral Canyon Federal Wt	Turn Around	
Project Number:		Routine	☐
P.O. Number:	288 499a	Rush: same day	
Sampler's Name:	Anna Byers	Due Date:	

SAMPLE RECEIPT		Temp Blank:	Yes ☒ No ☐	Wet Ice:	Yes ☐ No ☒
Temperature (°C):	141.3	Thermometer ID			
Received In tact:	Yes ☒ No ☐	Correction Factor:	P8		
Cooler Custody Seals:	Yes ☐ No ☒	Total Containers:	-0.1		
Sample Custody Seals:	Yes ☐ No ☒				

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)	ANALYSIS REQUEST	Work Order Notes
FS08	S	1/8/19	1055	5.5'	1					
FS09	S		1045	5.5'	1					
FS10	S		1040	5.5'	1					
FS11	S		1035	5.5'	1					
FS12	S		1130	2.5'	1					
FS13	S		1135	2.5'	1					
FS14	S		1140	2.5'	1					
FS15	S		1145	2.5'	1					
FS16	S		1550	3'	1					
FS17	S		1610	5'	1					

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Anna Byers		1/9/2019 0830			1/9/19 14:10
		11/01/19 1250			



Chain of Custody

Work Order No:

610941

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

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Page 1 of 2

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

Program: UST/PST	☐ RP	☐ Rowfields	☐ C	☐ Pertund
State of Project:				
Reporting Level II	☐ Level III	☐ BT/UST	☐ RP	☐ Vel IV
Deliverables: EDD	☐	ADAPT	☐	Other:

Project Name:	Local Canyon Federal Wt	Turn Around	
Project Number:		Routine	☐
P.O. Number:	1414229	Rush	☐
Sampler's Name:	Anna Byers	Due Date:	

SAMPLE RECEIPT	Temp Blank:	Yes ☐ No ☒	Wet Ice:	Yes ☐ No ☒
	Temperature (°C):	141.3	Thermometer ID	EE
	Received Intact:	Yes ☒ No ☐	Correction Factor:	EE
	Cooler Custody Seals:	Yes ☐ No ☒	Total Containers:	-0.1
	Sample Custody Seals:	Yes ☐ No ☒		

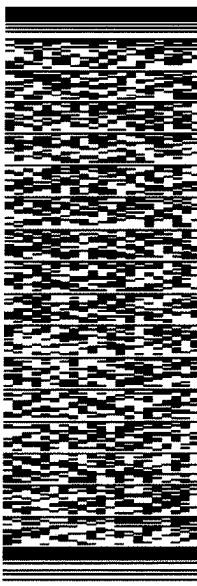
Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers			ANALYSIS REQUEST										Work Order Notes
					TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)											
FS18	S	1/8/19	1620	5.5'														
FS19	S	1/8/19	1630	4'														
 1/09/19																		

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Anna Byers		1/9/2019 0630			1/9/19 1410
Anna Byers		1/10/19 1250			

ORIGIN DCAOA (575) 887-6245 XENCO PAC MAIL 910 W PIERCE ST CARLSBAD, NM 88220 UNITED STATES US	SHIP DATE: 09JAN19 ACTWGT: 26.00 LB CAD: 10183081NET4040 DIMS: 18x12x15 IN BILL RECIPIENT
TO HOLD FOR XENCO FEDEX EXPRESS SHIP CENTER FEDEX SHIP CENTER 3600 COUNTY RD 1276 S MIDLAND TX 79711 (806) 794-1296 INV: REF: PO: DEPT:	
552J2D74C/DCA5	

TRK# 7741 5562 3258 0201 THU - 10 JAN HOLD STANDARD OVERNIGHT HLD TX-US 41 MAFA MAFA LBB	 
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After printing this label:

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

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Client: LT Environmental, Inc.

Date/ Time Received: 01/10/2019 12:50:00 PM

Work Order #: 610941

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	1.3
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	Yes
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Katie Lowe

Date: 01/10/2019

Checklist reviewed by:

Jessica Kramer

Date: 01/10/2019

Analytical Report 611325

for
LT Environmental, Inc.

Project Manager: Adrian Baker
Corral Canyon Federal 16H

16-JAN-19

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

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

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

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



16-JAN-19

Project Manager: **Adrian Baker**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **611325**

Corral Canyon Federal 16H

Project Address: Delaware Basin

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 611325. 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. 611325 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 611325****LT Environmental, Inc., Arvada, CO**

Corral Canyon Federal 16H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS20	S	01-11-19 12:25	0.5 ft	611325-001
FS21	S	01-11-19 12:20	0.5 ft	611325-002
SW03	S	01-11-19 13:00	1.0 ft	611325-003
SW05	S	01-11-19 13:45	2.0 ft	611325-004



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Corral Canyon Federal 16H

Project ID:
Work Order Number(s): 611325

Report Date: 16-JAN-19
Date Received: 01/15/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3075941 Inorganic Anions by EPA 300

Lab Sample ID 611325-004 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 611325-001, -002, -003, -004.

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

Batch: LBA-3075983 BTEX by EPA 8021B

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



Certificate of Analysis Summary 611325

LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon Federal 16H

Project Id:

Contact: Adrian Baker

Project Location: Delaware Basin

Date Received in Lab: Tue Jan-15-19 11:51 am

Report Date: 16-JAN-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	611325-001	611325-002	611325-003	611325-004		
	Field Id:	FS20	FS21	SW03	SW05		
	Depth:	0.5- ft	0.5- ft	1.0- ft	2.0- ft		
	Matrix:	SOIL	SOIL	SOIL	SOIL		
	Sampled:	Jan-11-19 12:25	Jan-11-19 12:20	Jan-11-19 13:00	Jan-11-19 13:45		
BTEX by EPA 8021B	Extracted:	Jan-15-19 16:30	Jan-15-19 16:30	Jan-15-19 16:30	Jan-15-19 16:30		
	Analyzed:	Jan-15-19 22:33	Jan-15-19 22:52	Jan-15-19 23:11	Jan-15-19 23:30		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Benzene		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202		
Toluene		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202		
Ethylbenzene		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202		
m,p-Xylenes		<0.00401 0.00401	<0.00398 0.00398	<0.00400 0.00400	<0.00403 0.00403		
o-Xylene		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202		
Total Xylenes		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202		
Total BTEX		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202		
Inorganic Anions by EPA 300	Extracted:	Jan-15-19 14:00	Jan-15-19 14:00	Jan-15-19 14:00	Jan-15-19 14:00		
	Analyzed:	Jan-16-19 10:06	Jan-16-19 10:12	Jan-16-19 10:19	Jan-16-19 10:25		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		308 4.98	357 4.98	133 4.97	298 4.97		
TPH by SW8015 Mod	Extracted:	Jan-15-19 17:00	Jan-15-19 17:00	Jan-15-19 17:00	Jan-15-19 17:00		
	Analyzed:	Jan-16-19 08:47	Jan-16-19 09:46	Jan-16-19 10:06	Jan-16-19 10:26		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0		
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	20.7 15.0		
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0		
Total TPH		<15.0 15.0	<15.0 15.0	<15.0 15.0	20.7 15.0		

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Version: 1.0%

Jessica Kramer
Project Assistant



Certificate of Analytical Results 611325



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS20**
Lab Sample Id: 611325-001

Matrix: Soil
Date Collected: 01.11.19 12.25

Date Received: 01.15.19 11.51
Sample Depth: 0.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3075941

Date Prep: 01.15.19 14.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	308	4.98	mg/kg	01.16.19 10.06		1

Analytical Method: TPH by SW8015 Mod

Tech: ALJ

Analyst: ALJ

Seq Number: 3075975

Date Prep: 01.15.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.16.19 08.47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.16.19 08.47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.16.19 08.47	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.16.19 08.47	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	84	%	70-135	01.16.19 08.47		
o-Terphenyl	84-15-1	85	%	70-135	01.16.19 08.47		



Certificate of Analytical Results 611325

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS20**
 Lab Sample Id: 611325-001

Matrix: Soil
 Date Collected: 01.11.19 12.25

Date Received: 01.15.19 11.51
 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 01.15.19 16.30

Basis: Wet Weight

Seq Number: 3075983

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.15.19 22.33	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.15.19 22.33	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.15.19 22.33	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	01.15.19 22.33	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.15.19 22.33	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.15.19 22.33	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.15.19 22.33	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	100	%	70-130	01.15.19 22.33		
1,4-Difluorobenzene	540-36-3	106	%	70-130	01.15.19 22.33		



Certificate of Analytical Results 611325



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: FS21
Lab Sample Id: 611325-002

Matrix: Soil
Date Collected: 01.11.19 12.20

Date Received: 01.15.19 11.51
Sample Depth: 0.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3075941

Date Prep: 01.15.19 14.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	357	4.98	mg/kg	01.16.19 10.12		1

Analytical Method: TPH by SW8015 Mod

Tech: ALJ

Analyst: ALJ

Seq Number: 3075975

Date Prep: 01.15.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.16.19 09.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.16.19 09.46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.16.19 09.46	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.16.19 09.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	01.16.19 09.46	
o-Terphenyl	84-15-1	92	%	70-135	01.16.19 09.46	



Certificate of Analytical Results 611325

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS21**
 Lab Sample Id: 611325-002

Matrix: Soil
 Date Collected: 01.11.19 12.20

Date Received: 01.15.19 11.51
 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 01.15.19 16.30

Basis: Wet Weight

Seq Number: 3075983

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.15.19 22.52	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.15.19 22.52	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.15.19 22.52	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.15.19 22.52	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.15.19 22.52	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.15.19 22.52	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.15.19 22.52	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	98	%	70-130	01.15.19 22.52		
1,4-Difluorobenzene	540-36-3	108	%	70-130	01.15.19 22.52		



Certificate of Analytical Results 611325



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **SW03**
Lab Sample Id: 611325-003

Matrix: Soil
Date Collected: 01.11.19 13.00

Date Received: 01.15.19 11.51
Sample Depth: 1.0 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3075941

Date Prep: 01.15.19 14.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	133	4.97	mg/kg	01.16.19 10.19		1

Analytical Method: TPH by SW8015 Mod

Tech: ALJ

Analyst: ALJ

Seq Number: 3075975

Date Prep: 01.15.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.16.19 10.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.16.19 10.06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.16.19 10.06	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.16.19 10.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	82	%	70-135	01.16.19 10.06	
o-Terphenyl	84-15-1	83	%	70-135	01.16.19 10.06	



Certificate of Analytical Results 611325

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **SW03**
 Lab Sample Id: 611325-003

Matrix: Soil
 Date Collected: 01.11.19 13.00

Date Received: 01.15.19 11.51
 Sample Depth: 1.0 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 01.15.19 16.30

Basis: Wet Weight

Seq Number: 3075983

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.15.19 23.11	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.15.19 23.11	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.15.19 23.11	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.15.19 23.11	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.15.19 23.11	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.15.19 23.11	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.15.19 23.11	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	108	%	70-130	01.15.19 23.11		
4-Bromofluorobenzene	460-00-4	101	%	70-130	01.15.19 23.11		



Certificate of Analytical Results 611325



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **SW05**
Lab Sample Id: 611325-004

Matrix: Soil
Date Collected: 01.11.19 13.45

Date Received: 01.15.19 11.51
Sample Depth: 2.0 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3075941

Date Prep: 01.15.19 14.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	298	4.97	mg/kg	01.16.19 10.25		1

Analytical Method: TPH by SW8015 Mod

Tech: ALJ

Analyst: ALJ

Seq Number: 3075975

Date Prep: 01.15.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.16.19 10.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	20.7	15.0	mg/kg	01.16.19 10.26		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.16.19 10.26	U	1
Total TPH	PHC635	20.7	15.0	mg/kg	01.16.19 10.26		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	01.16.19 10.26	
o-Terphenyl	84-15-1	88	%	70-135	01.16.19 10.26	



Certificate of Analytical Results 611325

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **SW05**
 Lab Sample Id: 611325-004

Matrix: Soil
 Date Collected: 01.11.19 13.45

Date Received: 01.15.19 11.51
 Sample Depth: 2.0 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 01.15.19 16.30

Basis: Wet Weight

Seq Number: 3075983

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.15.19 23.30	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.15.19 23.30	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.15.19 23.30	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	01.15.19 23.30	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.15.19 23.30	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	01.15.19 23.30	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.15.19 23.30	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	99	%	70-130	01.15.19 23.30		
1,4-Difluorobenzene	540-36-3	108	%	70-130	01.15.19 23.30		



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 Federal 16H

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3075941

MB Sample Id: 7669772-1-BLK

Matrix: Solid

LCS Sample Id: 7669772-1-BKS

Prep Method: E300P

Date Prep: 01.15.19

LCSD Sample Id: 7669772-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	248	99	239	96	90-110	4	20	mg/kg	01.16.19 08:37	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3075941

Parent Sample Id: 611324-001

Matrix: Soil

MS Sample Id: 611324-001 S

Prep Method: E300P

Date Prep: 01.15.19

MSD Sample Id: 611324-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2.94	248	237	94	237	94	90-110	0	20	mg/kg	01.16.19 08:55	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3075941

Parent Sample Id: 611325-004

Matrix: Soil

MS Sample Id: 611325-004 S

Prep Method: E300P

Date Prep: 01.15.19

MSD Sample Id: 611325-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	298	249	509	85	508	84	90-110	0	20	mg/kg	01.16.19 10:31	X

Analytical Method: TPH by SW8015 Mod

Seq Number: 3075975

MB Sample Id: 7669854-1-BLK

Matrix: Solid

LCS Sample Id: 7669854-1-BKS

Prep Method: TX1005P

Date Prep: 01.15.19

LCSD Sample Id: 7669854-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	770	77	859	86	70-135	11	20	mg/kg	01.15.19 23:52	
Diesel Range Organics (DRO)	<8.13	1000	903	90	1010	101	70-135	11	20	mg/kg	01.15.19 23:52	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	115		109		127		70-135	%	01.15.19 23:52
o-Terphenyl	118		87		128		70-135	%	01.15.19 23:52

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 Federal 16H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3075975

Parent Sample Id: 611325-001

Matrix: Soil

MS Sample Id: 611325-001 S

Prep Method: TX1005P

Date Prep: 01.15.19

MSD Sample Id: 611325-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	741	74	735	74	70-135	1	20	mg/kg	01.16.19 09:07	
Diesel Range Organics (DRO)	12.8	1000	815	80	808	80	70-135	1	20	mg/kg	01.16.19 09:07	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	107		106		70-135	%	01.16.19 09:07
o-Terphenyl	102		102		70-135	%	01.16.19 09:07

Analytical Method: BTEX by EPA 8021B

Seq Number: 3075983

MB Sample Id: 7669856-1-BLK

Matrix: Solid

LCS Sample Id: 7669856-1-BKS

Prep Method: SW5030B

Date Prep: 01.15.19

LCSD Sample Id: 7669856-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000383	0.0996	0.102	102	0.102	102	70-130	0	35	mg/kg	01.15.19 20:41	
Toluene	<0.000454	0.0996	0.0972	98	0.0971	97	70-130	0	35	mg/kg	01.15.19 20:41	
Ethylbenzene	<0.000563	0.0996	0.0943	95	0.0939	94	70-130	0	35	mg/kg	01.15.19 20:41	
m,p-Xylenes	<0.00101	0.199	0.186	93	0.185	93	70-130	1	35	mg/kg	01.15.19 20:41	
o-Xylene	<0.000343	0.0996	0.0944	95	0.0938	94	70-130	1	35	mg/kg	01.15.19 20:41	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		102		103		70-130	%	01.15.19 20:41
4-Bromofluorobenzene	83		91		94		70-130	%	01.15.19 20:41

Analytical Method: BTEX by EPA 8021B

Seq Number: 3075983

Parent Sample Id: 611129-022

Matrix: Soil

MS Sample Id: 611129-022 S

Prep Method: SW5030B

Date Prep: 01.15.19

MSD Sample Id: 611129-022 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000388	0.101	0.0926	92	0.0878	88	70-130	5	35	mg/kg	01.15.19 21:19	
Toluene	<0.000459	0.101	0.0894	89	0.0852	85	70-130	5	35	mg/kg	01.15.19 21:19	
Ethylbenzene	<0.000569	0.101	0.0861	85	0.0821	82	70-130	5	35	mg/kg	01.15.19 21:19	
m,p-Xylenes	<0.00102	0.202	0.170	84	0.162	81	70-130	5	35	mg/kg	01.15.19 21:19	
o-Xylene	<0.000347	0.101	0.0869	86	0.0830	83	70-130	5	35	mg/kg	01.15.19 21:19	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		102		70-130	%	01.15.19 21:19
4-Bromofluorobenzene	94		95		70-130	%	01.15.19 21:19

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: 0100

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)

Page 1 of 1
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Project Manager:	Adrian Baker	Bill to: (if different)	Kyle Littlell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	
Phone:	432.704.5178	Email:	abakers@ltenv.com / abaker@ltenv.com

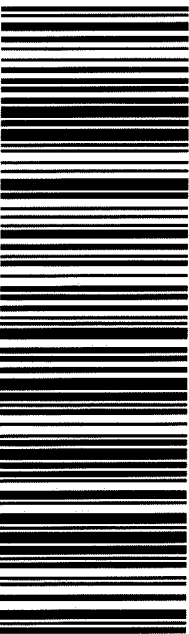
Work Order Comments			
Program: UST/PST	☐ RP	☐ rownfields	☐ C ☐ perfund ☐
State of Project:			
Reporting Level II	☐ Level III	☐ ST/UST	☐ RP ☐ vel IV ☐
Deliverables: EDD	☐	ADAPT ☐	Other:

[illegible][illegible]

	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 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 / 7

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenoco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenoco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenoco. A minimum charge of \$75.00 will be applied to each project and a charge of \$3 for each sample submitted to Xenoco, but not analyzed. These terms will be enforced unless previously negotiated.

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	<i>Danna Byers</i>	<i>[Signature]</i>	01/14/19 @ 0630	<i>[Signature]</i>	<i>[Signature]</i>	1/15/19
3						
5						

ORIGIN ID:CAOA (575) 887-6245 XENCO PACIFIC MAIL 910 W PIERCE ST CARLSBAD, NM 88220 UNITED STATES US	SHIP DATE: 1A JAN 19 ACT WGT: 22.00 LB CAD: 101813.06/NET 4040 DIMS: 18x14x15 IN BILL RECIPIENT
TO HOLD FOR XENCO FEDEX EXPRESS SHIP CENTER FEDEX SHIP CENTER 3600 COUNTY RD 1276 S MIDLAND TX 79711 (806) 794-1296 REF INV: PO: DEPT:	
TRACK# 7741 9049 7977 0201 TUE - 15 JAN HOLD STANDARD OVERNIGHT HLD MAFA TX-US LBB 41 MAFA 	
	

552J2/D74C/DCA5

After printing this label:

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

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Client: LT Environmental, Inc.

Date/ Time Received: 01/15/2019 11:51:00 AM

Work Order #: 611325

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist

Comments

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

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Brianna Teel

Date: 01/15/2019

Checklist reviewed by:

Jessica Kramer

Date: 01/15/2019

Analytical Report 612243

for
LT Environmental, Inc.

Project Manager: Adrian Baker
Corral Canyon Federal 16H

14-FEB-19

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

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

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

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



14-FEB-19

Project Manager: **Adrian Baker**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **612243**

Corral Canyon Federal 16H

Project Address: Delaware Basin

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 612243. 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. 612243 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.

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



Sample Cross Reference 612243

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW06	S	01-16-19 14:20	0.5 - 5.5 ft	612243-001
SW07	S	01-17-19 08:55	0.5 - 4 ft	612243-002
SW08	S	01-16-19 13:00	0.5 - 5.5 ft	612243-003
FS22	S	01-16-19 10:35	0.5 ft	612243-004
FS23	S	01-16-19 10:40	0.5 ft	612243-005
FS24	S	01-16-19 11:00	0.5 - 2.5 ft	612243-006
FS25	S	01-16-19 11:10	0.5 - 2.5 ft	612243-007
FS26	S	01-16-19 11:20	2.5 ft	612243-008
FS27	S	01-16-19 11:25	2.5 ft	612243-009
FS28	S	01-16-19 13:45	6 ft	612243-010
FS29	S	01-17-19 09:00	4 ft	612243-011
FS30	S	01-17-19 09:30	4 ft	612243-012
FS31	S	01-17-19 10:10	6 ft	612243-013
FS32	S	01-17-19 10:15	6 ft	612243-014
FS33	S	01-17-19 10:35	4 ft	612243-015

**CASE NARRATIVE****Client Name: LT Environmental, Inc.****Project Name: Corral Canyon Federal 16H**

Project ID:
Work Order Number(s): 612243

Report Date: 14-FEB-19
Date Received: 01/23/2019

Sample receipt non conformances and comments:

PER CLIENTS EMAIL CORRECTED SAMPLE DEPTH FOR FS33 FROM 6' TO 4'. NEW VERSION GENERATED JK 02/14/19

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3077011 Inorganic Anions by EPA 300

Lab Sample ID 612382-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 612243-014, -015.

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

Batch: LBA-3077017 Inorganic Anions by EPA 300

Lab Sample ID 612243-011 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 612243-010, -011.

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

Batch: LBA-3077289 BTEX by EPA 8021B

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

Batch: LBA-3077319 BTEX by EPA 8021B

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



Certificate of Analysis Summary 612243

LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon Federal 16H

Project Id:

Contact: Adrian Baker

Project Location: Delaware Basin

Date Received in Lab: Wed Jan-23-19 01:29 pm

Report Date: 14-FEB-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	612243-001	612243-002	612243-003	612243-004	612243-005	612243-006
	<i>Field Id:</i>	SW06	SW07	SW08	FS22	FS23	FS24
	<i>Depth:</i>	0.5-5.5 ft	0.5-4 ft	0.5-5.5 ft	0.5- ft	0.5- ft	0.5-2.5 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jan-16-19 14:20	Jan-17-19 08:55	Jan-16-19 13:00	Jan-16-19 10:35	Jan-16-19 10:40	Jan-16-19 11:00
BTEX by EPA 8021B	<i>Extracted:</i>	Jan-28-19 08:30	Jan-28-19 08:30	Jan-28-19 10:00	Jan-28-19 10:00	Jan-28-19 10:00	Jan-28-19 10:00
	<i>Analyzed:</i>	Jan-28-19 20:12	Jan-28-19 20:31	Jan-28-19 23:30	Jan-28-19 17:30	Jan-28-19 17:51	Jan-28-19 18:13
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00202 0.00202	<0.00201 0.00201	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199	<0.00201 0.00201
Toluene		<0.00202 0.00202	<0.00201 0.00201	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199	<0.00201 0.00201
Ethylbenzene		<0.00202 0.00202	<0.00201 0.00201	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199	<0.00201 0.00201
m,p-Xylenes		<0.00403 0.00403	<0.00402 0.00402	<0.00400 0.00400	<0.00402 0.00402	<0.00398 0.00398	<0.00402 0.00402
o-Xylene		<0.00202 0.00202	<0.00201 0.00201	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199	<0.00201 0.00201
Total Xylenes		<0.00202 0.00202	<0.00201 0.00201	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199	<0.00201 0.00201
Total BTEX		<0.00202 0.00202	<0.00201 0.00201	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199	<0.00201 0.00201
Inorganic Anions by EPA 300	<i>Extracted:</i>	Jan-25-19 12:30	Jan-25-19 12:30	Jan-25-19 12:30	Jan-25-19 12:30	Jan-25-19 12:30	Jan-25-19 12:30
	<i>Analyzed:</i>	Jan-25-19 19:41	Jan-25-19 19:47	Jan-25-19 20:09	Jan-25-19 20:15	Jan-25-19 20:21	Jan-25-19 20:27
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		203 4.99	144 4.95	308 4.98	322 5.00	297 4.96	331 4.99
TPH by SW8015 Mod	<i>Extracted:</i>	Jan-26-19 11:00	Jan-26-19 11:00	Jan-26-19 11:00	Jan-26-19 11:00	Jan-26-19 11:00	Jan-26-19 11:00
	<i>Analyzed:</i>	Jan-27-19 03:32	Jan-27-19 03:52	Jan-27-19 04:12	Jan-27-19 04:32	Jan-27-19 04:52	Jan-27-19 05:12
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<14.9 14.9	<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0
Diesel Range Organics (DRO)		<15.0 15.0	<14.9 14.9	<15.0 15.0	<14.9 14.9	<15.0 15.0	18.6 15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<14.9 14.9	<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0
Total TPH		<15.0 15.0	<14.9 14.9	<15.0 15.0	<14.9 14.9	<15.0 15.0	18.6 15.0

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Version: 1.9%

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 612243

LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon Federal 16H

Project Id:

Contact: Adrian Baker

Project Location: Delaware Basin

Date Received in Lab: Wed Jan-23-19 01:29 pm

Report Date: 14-FEB-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	612243-007	612243-008	612243-009	612243-010	612243-011	612243-012
	<i>Field Id:</i>	FS25	FS26	FS27	FS28	FS29	FS30
	<i>Depth:</i>	0.5-2.5 ft	2.5- ft	2.5- ft	6- ft	4- ft	4- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jan-16-19 11:10	Jan-16-19 11:20	Jan-16-19 11:25	Jan-16-19 13:45	Jan-17-19 09:00	Jan-17-19 09:30
BTEX by EPA 8021B	<i>Extracted:</i>	Jan-28-19 10:00	Jan-28-19 10:00	Jan-28-19 10:00	Jan-28-19 10:00	Jan-28-19 10:00	Jan-28-19 10:00
	<i>Analyzed:</i>	Jan-28-19 18:34	Jan-28-19 18:55	Jan-28-19 19:16	Jan-28-19 19:38	Jan-28-19 20:00	Jan-28-19 20:21
	<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	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202	<0.00199 0.00199
Toluene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202	<0.00199 0.00199
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202	<0.00199 0.00199
m,p-Xylenes		<0.00400 0.00400	<0.00399 0.00399	<0.00401 0.00401	<0.00398 0.00398	<0.00403 0.00403	<0.00398 0.00398
o-Xylene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202	<0.00199 0.00199
Total Xylenes		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202	<0.00199 0.00199
Total BTEX		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202	<0.00199 0.00199
Inorganic Anions by EPA 300	<i>Extracted:</i>	Jan-25-19 12:30	Jan-25-19 12:30	Jan-25-19 12:30	Jan-24-19 16:40	Jan-24-19 16:40	Jan-25-19 12:30
	<i>Analyzed:</i>	Jan-25-19 20:33	Jan-25-19 20:40	Jan-25-19 20:58	Jan-25-19 10:43	Jan-25-19 12:12	Jan-25-19 21:04
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		469 4.97	233 4.97	212 4.99	677 4.98	280 5.00	274 4.95
TPH by SW8015 Mod	<i>Extracted:</i>	Jan-26-19 11:00	Jan-26-19 11:00	Jan-26-19 11:00	Jan-26-19 11:00	Jan-26-19 11:00	Jan-26-19 11:00
	<i>Analyzed:</i>	Jan-27-19 05:32	Jan-27-19 06:33	Jan-27-19 06:53	Jan-27-19 07:13	Jan-27-19 07:33	Jan-27-19 07:53
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total TPH		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0

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Version: 1.9%

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 612243

LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon Federal 16H

Project Id:

Contact: Adrian Baker

Project Location: Delaware Basin

Date Received in Lab: Wed Jan-23-19 01:29 pm

Report Date: 14-FEB-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	612243-013	612243-014	612243-015			
	Field Id:	FS31	FS32	FS33			
	Depth:	6- ft	6- ft	4- ft			
	Matrix:	SOIL	SOIL	SOIL			
	Sampled:	Jan-17-19 10:10	Jan-17-19 10:15	Jan-17-19 10:35			
BTEX by EPA 8021B	Extracted:	Jan-28-19 10:00	Jan-28-19 10:00	Jan-28-19 10:00			
	Analyzed:	Jan-28-19 20:42	Jan-28-19 23:52	Jan-29-19 00:12			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
Benzene		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200			
Toluene		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200			
Ethylbenzene		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200			
m,p-Xylenes		<0.00400 0.00400	<0.00402 0.00402	<0.00399 0.00399			
o-Xylene		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200			
Total Xylenes		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200			
Total BTEX		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200			
Inorganic Anions by EPA 300	Extracted:	Jan-25-19 12:30	Jan-24-19 12:30	Jan-24-19 12:30			
	Analyzed:	Jan-25-19 21:26	Jan-24-19 16:45	Jan-24-19 17:03			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
Chloride		621 4.96	457 4.96	116 4.96			
TPH by SW8015 Mod	Extracted:	Jan-26-19 11:00	Jan-26-19 11:00	Jan-26-19 11:00			
	Analyzed:	Jan-27-19 08:13	Jan-27-19 08:33	Jan-27-19 08:53			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0	<14.9 14.9			
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0	<14.9 14.9			
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0	<14.9 14.9			
Total TPH		<15.0 15.0	<15.0 15.0	<14.9 14.9			

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Version: 1.9%

Jessica Kramer
Project Assistant



Certificate of Analytical Results 612243

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **SW06**
 Lab Sample Id: 612243-001

Matrix: Soil
 Date Collected: 01.16.19 14.20

Date Received: 01.23.19 13.29
 Sample Depth: 0.5 - 5.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3077178

Date Prep: 01.25.19 12.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	203	4.99	mg/kg	01.25.19 19.41		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3077210

Date Prep: 01.26.19 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.27.19 03.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.27.19 03.32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.27.19 03.32	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.27.19 03.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	01.27.19 03.32	
o-Terphenyl	84-15-1	100	%	70-135	01.27.19 03.32	



Certificate of Analytical Results 612243

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **SW06**
 Lab Sample Id: 612243-001

Matrix: Soil
 Date Collected: 01.16.19 14.20

Date Received: 01.23.19 13.29
 Sample Depth: 0.5 - 5.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 01.28.19 08.30

Basis: Wet Weight

Seq Number: 3077319

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.28.19 20.12	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.28.19 20.12	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.28.19 20.12	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	01.28.19 20.12	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.28.19 20.12	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	01.28.19 20.12	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.28.19 20.12	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	111	%	70-130	01.28.19 20.12		
4-Bromofluorobenzene	460-00-4	115	%	70-130	01.28.19 20.12		



Certificate of Analytical Results 612243

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **SW07**
 Lab Sample Id: 612243-002

Matrix: Soil
 Date Collected: 01.17.19 08.55

Date Received: 01.23.19 13.29
 Sample Depth: 0.5 - 4 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3077178

Date Prep: 01.25.19 12.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	144	4.95	mg/kg	01.25.19 19.47		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3077210

Date Prep: 01.26.19 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	01.27.19 03.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	01.27.19 03.52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	01.27.19 03.52	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	01.27.19 03.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	01.27.19 03.52	
o-Terphenyl	84-15-1	94	%	70-135	01.27.19 03.52	



Certificate of Analytical Results 612243



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **SW07**
Lab Sample Id: 612243-002

Matrix: Soil
Date Collected: 01.17.19 08.55

Date Received: 01.23.19 13.29
Sample Depth: 0.5 - 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3077319

Prep Method: SW5030B

% Moisture:

Date Prep: 01.28.19 08.30

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.28.19 20.31	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.28.19 20.31	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.28.19 20.31	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.28.19 20.31	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.28.19 20.31	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	01.28.19 20.31	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.28.19 20.31	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	111	%	70-130	01.28.19 20.31		
4-Bromofluorobenzene	460-00-4	118	%	70-130	01.28.19 20.31		



Certificate of Analytical Results 612243



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **SW08**
Lab Sample Id: 612243-003

Matrix: Soil
Date Collected: 01.16.19 13.00

Date Received: 01.23.19 13.29
Sample Depth: 0.5 - 5.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3077178

Date Prep: 01.25.19 12.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	308	4.98	mg/kg	01.25.19 20.09		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3077210

Date Prep: 01.26.19 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.27.19 04.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.27.19 04.12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.27.19 04.12	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.27.19 04.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	01.27.19 04.12	
o-Terphenyl	84-15-1	105	%	70-135	01.27.19 04.12	



Certificate of Analytical Results 612243



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **SW08**
Lab Sample Id: 612243-003

Matrix: Soil
Date Collected: 01.16.19 13.00

Date Received: 01.23.19 13.29
Sample Depth: 0.5 - 5.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 01.28.19 10.00

Basis: Wet Weight

Seq Number: 3077289

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.28.19 23.30	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.28.19 23.30	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.28.19 23.30	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.28.19 23.30	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.28.19 23.30	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.28.19 23.30	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.28.19 23.30	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	94	%	70-130	01.28.19 23.30		
1,4-Difluorobenzene	540-36-3	92	%	70-130	01.28.19 23.30		



Certificate of Analytical Results 612243



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: FS22
Lab Sample Id: 612243-004

Matrix: Soil
Date Collected: 01.16.19 10.35

Date Received: 01.23.19 13.29
Sample Depth: 0.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3077178

Date Prep: 01.25.19 12.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	322	5.00	mg/kg	01.25.19 20.15		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3077210

Date Prep: 01.26.19 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	01.27.19 04.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	01.27.19 04.32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	01.27.19 04.32	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	01.27.19 04.32	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	100	%	70-135	01.27.19 04.32		
o-Terphenyl	84-15-1	101	%	70-135	01.27.19 04.32		



Certificate of Analytical Results 612243



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: FS22
Lab Sample Id: 612243-004

Matrix: Soil
Date Collected: 01.16.19 10.35

Date Received: 01.23.19 13.29
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 01.28.19 10.00

Basis: Wet Weight

Seq Number: 3077289

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.28.19 17.30	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.28.19 17.30	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.28.19 17.30	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.28.19 17.30	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.28.19 17.30	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	01.28.19 17.30	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.28.19 17.30	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	85	%	70-130	01.28.19 17.30		
4-Bromofluorobenzene	460-00-4	92	%	70-130	01.28.19 17.30		



Certificate of Analytical Results 612243



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: FS23
Lab Sample Id: 612243-005

Matrix: Soil
Date Collected: 01.16.19 10.40

Date Received: 01.23.19 13.29
Sample Depth: 0.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3077178

Date Prep: 01.25.19 12.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	297	4.96	mg/kg	01.25.19 20.21		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3077210

Date Prep: 01.26.19 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.27.19 04.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.27.19 04.52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.27.19 04.52	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.27.19 04.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	01.27.19 04.52	
o-Terphenyl	84-15-1	103	%	70-135	01.27.19 04.52	



Certificate of Analytical Results 612243

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS23**
 Lab Sample Id: 612243-005

Matrix: Soil
 Date Collected: 01.16.19 10.40

Date Received: 01.23.19 13.29
 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3077289

Date Prep: 01.28.19 10.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.28.19 17.51	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.28.19 17.51	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.28.19 17.51	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.28.19 17.51	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.28.19 17.51	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.28.19 17.51	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.28.19 17.51	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	97	%	70-130	01.28.19 17.51		
1,4-Difluorobenzene	540-36-3	96	%	70-130	01.28.19 17.51		



Certificate of Analytical Results 612243



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS24**
Lab Sample Id: 612243-006

Matrix: Soil
Date Collected: 01.16.19 11.00

Date Received: 01.23.19 13.29
Sample Depth: 0.5 - 2.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3077178

Date Prep: 01.25.19 12.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	331	4.99	mg/kg	01.25.19 20.27		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3077210

Date Prep: 01.26.19 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.27.19 05.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	18.6	15.0	mg/kg	01.27.19 05.12		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.27.19 05.12	U	1
Total TPH	PHC635	18.6	15.0	mg/kg	01.27.19 05.12		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	01.27.19 05.12	
o-Terphenyl	84-15-1	95	%	70-135	01.27.19 05.12	



Certificate of Analytical Results 612243

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS24**
 Lab Sample Id: 612243-006

Matrix: Soil
 Date Collected: 01.16.19 11.00

Date Received: 01.23.19 13.29
 Sample Depth: 0.5 - 2.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3077289

Date Prep: 01.28.19 10.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.28.19 18.13	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.28.19 18.13	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.28.19 18.13	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.28.19 18.13	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.28.19 18.13	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	01.28.19 18.13	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.28.19 18.13	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	94	%	70-130	01.28.19 18.13		
4-Bromofluorobenzene	460-00-4	93	%	70-130	01.28.19 18.13		



Certificate of Analytical Results 612243

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: FS25
 Lab Sample Id: 612243-007

Matrix: Soil
 Date Collected: 01.16.19 11.10

Date Received: 01.23.19 13.29
 Sample Depth: 0.5 - 2.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3077178

Date Prep: 01.25.19 12.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	469	4.97	mg/kg	01.25.19 20.33		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3077210

Date Prep: 01.26.19 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.27.19 05.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.27.19 05.32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.27.19 05.32	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.27.19 05.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	01.27.19 05.32	
o-Terphenyl	84-15-1	94	%	70-135	01.27.19 05.32	



Certificate of Analytical Results 612243



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: FS25
Lab Sample Id: 612243-007

Matrix: Soil
Date Collected: 01.16.19 11.10

Date Received: 01.23.19 13.29
Sample Depth: 0.5 - 2.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3077289

Date Prep: 01.28.19 10.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.28.19 18.34	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.28.19 18.34	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.28.19 18.34	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.28.19 18.34	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.28.19 18.34	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.28.19 18.34	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.28.19 18.34	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	91	%	70-130	01.28.19 18.34		
4-Bromofluorobenzene	460-00-4	97	%	70-130	01.28.19 18.34		



Certificate of Analytical Results 612243

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS26**
 Lab Sample Id: 612243-008

Matrix: Soil
 Date Collected: 01.16.19 11.20

Date Received: 01.23.19 13.29
 Sample Depth: 2.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3077178

Date Prep: 01.25.19 12.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	233	4.97	mg/kg	01.25.19 20.40		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3077210

Date Prep: 01.26.19 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.27.19 06.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.27.19 06.33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.27.19 06.33	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.27.19 06.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	01.27.19 06.33	
o-Terphenyl	84-15-1	94	%	70-135	01.27.19 06.33	



Certificate of Analytical Results 612243



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS26**
Lab Sample Id: 612243-008

Matrix: Soil
Date Collected: 01.16.19 11.20

Date Received: 01.23.19 13.29
Sample Depth: 2.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3077289

Date Prep: 01.28.19 10.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.28.19 18.55	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.28.19 18.55	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.28.19 18.55	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.28.19 18.55	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.28.19 18.55	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.28.19 18.55	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.28.19 18.55	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	88	%	70-130	01.28.19 18.55		
4-Bromofluorobenzene	460-00-4	90	%	70-130	01.28.19 18.55		



Certificate of Analytical Results 612243



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: FS27
Lab Sample Id: 612243-009

Matrix: Soil
Date Collected: 01.16.19 11.25

Date Received: 01.23.19 13.29
Sample Depth: 2.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3077178

Date Prep: 01.25.19 12.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	212	4.99	mg/kg	01.25.19 20.58		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3077210

Date Prep: 01.26.19 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.27.19 06.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.27.19 06.53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.27.19 06.53	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.27.19 06.53	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	97	%	70-135	01.27.19 06.53		
o-Terphenyl	84-15-1	96	%	70-135	01.27.19 06.53		



Certificate of Analytical Results 612243



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: FS27
Lab Sample Id: 612243-009

Matrix: Soil
Date Collected: 01.16.19 11.25

Date Received: 01.23.19 13.29
Sample Depth: 2.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3077289

Date Prep: 01.28.19 10.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.28.19 19.16	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.28.19 19.16	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.28.19 19.16	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	01.28.19 19.16	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.28.19 19.16	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.28.19 19.16	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.28.19 19.16	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	91	%	70-130	01.28.19 19.16		
4-Bromofluorobenzene	460-00-4	91	%	70-130	01.28.19 19.16		



Certificate of Analytical Results 612243



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS28**
Lab Sample Id: 612243-010

Matrix: Soil
Date Collected: 01.16.19 13.45

Date Received: 01.23.19 13.29
Sample Depth: 6 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3077017

Date Prep: 01.24.19 16.40

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	677	4.98	mg/kg	01.25.19 10.43		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3077210

Date Prep: 01.26.19 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.27.19 07.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.27.19 07.13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.27.19 07.13	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.27.19 07.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	01.27.19 07.13	
o-Terphenyl	84-15-1	101	%	70-135	01.27.19 07.13	



Certificate of Analytical Results 612243



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS28**
Lab Sample Id: 612243-010

Matrix: Soil
Date Collected: 01.16.19 13.45

Date Received: 01.23.19 13.29
Sample Depth: 6 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 01.28.19 10.00

Basis: Wet Weight

Seq Number: 3077289

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.28.19 19.38	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.28.19 19.38	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.28.19 19.38	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.28.19 19.38	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.28.19 19.38	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.28.19 19.38	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.28.19 19.38	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	94	%	70-130	01.28.19 19.38		
4-Bromofluorobenzene	460-00-4	97	%	70-130	01.28.19 19.38		



Certificate of Analytical Results 612243

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS29**
 Lab Sample Id: 612243-011

Matrix: Soil
 Date Collected: 01.17.19 09.00

Date Received: 01.23.19 13.29
 Sample Depth: 4 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3077017

Date Prep: 01.24.19 16.40

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	280	5.00	mg/kg	01.25.19 12.12		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3077210

Date Prep: 01.26.19 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.27.19 07.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.27.19 07.33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.27.19 07.33	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.27.19 07.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	01.27.19 07.33	
o-Terphenyl	84-15-1	99	%	70-135	01.27.19 07.33	



Certificate of Analytical Results 612243



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS29**
Lab Sample Id: 612243-011

Matrix: Soil
Date Collected: 01.17.19 09.00

Date Received: 01.23.19 13.29
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 01.28.19 10.00

Basis: Wet Weight

Seq Number: 3077289

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.28.19 20.00	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.28.19 20.00	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.28.19 20.00	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	01.28.19 20.00	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.28.19 20.00	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	01.28.19 20.00	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.28.19 20.00	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	90	%	70-130	01.28.19 20.00		
4-Bromofluorobenzene	460-00-4	94	%	70-130	01.28.19 20.00		



Certificate of Analytical Results 612243

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS30**
 Lab Sample Id: 612243-012

Matrix: Soil
 Date Collected: 01.17.19 09.30

Date Received: 01.23.19 13.29
 Sample Depth: 4 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3077178

Date Prep: 01.25.19 12.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	274	4.95	mg/kg	01.25.19 21.04		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3077210

Date Prep: 01.26.19 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.27.19 07.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.27.19 07.53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.27.19 07.53	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.27.19 07.53	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	95	%	70-135	01.27.19 07.53		
o-Terphenyl	84-15-1	95	%	70-135	01.27.19 07.53		



Certificate of Analytical Results 612243

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS30**
 Lab Sample Id: 612243-012

Matrix: Soil
 Date Collected: 01.17.19 09.30

Date Received: 01.23.19 13.29
 Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3077289

Date Prep: 01.28.19 10.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.28.19 20.21	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.28.19 20.21	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.28.19 20.21	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.28.19 20.21	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.28.19 20.21	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.28.19 20.21	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.28.19 20.21	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	95	%	70-130	01.28.19 20.21		
1,4-Difluorobenzene	540-36-3	88	%	70-130	01.28.19 20.21		



Certificate of Analytical Results 612243

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: FS31
Lab Sample Id: 612243-013

Matrix: Soil
Date Collected: 01.17.19 10.10

Date Received: 01.23.19 13.29
Sample Depth: 6 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3077178

Date Prep: 01.25.19 12.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	621	4.96	mg/kg	01.25.19 21.26		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3077210

Date Prep: 01.26.19 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.27.19 08.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.27.19 08.13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.27.19 08.13	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.27.19 08.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	01.27.19 08.13	
o-Terphenyl	84-15-1	97	%	70-135	01.27.19 08.13	



Certificate of Analytical Results 612243

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS31**
 Lab Sample Id: 612243-013

Matrix: Soil
 Date Collected: 01.17.19 10.10

Date Received: 01.23.19 13.29
 Sample Depth: 6 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3077289

Date Prep: 01.28.19 10.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.28.19 20.42	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.28.19 20.42	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.28.19 20.42	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.28.19 20.42	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.28.19 20.42	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.28.19 20.42	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.28.19 20.42	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	90	%	70-130	01.28.19 20.42		
4-Bromofluorobenzene	460-00-4	93	%	70-130	01.28.19 20.42		



Certificate of Analytical Results 612243



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: FS32
Lab Sample Id: 612243-014

Matrix: Soil
Date Collected: 01.17.19 10.15

Date Received: 01.23.19 13.29
Sample Depth: 6 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3077011

Date Prep: 01.24.19 12.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	457	4.96	mg/kg	01.24.19 16.45		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3077210

Date Prep: 01.26.19 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.27.19 08.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.27.19 08.33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.27.19 08.33	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.27.19 08.33	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	95	%	70-135	01.27.19 08.33		
o-Terphenyl	84-15-1	95	%	70-135	01.27.19 08.33		



Certificate of Analytical Results 612243

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: FS32
 Lab Sample Id: 612243-014

Matrix: Soil
 Date Collected: 01.17.19 10.15

Date Received: 01.23.19 13.29
 Sample Depth: 6 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 01.28.19 10.00

Basis: Wet Weight

Seq Number: 3077289

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.28.19 23.52	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.28.19 23.52	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.28.19 23.52	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.28.19 23.52	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.28.19 23.52	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	01.28.19 23.52	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.28.19 23.52	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	99	%	70-130	01.28.19 23.52		
1,4-Difluorobenzene	540-36-3	81	%	70-130	01.28.19 23.52		



Certificate of Analytical Results 612243

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: FS33
Lab Sample Id: 612243-015

Matrix: Soil
Date Collected: 01.17.19 10.35

Date Received: 01.23.19 13.29
Sample Depth: 4 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3077011

Date Prep: 01.24.19 12.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	116	4.96	mg/kg	01.24.19 17.03		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3077210

Date Prep: 01.26.19 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	01.27.19 08.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	01.27.19 08.53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	01.27.19 08.53	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	01.27.19 08.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	01.27.19 08.53	
o-Terphenyl	84-15-1	94	%	70-135	01.27.19 08.53	



Certificate of Analytical Results 612243



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS33**
Lab Sample Id: 612243-015

Matrix: Soil
Date Collected: 01.17.19 10.35

Date Received: 01.23.19 13.29
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3077289

Date Prep: 01.28.19 10.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.29.19 00.12	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.29.19 00.12	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.29.19 00.12	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.29.19 00.12	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.29.19 00.12	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.29.19 00.12	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.29.19 00.12	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	94	%	70-130	01.29.19 00.12		
4-Bromofluorobenzene	460-00-4	94	%	70-130	01.29.19 00.12		



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 Federal 16H

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3077011

MB Sample Id: 7670433-1-BLK

Matrix: Solid

LCS Sample Id: 7670433-1-BKS

Prep Method: E300P

Date Prep: 01.24.19

LCSD Sample Id: 7670433-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	226	250	226	90	230	92	90-110	2	20	mg/kg	01.24.19 15:35	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3077017

MB Sample Id: 7670435-1-BLK

Matrix: Solid

LCS Sample Id: 7670435-1-BKS

Prep Method: E300P

Date Prep: 01.24.19

LCSD Sample Id: 7670435-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	275	110	273	109	90-110	1	20	mg/kg	01.25.19 10:20	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3077178

MB Sample Id: 7670483-1-BLK

Matrix: Solid

LCS Sample Id: 7670483-1-BKS

Prep Method: E300P

Date Prep: 01.25.19

LCSD Sample Id: 7670483-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	255	102	240	96	90-110	6	20	mg/kg	01.25.19 18:58	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3077011

Parent Sample Id: 612382-001

Matrix: Soil

MS Sample Id: 612382-001 S

Prep Method: E300P

Date Prep: 01.24.19

MSD Sample Id: 612382-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	139	250	409	108	385	98	90-110	6	20	mg/kg	01.24.19 18:20	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3077017

Parent Sample Id: 612243-010

Matrix: Soil

MS Sample Id: 612243-010 S

Prep Method: E300P

Date Prep: 01.24.19

MSD Sample Id: 612243-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	677	249	914	95	913	95	90-110	0	20	mg/kg	01.25.19 10:49	

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 Federal 16H

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3077017

Matrix: Soil

Prep Method: E300P

Parent Sample Id: 612243-011

MS Sample Id: 612243-011 S

Date Prep: 01.24.19

MSD Sample Id: 612243-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	280	250	547	107	576	118	90-110	5	20	mg/kg	01.25.19 12:19	X

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3077178

Matrix: Soil

Prep Method: E300P

Parent Sample Id: 612242-021

MS Sample Id: 612242-021 S

Date Prep: 01.25.19

MSD Sample Id: 612242-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	751	248	1000	100	970	88	90-110	3	20	mg/kg	01.25.19 19:16	X

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3077178

Matrix: Soil

Prep Method: E300P

Parent Sample Id: 612243-008

MS Sample Id: 612243-008 S

Date Prep: 01.25.19

MSD Sample Id: 612243-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	233	249	476	98	479	99	90-110	1	20	mg/kg	01.25.19 20:46	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3077211

Matrix: Soil

Prep Method: E300P

Parent Sample Id: 612243-014

MS Sample Id: 612243-014 S

Date Prep: 01.24.19

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Chloride	457	248	646	76	90-110	mg/kg	01.24.19 16:51	X

Analytical Method: TPH by SW8015 Mod

Seq Number: 3077210

Matrix: Solid

Prep Method: TX1005P

MB Sample Id: 7670534-1-BLK

LCS Sample Id: 7670534-1-BKS

Date Prep: 01.26.19

LCSD Sample Id: 7670534-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	911	91	895	90	70-135	2	20	mg/kg	01.27.19 10:14	
Diesel Range Organics (DRO)	<8.13	1000	1030	103	1000	100	70-135	3	20	mg/kg	01.27.19 10:14	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	98		126		124		70-135	%	01.27.19 10:14
o-Terphenyl	101		114		113		70-135	%	01.27.19 10:14

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 Federal 16H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3077210

Parent Sample Id: 612242-021

Matrix: Soil

MS Sample Id: 612242-021 S

Prep Method: TX1005P

Date Prep: 01.26.19

MSD Sample Id: 612242-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	999	954	95	924	93	70-135	3	20	mg/kg	01.27.19 02:12	
Diesel Range Organics (DRO)	<8.12	999	1100	110	1060	106	70-135	4	20	mg/kg	01.27.19 02:12	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	127		127		70-135	%	01.27.19 02:12
o-Terphenyl	119		116		70-135	%	01.27.19 02:12

Analytical Method: BTEX by EPA 8021B

Seq Number: 3077319

MB Sample Id: 7670611-1-BLK

Matrix: Solid

LCS Sample Id: 7670611-1-BKS

Prep Method: SW5030B

Date Prep: 01.28.19

LCSD Sample Id: 7670611-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000386	0.100	0.115	115	0.0971	97	70-130	17	35	mg/kg	01.28.19 10:33	
Toluene	<0.000457	0.100	0.103	103	0.0893	89	70-130	14	35	mg/kg	01.28.19 10:33	
Ethylbenzene	<0.000567	0.100	0.0997	100	0.0862	86	70-130	15	35	mg/kg	01.28.19 10:33	
m,p-Xylenes	<0.00102	0.201	0.199	99	0.173	87	70-130	14	35	mg/kg	01.28.19 10:33	
o-Xylene	<0.000346	0.100	0.0982	98	0.0864	86	70-130	13	35	mg/kg	01.28.19 10:33	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		105		106		70-130	%	01.28.19 10:33
4-Bromofluorobenzene	94		103		107		70-130	%	01.28.19 10:33

Analytical Method: BTEX by EPA 8021B

Seq Number: 3077289

MB Sample Id: 7670614-1-BLK

Matrix: Solid

LCS Sample Id: 7670614-1-BKS

Prep Method: SW5030B

Date Prep: 01.28.19

LCSD Sample Id: 7670614-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.101	0.112	111	0.110	110	70-130	2	35	mg/kg	01.28.19 15:21	
Toluene	<0.00201	0.101	0.0965	96	0.0991	99	70-130	3	35	mg/kg	01.28.19 15:21	
Ethylbenzene	<0.00201	0.101	0.118	117	0.123	123	70-130	4	35	mg/kg	01.28.19 15:21	
m,p-Xylenes	<0.00402	0.201	0.239	119	0.238	119	70-130	0	35	mg/kg	01.28.19 15:21	
o-Xylene	<0.00201	0.101	0.114	113	0.116	116	70-130	2	35	mg/kg	01.28.19 15:21	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	96		95		101		70-130	%	01.28.19 15:21
4-Bromofluorobenzene	93		82		96		70-130	%	01.28.19 15:21

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 Federal 16H

Analytical Method: BTEX by EPA 8021B

Seq Number: 3077319

Parent Sample Id: 612242-021

Matrix: Soil

MS Sample Id: 612242-021 S

Prep Method: SW5030B

Date Prep: 01.28.19

MSD Sample Id: 612242-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000386	0.100	0.0693	69	0.0908	90	70-130	27	35	mg/kg	01.28.19 11:06	X
Toluene	<0.000457	0.100	0.0656	66	0.0788	78	70-130	18	35	mg/kg	01.28.19 11:06	X
Ethylbenzene	<0.000566	0.100	0.0635	64	0.0730	72	70-130	14	35	mg/kg	01.28.19 11:06	X
m,p-Xylenes	<0.00102	0.200	0.130	65	0.144	72	70-130	10	35	mg/kg	01.28.19 11:06	X
o-Xylene	<0.000345	0.100	0.0643	64	0.0706	70	70-130	9	35	mg/kg	01.28.19 11:06	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		106		70-130	%	01.28.19 11:06
4-Bromofluorobenzene	106		102		70-130	%	01.28.19 11:06

Analytical Method: BTEX by EPA 8021B

Seq Number: 3077289

Parent Sample Id: 612243-015

Matrix: Soil

MS Sample Id: 612243-015 S

Prep Method: SW5030B

Date Prep: 01.28.19

MSD Sample Id: 612243-015 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.101	100	0.101	101	70-130	0	35	mg/kg	01.28.19 15:43	
Toluene	<0.00202	0.101	0.0910	90	0.0866	87	70-130	5	35	mg/kg	01.28.19 15:43	
Ethylbenzene	<0.00202	0.101	0.0977	97	0.104	104	70-130	6	35	mg/kg	01.28.19 15:43	
m,p-Xylenes	<0.00403	0.202	0.193	96	0.212	107	70-130	9	35	mg/kg	01.28.19 15:43	
o-Xylene	<0.00202	0.101	0.0785	78	0.101	101	70-130	25	35	mg/kg	01.28.19 15:43	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	88		87		70-130	%	01.28.19 15:43
4-Bromofluorobenzene	72		100		70-130	%	01.28.19 15:43

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: 1012243

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

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Page 1 of 2

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

Work Order Comments Program: UST/PST ☐ RP ☐ Rowfields ☐ C ☐ perfund ☐ State of Project:	
Reporting Level II ☐ Level III ☐ ST/UST ☐ RP ☐ Level IV ☐	Deliverables: EDD ☐ ADAPT ☐ Other: ☐

Project Name:	Corral Canyon Federal Hatt	Turn Around	
Project Number:		Routine	☒
P.O. Number:	22P4922	Rush:	
Sampler's Name:	Anna Byers	Due Date:	

SAMPLE RECEIPT	Temp Blank:	Yes ☐ No ☒	Wet Ice:	Yes ☒ No ☐
Temperature (°C):	0.3/0.2	Thermometer ID:	VE	
Received Intact:	Yes ☒ No ☐	Correction Factor:	-0.1	
Cooler Custody Seals:	Yes ☒ No ☐	Total Containers:		
Sample Custody Seals:	Yes ☒ No ☐			

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 8022)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu 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
Anna Byers	[Signature]	1/22/19 0700
	[Signature]	1/23/19 1309
		1/23/19 1530



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)555-3443 Lubbock, TX (806)794-1296
Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813-575-392-7550)

Chain of Custody

Work Order No: 0212243

Project Manager:	Adrian Baker	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTD Energy
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	
Phone:	432.704.5178	Email:	abaker@ltenv.com ² , abayers@ltenv.com

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

[illegible]

SAMPLE RECEIPT			
Temperature (°C):	0.2/0.2	Temp Blank:	Yes ☐ No ☒
Received Intact:	Yes ☒ No ☐	Wet Ice:	Yes ☒ No ☐
Cooler Custody Seals:	Yes ☒ No ☐	Correction Factor:	-0.1
Sample Custody Seals:	Yes ☒ No ☐	Total Containers:	
Number of Containers			
PA 8015)			
EPA 8021)			
le (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 (C)	Chloride											Sample Comments
F529	S	1/17	0900	4'	1	X	X	X											
F530	S	1/17	0930	4'	1	X	X	X											
F531	S	1/17	1010	6'	1	X	X	X											
F532	S	1/17	1015	6'	1	X	X	X											
F533	S	1/17	1035	4'	1	X	X	X											

[illegible]

Notices: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenoco. Its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenoco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenoco. A minimum charge of \$750.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenoco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Anne Beyer	[Signature]	1/22/19 07:00	2 [Signature]	[Signature]	1/22/19 15:30
3			4		
5			6		

ORIGIN ID: CACA (5/5) 887-6245 XENCO PAC N MAIL 910 W PIERCE ST CARLSBAD, NM 88220 UNITED STATES US		SHIP DATE: 22 JAN 19 ACTWGT: 57.00 LB CAD: 101813708INET4100 DIMS: 20x14x16 IN BILL RECIPIENT
TO HOLD FOR XENCO FEDEX EXPRESS SHIP CENTER FEDEX SHIP CENTER 3600 COUNTY RD 1276 S MIDLAND TX 79711 (806) 794-1296 PO: NV: REF: DEPT:		
565J2ID74C/23AD		

TRK# 7742 8371 8130 0201 41 MAFA TX-US LBB MAFA HLD	WED - 23 JAN HOLD STANDARD OVERNIGHT
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After printing this label:

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

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com. FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is \$1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our Service Guide. Written claims must be filed within strict time limits, see current FedEx Service Guide.



Client: LT Environmental, Inc.

Date/ Time Received: 01/23/2019 01:29:21 PM

Work Order #: 612243

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist

Comments

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

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Brianna Teel

Date: 01/23/2019

Checklist reviewed by:

Jessica Kramer

Date: 01/23/2019

Analytical Report 612242

for
LT Environmental, Inc.

Project Manager: Adrian Baker
Corral Canyon Federal 16H

29-JAN-19

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

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

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

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



29-JAN-19

Project Manager: **Adrian Baker**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **612242**

Corral Canyon Federal 16H

Project Address: Delaware Basin

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 612242. 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. 612242 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.

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Sample Cross Reference 612242

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS34	S	01-21-19 09:35	6 - 7 ft	612242-001
FS35	S	01-21-19 09:50	6 - 7 ft	612242-002
FS36	S	01-21-19 09:55	6 - 8 ft	612242-003
FS37	S	01-21-19 10:00	7 - 10 ft	612242-004
FS38	S	01-21-19 16:50	8 ft	612242-005
FS39	S	01-21-19 17:00	4 - 10 ft	612242-006
FS40	S	01-21-19 16:55	4 - 10 ft	612242-007
FS41	S	01-21-19 12:00	8 ft	612242-008
FS42	S	01-21-19 16:30	8 ft	612242-009
FS43	S	01-21-19 16:15	8 ft	612242-010
FS44	S	01-21-19 15:55	4 - 8 ft	612242-011
FS45	S	01-21-19 16:35	8 ft	612242-012
FS46	S	01-21-19 16:20	8 ft	612242-013
FS47	S	01-21-19 16:00	4 - 8 ft	612242-014
FS48	S	01-21-19 10:05	7 - 8 ft	612242-015
FS49	S	01-21-19 16:25	7 - 8 ft	612242-016
FS50	S	01-21-19 16:10	4 - 8 ft	612242-017
FS51	S	01-21-19 16:40	6 - 7 ft	612242-018
FS52	S	01-21-19 16:27	6 - 7 ft	612242-019
FS53	S	01-21-19 11:25	3 - 4 ft	612242-020
FS54	S	01-21-19 11:20	2.5 - 4 ft	612242-021
FS55	S	01-21-19 11:15	3 - 4 ft	612242-022
FS56	S	01-18-19 11:57	6 ft	612242-023

**CASE NARRATIVE****Client Name: LT Environmental, Inc.****Project Name: Corral Canyon Federal 16H**Project ID:
Work Order Number(s): 612242Report Date: 29-JAN-19
Date Received: 01/23/2019**Sample receipt non conformances and comments:**

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3076948 BTEX by EPA 8021B

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

Batch: LBA-3077148 Inorganic Anions by EPA 300

Lab Sample ID 612242-011 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 612242-001, -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-3077160 BTEX by EPA 8021B

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

Batch: LBA-3077178 Inorganic Anions by EPA 300

Lab Sample ID 612243-008 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 612242-021, -022, -023.

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

Batch: LBA-3077319 BTEX by EPA 8021B

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

Lab Sample ID 612242-021 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 612242-020, -021, -022, -023.

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



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Corral Canyon Federal 16H

Project ID:

Work Order Number(s): 612242

Report Date: 29-JAN-19

Date Received: 01/23/2019



Certificate of Analysis Summary 612242

LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon Federal 16H

Project Id:

Contact: Adrian Baker

Project Location: Delaware Basin

Date Received in Lab: Wed Jan-23-19 01:09 pm

Report Date: 29-JAN-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	612242-001	612242-002	612242-003	612242-004	612242-005	612242-006
	<i>Field Id:</i>	FS34	FS35	FS36	FS37	FS38	FS39
	<i>Depth:</i>	6-7 ft	6-7 ft	6-8 ft	7-10 ft	8- ft	4-10 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jan-21-19 09:35	Jan-21-19 09:50	Jan-21-19 09:55	Jan-21-19 10:00	Jan-21-19 16:50	Jan-21-19 17:00
BTEX by EPA 8021B	<i>Extracted:</i>	Jan-24-19 12:30	Jan-24-19 12:30	Jan-24-19 12:30	Jan-24-19 12:30	Jan-24-19 12:30	Jan-24-19 12:30
	<i>Analyzed:</i>	Jan-24-19 22:15	Jan-24-19 22:36	Jan-24-19 22:58	Jan-24-19 23:19	Jan-24-19 23:40	Jan-25-19 00:02
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00201 0.00201	<0.00199 0.00199	<0.00201 0.00201	<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200
Toluene		<0.00201 0.00201	<0.00199 0.00199	<0.00201 0.00201	<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200
Ethylbenzene		<0.00201 0.00201	<0.00199 0.00199	<0.00201 0.00201	<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200
m,p-Xylenes		<0.00402 0.00402	<0.00398 0.00398	<0.00402 0.00402	<0.00398 0.00398	<0.00402 0.00402	<0.00399 0.00399
o-Xylene		<0.00201 0.00201	<0.00199 0.00199	<0.00201 0.00201	<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200
Total Xylenes		<0.00201 0.00201	<0.00199 0.00199	<0.00201 0.00201	<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200
Total BTEX		<0.00201 0.00201	<0.00199 0.00199	<0.00201 0.00201	<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200
Inorganic Anions by EPA 300	<i>Extracted:</i>	Jan-25-19 10:00	Jan-25-19 10:00	Jan-25-19 10:00	Jan-25-19 10:00	Jan-25-19 10:00	Jan-25-19 10:00
	<i>Analyzed:</i>	Jan-25-19 15:20	Jan-25-19 15:39	Jan-25-19 15:56	Jan-25-19 16:02	Jan-25-19 17:25	Jan-25-19 16:30
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		269 4.99	361 4.95	242 4.98	127 4.98	133 4.98	369 4.98
TPH by SW8015 Mod	<i>Extracted:</i>	Jan-26-19 11:00	Jan-26-19 11:00	Jan-26-19 11:00	Jan-26-19 11:00	Jan-26-19 11:00	Jan-26-19 11:00
	<i>Analyzed:</i>	Jan-26-19 16:36	Jan-26-19 17:35	Jan-26-19 17:55	Jan-26-19 18:15	Jan-26-19 18:34	Jan-26-19 18:54
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0	20.9 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total TPH		<15.0 15.0	<15.0 15.0	20.9 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0

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

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

Version: 1.9%

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 612242

LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon Federal 16H

Project Id:

Contact: Adrian Baker

Project Location: Delaware Basin

Date Received in Lab: Wed Jan-23-19 01:09 pm

Report Date: 29-JAN-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	612242-007	612242-008	612242-009	612242-010	612242-011	612242-012
	<i>Field Id:</i>	FS40	FS41	FS42	FS43	FS44	FS45
	<i>Depth:</i>	4-10 ft	8- ft	8- ft	8- ft	4-8 ft	8- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jan-21-19 16:55	Jan-21-19 12:00	Jan-21-19 16:30	Jan-21-19 16:15	Jan-21-19 15:55	Jan-21-19 16:35
BTEX by EPA 8021B	<i>Extracted:</i>	Jan-24-19 12:30	Jan-24-19 12:30	Jan-24-19 12:30	Jan-25-19 17:00	Jan-25-19 17:00	Jan-25-19 17:00
	<i>Analyzed:</i>	Jan-25-19 00:23	Jan-25-19 00:44	Jan-25-19 01:05	Jan-26-19 12:05	Jan-26-19 12:24	Jan-26-19 12:43
	<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	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202	<0.00199 0.00199
Toluene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202	<0.00199 0.00199
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202	<0.00199 0.00199
m,p-Xylenes		<0.00399 0.00399	<0.00401 0.00401	<0.00401 0.00401	<0.00398 0.00398	<0.00403 0.00403	<0.00398 0.00398
o-Xylene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202	<0.00199 0.00199
Total Xylenes		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202	<0.00199 0.00199
Total BTEX		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202	<0.00199 0.00199
Inorganic Anions by EPA 300	<i>Extracted:</i>	Jan-25-19 10:00	Jan-25-19 10:00	Jan-25-19 10:00	Jan-25-19 10:00	Jan-25-19 10:00	Jan-25-19 10:00
	<i>Analyzed:</i>	Jan-25-19 16:36	Jan-25-19 16:42	Jan-25-19 16:48	Jan-25-19 16:54	Jan-25-19 17:01	Jan-25-19 17:19
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		170 4.96	146 4.95	178 4.99	150 5.00	177 4.96	314 4.98
TPH by SW8015 Mod	<i>Extracted:</i>	Jan-26-19 11:00	Jan-26-19 11:00	Jan-26-19 11:00	Jan-26-19 11:00	Jan-26-19 11:00	Jan-26-19 11:00
	<i>Analyzed:</i>	Jan-26-19 19:14	Jan-26-19 19:33	Jan-26-19 19:53	Jan-26-19 20:13	Jan-26-19 21:12	Jan-26-19 21:31
	<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)		<15.0 15.0	<14.9 14.9	<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0
Diesel Range Organics (DRO)		<15.0 15.0	<14.9 14.9	<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<14.9 14.9	<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0
Total TPH		<15.0 15.0	<14.9 14.9	<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0

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

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

Version: 1.9%

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 612242

LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon Federal 16H

Project Id:

Contact: Adrian Baker

Project Location: Delaware Basin

Date Received in Lab: Wed Jan-23-19 01:09 pm

Report Date: 29-JAN-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	612242-013	612242-014	612242-015	612242-016	612242-017	612242-018
	<i>Field Id:</i>	FS46	FS47	FS48	FS49	FS50	FS51
	<i>Depth:</i>	8- ft	4-8 ft	7-8 ft	7-8 ft	4-8 ft	6-7 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jan-21-19 16:20	Jan-21-19 16:00	Jan-21-19 10:05	Jan-21-19 16:25	Jan-21-19 16:10	Jan-21-19 16:40
BTEX by EPA 8021B	<i>Extracted:</i>	Jan-25-19 17:00	Jan-25-19 17:00	Jan-25-19 17:00	Jan-25-19 17:00	Jan-25-19 17:00	Jan-25-19 17:00
	<i>Analyzed:</i>	Jan-26-19 13:02	Jan-26-19 13:21	Jan-26-19 13:40	Jan-26-19 14:54	Jan-26-19 15:13	Jan-26-19 15:32
	<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	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199
Toluene		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199
m,p-Xylenes		<0.00401 0.00401	<0.00399 0.00399	<0.00402 0.00402	<0.00400 0.00400	<0.00402 0.00402	<0.00398 0.00398
o-Xylene		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199
Total Xylenes		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199
Total BTEX		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199
Inorganic Anions by EPA 300	<i>Extracted:</i>	Jan-25-19 10:00	Jan-25-19 10:00	Jan-25-19 10:00	Jan-25-19 10:00	Jan-25-19 10:00	Jan-25-19 10:00
	<i>Analyzed:</i>	Jan-25-19 17:47	Jan-25-19 17:53	Jan-25-19 17:59	Jan-25-19 18:05	Jan-25-19 18:11	Jan-25-19 18:18
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		236 4.95	358 4.95	400 4.95	282 4.95	126 4.99	435 4.97
TPH by SW8015 Mod	<i>Extracted:</i>	Jan-26-19 11:00	Jan-26-19 11:00	Jan-26-19 11:00	Jan-26-19 11:00	Jan-26-19 11:00	Jan-26-19 11:00
	<i>Analyzed:</i>	Jan-26-19 21:51	Jan-26-19 22:11	Jan-26-19 22:31	Jan-26-19 22:52	Jan-26-19 23:12	Jan-26-19 23:32
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0
Diesel Range Organics (DRO)		<15.0 15.0	15.9 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0
Total TPH		<15.0 15.0	15.9 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0

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Version: 1.9%

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 612242

LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon Federal 16H

Project Id:

Contact: Adrian Baker

Project Location: Delaware Basin

Date Received in Lab: Wed Jan-23-19 01:09 pm

Report Date: 29-JAN-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	612242-019	612242-020	612242-021	612242-022	612242-023	
	<i>Field Id:</i>	FS52	FS53	FS54	FS55	FS56	
	<i>Depth:</i>	6-7 ft	3-4 ft	2.5-4 ft	3-4 ft	6- ft	
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	
	<i>Sampled:</i>	Jan-21-19 16:27	Jan-21-19 11:25	Jan-21-19 11:20	Jan-21-19 11:15	Jan-18-19 11:57	
BTEX by EPA 8021B	<i>Extracted:</i>	Jan-25-19 17:00	Jan-28-19 08:30	Jan-28-19 08:30	Jan-28-19 08:30	Jan-28-19 08:30	
	<i>Analyzed:</i>	Jan-26-19 15:51	Jan-28-19 18:56	Jan-28-19 19:15	Jan-28-19 19:34	Jan-28-19 19:53	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Benzene		<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	
Toluene		<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	
m,p-Xylenes		<0.00399 0.00399	<0.00401 0.00401	<0.00398 0.00398	<0.00400 0.00400	<0.00399 0.00399	
o-Xylene		<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	
Total Xylenes		<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	
Total BTEX		<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	
Inorganic Anions by EPA 300	<i>Extracted:</i>	Jan-25-19 10:00	Jan-25-19 10:00	Jan-25-19 12:30	Jan-25-19 12:30	Jan-25-19 12:30	
	<i>Analyzed:</i>	Jan-25-19 18:24	Jan-25-19 18:30	Jan-25-19 19:10	Jan-26-19 18:54	Jan-25-19 19:35	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		399 4.98	862 4.98	751 4.96	2280 49.6	351 4.96	
TPH by SW8015 Mod	<i>Extracted:</i>	Jan-26-19 11:00	Jan-26-19 11:00	Jan-26-19 11:00	Jan-26-19 11:00	Jan-26-19 11:00	
	<i>Analyzed:</i>	Jan-26-19 23:52	Jan-27-19 00:12	Jan-27-19 01:52	Jan-27-19 02:52	Jan-27-19 03:12	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Gasoline Range Hydrocarbons (GRO)		<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	
Diesel Range Organics (DRO)		<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	
Motor Oil Range Hydrocarbons (MRO)		<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	
Total TPH		<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	

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Jessica Kramer
Project Assistant



Certificate of Analytical Results 612242



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS34**
Lab Sample Id: 612242-001

Matrix: Soil
Date Collected: 01.21.19 09.35

Date Received: 01.23.19 13.09
Sample Depth: 6 - 7 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3077148

Date Prep: 01.25.19 10.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	269	4.99	mg/kg	01.25.19 15.20		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3077209

Date Prep: 01.26.19 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.26.19 16.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.26.19 16.36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.26.19 16.36	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.26.19 16.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	01.26.19 16.36	
o-Terphenyl	84-15-1	102	%	70-135	01.26.19 16.36	



Certificate of Analytical Results 612242



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS34**
Lab Sample Id: 612242-001

Matrix: Soil
Date Collected: 01.21.19 09.35

Date Received: 01.23.19 13.09
Sample Depth: 6 - 7 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3076948

Date Prep: 01.24.19 12.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.24.19 22.15	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.24.19 22.15	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.24.19 22.15	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.24.19 22.15	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.24.19 22.15	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	01.24.19 22.15	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.24.19 22.15	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	89	%	70-130	01.24.19 22.15		
4-Bromofluorobenzene	460-00-4	101	%	70-130	01.24.19 22.15		



Certificate of Analytical Results 612242

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: FS35
Lab Sample Id: 612242-002

Matrix: Soil
Date Collected: 01.21.19 09.50

Date Received: 01.23.19 13.09
Sample Depth: 6 - 7 ft

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 01.25.19 10.00

Basis: Wet Weight

Seq Number: 3077148

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	361	4.95	mg/kg	01.25.19 15.39		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 01.26.19 11.00

Basis: Wet Weight

Seq Number: 3077209

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.26.19 17.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.26.19 17.35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.26.19 17.35	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.26.19 17.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	01.26.19 17.35	
o-Terphenyl	84-15-1	100	%	70-135	01.26.19 17.35	



Certificate of Analytical Results 612242



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: FS35
Lab Sample Id: 612242-002

Matrix: Soil
Date Collected: 01.21.19 09.50

Date Received: 01.23.19 13.09
Sample Depth: 6 - 7 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 01.24.19 12.30

Basis: Wet Weight

Seq Number: 3076948

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.24.19 22.36	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.24.19 22.36	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.24.19 22.36	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.24.19 22.36	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.24.19 22.36	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.24.19 22.36	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.24.19 22.36	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	102	%	70-130	01.24.19 22.36		
4-Bromofluorobenzene	460-00-4	99	%	70-130	01.24.19 22.36		



Certificate of Analytical Results 612242

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS36**
 Lab Sample Id: 612242-003

Matrix: Soil
 Date Collected: 01.21.19 09.55

Date Received: 01.23.19 13.09
 Sample Depth: 6 - 8 ft

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 01.25.19 10.00

Basis: Wet Weight

Seq Number: 3077148

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	242	4.98	mg/kg	01.25.19 15.56		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 01.26.19 11.00

Basis: Wet Weight

Seq Number: 3077209

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.26.19 17.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	20.9	15.0	mg/kg	01.26.19 17.55		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.26.19 17.55	U	1
Total TPH	PHC635	20.9	15.0	mg/kg	01.26.19 17.55		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	01.26.19 17.55	
o-Terphenyl	84-15-1	102	%	70-135	01.26.19 17.55	



Certificate of Analytical Results 612242



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS36**
Lab Sample Id: 612242-003

Matrix: Soil
Date Collected: 01.21.19 09.55

Date Received: 01.23.19 13.09
Sample Depth: 6 - 8 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 01.24.19 12.30

Basis: Wet Weight

Seq Number: 3076948

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.24.19 22.58	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.24.19 22.58	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.24.19 22.58	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.24.19 22.58	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.24.19 22.58	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	01.24.19 22.58	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.24.19 22.58	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	95	%	70-130	01.24.19 22.58		
1,4-Difluorobenzene	540-36-3	79	%	70-130	01.24.19 22.58		



Certificate of Analytical Results 612242



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: FS37
Lab Sample Id: 612242-004

Matrix: Soil
Date Collected: 01.21.19 10.00

Date Received: 01.23.19 13.09
Sample Depth: 7 - 10 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3077148

Date Prep: 01.25.19 10.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	127	4.98	mg/kg	01.25.19 16.02		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3077209

Date Prep: 01.26.19 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.26.19 18.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.26.19 18.15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.26.19 18.15	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.26.19 18.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	01.26.19 18.15	
o-Terphenyl	84-15-1	100	%	70-135	01.26.19 18.15	



Certificate of Analytical Results 612242



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS37**
Lab Sample Id: 612242-004

Matrix: Soil
Date Collected: 01.21.19 10.00

Date Received: 01.23.19 13.09
Sample Depth: 7 - 10 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 01.24.19 12.30

Basis: Wet Weight

Seq Number: 3076948

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.24.19 23.19	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.24.19 23.19	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.24.19 23.19	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.24.19 23.19	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.24.19 23.19	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.24.19 23.19	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.24.19 23.19	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	96	%	70-130	01.24.19 23.19		
1,4-Difluorobenzene	540-36-3	86	%	70-130	01.24.19 23.19		



Certificate of Analytical Results 612242



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS38**
Lab Sample Id: 612242-005

Matrix: Soil
Date Collected: 01.21.19 16.50

Date Received: 01.23.19 13.09
Sample Depth: 8 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3077148

Date Prep: 01.25.19 10.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	133	4.98	mg/kg	01.25.19 17.25		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3077209

Date Prep: 01.26.19 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.26.19 18.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.26.19 18.34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.26.19 18.34	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.26.19 18.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	01.26.19 18.34	
o-Terphenyl	84-15-1	98	%	70-135	01.26.19 18.34	



Certificate of Analytical Results 612242



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS38**
Lab Sample Id: 612242-005

Matrix: Soil
Date Collected: 01.21.19 16.50

Date Received: 01.23.19 13.09
Sample Depth: 8 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3076948

Date Prep: 01.24.19 12.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.24.19 23.40	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.24.19 23.40	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.24.19 23.40	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.24.19 23.40	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.24.19 23.40	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	01.24.19 23.40	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.24.19 23.40	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	86	%	70-130	01.24.19 23.40		
4-Bromofluorobenzene	460-00-4	95	%	70-130	01.24.19 23.40		



Certificate of Analytical Results 612242



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS39**
Lab Sample Id: 612242-006

Matrix: Soil
Date Collected: 01.21.19 17.00

Date Received: 01.23.19 13.09
Sample Depth: 4 - 10 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3077148

Date Prep: 01.25.19 10.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	369	4.98	mg/kg	01.25.19 16.30		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3077209

Date Prep: 01.26.19 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.26.19 18.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.26.19 18.54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.26.19 18.54	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.26.19 18.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	01.26.19 18.54	
o-Terphenyl	84-15-1	103	%	70-135	01.26.19 18.54	



Certificate of Analytical Results 612242

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS39**
 Lab Sample Id: 612242-006

Matrix: Soil
 Date Collected: 01.21.19 17.00

Date Received: 01.23.19 13.09
 Sample Depth: 4 - 10 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 01.24.19 12.30

Basis: Wet Weight

Seq Number: 3076948

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.25.19 00.02	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.25.19 00.02	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.25.19 00.02	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.25.19 00.02	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.25.19 00.02	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.25.19 00.02	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.25.19 00.02	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	86	%	70-130	01.25.19 00.02		
4-Bromofluorobenzene	460-00-4	99	%	70-130	01.25.19 00.02		



Certificate of Analytical Results 612242

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS40** Matrix: Soil Date Received: 01.23.19 13.09
 Lab Sample Id: 612242-007 Date Collected: 01.21.19 16.55 Sample Depth: 4 - 10 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 01.25.19 10.00 Basis: Wet Weight
 Seq Number: 3077148

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	170	4.96	mg/kg	01.25.19 16.36		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 01.26.19 11.00 Basis: Wet Weight
 Seq Number: 3077209

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.26.19 19.14	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.26.19 19.14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.26.19 19.14	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.26.19 19.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	01.26.19 19.14	
o-Terphenyl	84-15-1	102	%	70-135	01.26.19 19.14	



Certificate of Analytical Results 612242

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS40**
 Lab Sample Id: 612242-007

Matrix: Soil
 Date Collected: 01.21.19 16.55

Date Received: 01.23.19 13.09
 Sample Depth: 4 - 10 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 01.24.19 12.30

Basis: Wet Weight

Seq Number: 3076948

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.25.19 00.23	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.25.19 00.23	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.25.19 00.23	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.25.19 00.23	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.25.19 00.23	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.25.19 00.23	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.25.19 00.23	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	92	%	70-130	01.25.19 00.23		
4-Bromofluorobenzene	460-00-4	98	%	70-130	01.25.19 00.23		



Certificate of Analytical Results 612242



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS41**
Lab Sample Id: 612242-008

Matrix: Soil
Date Collected: 01.21.19 12.00

Date Received: 01.23.19 13.09
Sample Depth: 8 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3077148

Date Prep: 01.25.19 10.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	146	4.95	mg/kg	01.25.19 16.42		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3077209

Date Prep: 01.26.19 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	01.26.19 19.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	01.26.19 19.33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	01.26.19 19.33	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	01.26.19 19.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	01.26.19 19.33	
o-Terphenyl	84-15-1	102	%	70-135	01.26.19 19.33	



Certificate of Analytical Results 612242



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS41**

Matrix: Soil

Date Received: 01.23.19 13.09

Lab Sample Id: 612242-008

Date Collected: 01.21.19 12.00

Sample Depth: 8 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 01.24.19 12.30

Basis: Wet Weight

Seq Number: 3076948

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.25.19 00.44	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.25.19 00.44	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.25.19 00.44	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	01.25.19 00.44	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.25.19 00.44	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.25.19 00.44	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.25.19 00.44	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	97	%	70-130	01.25.19 00.44		
1,4-Difluorobenzene	540-36-3	91	%	70-130	01.25.19 00.44		



Certificate of Analytical Results 612242



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS42**
Lab Sample Id: 612242-009

Matrix: Soil
Date Collected: 01.21.19 16.30

Date Received: 01.23.19 13.09
Sample Depth: 8 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3077148

Date Prep: 01.25.19 10.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	178	4.99	mg/kg	01.25.19 16.48		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3077209

Date Prep: 01.26.19 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.26.19 19.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.26.19 19.53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.26.19 19.53	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.26.19 19.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	01.26.19 19.53	
o-Terphenyl	84-15-1	105	%	70-135	01.26.19 19.53	



Certificate of Analytical Results 612242



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS42**

Matrix: Soil

Date Received: 01.23.19 13.09

Lab Sample Id: 612242-009

Date Collected: 01.21.19 16.30

Sample Depth: 8 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 01.24.19 12.30

Basis: Wet Weight

Seq Number: 3076948

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.25.19 01.05	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.25.19 01.05	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.25.19 01.05	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	01.25.19 01.05	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.25.19 01.05	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.25.19 01.05	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.25.19 01.05	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	85	%	70-130	01.25.19 01.05		
4-Bromofluorobenzene	460-00-4	96	%	70-130	01.25.19 01.05		



Certificate of Analytical Results 612242

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS43**
 Lab Sample Id: 612242-010

Matrix: Soil
 Date Collected: 01.21.19 16.15

Date Received: 01.23.19 13.09
 Sample Depth: 8 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3077148

Date Prep: 01.25.19 10.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	150	5.00	mg/kg	01.25.19 16.54		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3077209

Date Prep: 01.26.19 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	01.26.19 20.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	01.26.19 20.13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	01.26.19 20.13	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	01.26.19 20.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	01.26.19 20.13	
o-Terphenyl	84-15-1	99	%	70-135	01.26.19 20.13	



Certificate of Analytical Results 612242

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS43**
 Lab Sample Id: 612242-010

Matrix: Soil
 Date Collected: 01.21.19 16.15

Date Received: 01.23.19 13.09
 Sample Depth: 8 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3077160

Date Prep: 01.25.19 17.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.26.19 12.05	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.26.19 12.05	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.26.19 12.05	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.26.19 12.05	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.26.19 12.05	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.26.19 12.05	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.26.19 12.05	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	113	%	70-130	01.26.19 12.05		
1,4-Difluorobenzene	540-36-3	111	%	70-130	01.26.19 12.05		



Certificate of Analytical Results 612242



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS44**
Lab Sample Id: 612242-011

Matrix: Soil
Date Collected: 01.21.19 15.55

Date Received: 01.23.19 13.09
Sample Depth: 4 - 8 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3077148

Date Prep: 01.25.19 10.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	177	4.96	mg/kg	01.25.19 17.01		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3077209

Date Prep: 01.26.19 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.26.19 21.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.26.19 21.12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.26.19 21.12	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.26.19 21.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	01.26.19 21.12	
o-Terphenyl	84-15-1	99	%	70-135	01.26.19 21.12	



Certificate of Analytical Results 612242



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS44**
Lab Sample Id: 612242-011

Matrix: Soil
Date Collected: 01.21.19 15.55

Date Received: 01.23.19 13.09
Sample Depth: 4 - 8 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3077160

Date Prep: 01.25.19 17.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.26.19 12.24	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.26.19 12.24	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.26.19 12.24	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	01.26.19 12.24	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.26.19 12.24	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	01.26.19 12.24	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.26.19 12.24	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	110	%	70-130	01.26.19 12.24		
4-Bromofluorobenzene	460-00-4	115	%	70-130	01.26.19 12.24		



Certificate of Analytical Results 612242

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: FS45
Lab Sample Id: 612242-012

Matrix: Soil
Date Collected: 01.21.19 16.35

Date Received: 01.23.19 13.09
Sample Depth: 8 ft

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 01.25.19 10.00

Basis: Wet Weight

Seq Number: 3077148

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	314	4.98	mg/kg	01.25.19 17.19		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 01.26.19 11.00

Basis: Wet Weight

Seq Number: 3077209

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.26.19 21.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.26.19 21.31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.26.19 21.31	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.26.19 21.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	01.26.19 21.31	
o-Terphenyl	84-15-1	97	%	70-135	01.26.19 21.31	



Certificate of Analytical Results 612242



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS45**
Lab Sample Id: 612242-012

Matrix: Soil
Date Collected: 01.21.19 16.35

Date Received: 01.23.19 13.09
Sample Depth: 8 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 01.25.19 17.00

Basis: Wet Weight

Seq Number: 3077160

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.26.19 12.43	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.26.19 12.43	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.26.19 12.43	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.26.19 12.43	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.26.19 12.43	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.26.19 12.43	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.26.19 12.43	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	110	%	70-130	01.26.19 12.43		
4-Bromofluorobenzene	460-00-4	114	%	70-130	01.26.19 12.43		



Certificate of Analytical Results 612242



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS46**
Lab Sample Id: 612242-013

Matrix: Soil
Date Collected: 01.21.19 16.20

Date Received: 01.23.19 13.09
Sample Depth: 8 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3077148

Date Prep: 01.25.19 10.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	236	4.95	mg/kg	01.25.19 17.47		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3077209

Date Prep: 01.26.19 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.26.19 21.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.26.19 21.51	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.26.19 21.51	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.26.19 21.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	01.26.19 21.51	
o-Terphenyl	84-15-1	97	%	70-135	01.26.19 21.51	



Certificate of Analytical Results 612242



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS46**
Lab Sample Id: 612242-013

Matrix: Soil
Date Collected: 01.21.19 16.20

Date Received: 01.23.19 13.09
Sample Depth: 8 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 01.25.19 17.00

Basis: Wet Weight

Seq Number: 3077160

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.26.19 13.02	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.26.19 13.02	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.26.19 13.02	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	01.26.19 13.02	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.26.19 13.02	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.26.19 13.02	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.26.19 13.02	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	113	%	70-130	01.26.19 13.02		
1,4-Difluorobenzene	540-36-3	111	%	70-130	01.26.19 13.02		



Certificate of Analytical Results 612242



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS47**
Lab Sample Id: 612242-014

Matrix: Soil
Date Collected: 01.21.19 16.00

Date Received: 01.23.19 13.09
Sample Depth: 4 - 8 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3077148

Date Prep: 01.25.19 10.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	358	4.95	mg/kg	01.25.19 17.53		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3077209

Date Prep: 01.26.19 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.26.19 22.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	15.9	15.0	mg/kg	01.26.19 22.11		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.26.19 22.11	U	1
Total TPH	PHC635	15.9	15.0	mg/kg	01.26.19 22.11		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	01.26.19 22.11	
o-Terphenyl	84-15-1	101	%	70-135	01.26.19 22.11	



Certificate of Analytical Results 612242



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS47**
Lab Sample Id: 612242-014

Matrix: Soil
Date Collected: 01.21.19 16.00

Date Received: 01.23.19 13.09
Sample Depth: 4 - 8 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 01.25.19 17.00

Basis: Wet Weight

Seq Number: 3077160

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.26.19 13.21	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.26.19 13.21	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.26.19 13.21	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.26.19 13.21	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.26.19 13.21	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.26.19 13.21	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.26.19 13.21	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	110	%	70-130	01.26.19 13.21		
4-Bromofluorobenzene	460-00-4	113	%	70-130	01.26.19 13.21		



Certificate of Analytical Results 612242

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS48**
 Lab Sample Id: 612242-015

Matrix: Soil
 Date Collected: 01.21.19 10.05

Date Received: 01.23.19 13.09
 Sample Depth: 7 - 8 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3077148

Date Prep: 01.25.19 10.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	400	4.95	mg/kg	01.25.19 17.59		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3077209

Date Prep: 01.26.19 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.26.19 22.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.26.19 22.31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.26.19 22.31	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.26.19 22.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	01.26.19 22.31	
o-Terphenyl	84-15-1	100	%	70-135	01.26.19 22.31	



Certificate of Analytical Results 612242



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS48**
Lab Sample Id: 612242-015

Matrix: Soil
Date Collected: 01.21.19 10.05

Date Received: 01.23.19 13.09
Sample Depth: 7 - 8 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3077160

Date Prep: 01.25.19 17.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.26.19 13.40	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.26.19 13.40	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.26.19 13.40	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.26.19 13.40	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.26.19 13.40	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	01.26.19 13.40	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.26.19 13.40	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	110	%	70-130	01.26.19 13.40		
4-Bromofluorobenzene	460-00-4	115	%	70-130	01.26.19 13.40		



Certificate of Analytical Results 612242



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS49**
Lab Sample Id: 612242-016

Matrix: Soil
Date Collected: 01.21.19 16.25

Date Received: 01.23.19 13.09
Sample Depth: 7 - 8 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3077148

Date Prep: 01.25.19 10.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	282	4.95	mg/kg	01.25.19 18.05		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3077209

Date Prep: 01.26.19 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.26.19 22.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.26.19 22.52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.26.19 22.52	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.26.19 22.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	01.26.19 22.52	
o-Terphenyl	84-15-1	98	%	70-135	01.26.19 22.52	



Certificate of Analytical Results 612242



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS49**
Lab Sample Id: 612242-016

Matrix: Soil
Date Collected: 01.21.19 16.25

Date Received: 01.23.19 13.09
Sample Depth: 7 - 8 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3077160

Date Prep: 01.25.19 17.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.26.19 14.54	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.26.19 14.54	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.26.19 14.54	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.26.19 14.54	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.26.19 14.54	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.26.19 14.54	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.26.19 14.54	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	109	%	70-130	01.26.19 14.54		
4-Bromofluorobenzene	460-00-4	107	%	70-130	01.26.19 14.54		



Certificate of Analytical Results 612242



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS50**
Lab Sample Id: 612242-017

Matrix: Soil
Date Collected: 01.21.19 16.10

Date Received: 01.23.19 13.09
Sample Depth: 4 - 8 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3077148

Date Prep: 01.25.19 10.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	126	4.99	mg/kg	01.25.19 18.11		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3077209

Date Prep: 01.26.19 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	01.26.19 23.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	01.26.19 23.12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	01.26.19 23.12	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	01.26.19 23.12	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	100	%	70-135	01.26.19 23.12		
o-Terphenyl	84-15-1	102	%	70-135	01.26.19 23.12		



Certificate of Analytical Results 612242



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS50**
Lab Sample Id: 612242-017

Matrix: Soil
Date Collected: 01.21.19 16.10

Date Received: 01.23.19 13.09
Sample Depth: 4 - 8 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3077160

Date Prep: 01.25.19 17.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.26.19 15.13	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.26.19 15.13	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.26.19 15.13	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.26.19 15.13	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.26.19 15.13	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	01.26.19 15.13	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.26.19 15.13	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	111	%	70-130	01.26.19 15.13		
1,4-Difluorobenzene	540-36-3	110	%	70-130	01.26.19 15.13		



Certificate of Analytical Results 612242



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: FS51
Lab Sample Id: 612242-018

Matrix: Soil
Date Collected: 01.21.19 16.40

Date Received: 01.23.19 13.09
Sample Depth: 6 - 7 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3077148

Date Prep: 01.25.19 10.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	435	4.97	mg/kg	01.25.19 18.18		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3077209

Date Prep: 01.26.19 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.26.19 23.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.26.19 23.32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.26.19 23.32	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.26.19 23.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	01.26.19 23.32	
o-Terphenyl	84-15-1	97	%	70-135	01.26.19 23.32	



Certificate of Analytical Results 612242

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS51**
 Lab Sample Id: 612242-018

Matrix: Soil
 Date Collected: 01.21.19 16.40

Date Received: 01.23.19 13.09
 Sample Depth: 6 - 7 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3077160

Date Prep: 01.25.19 17.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.26.19 15.32	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.26.19 15.32	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.26.19 15.32	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.26.19 15.32	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.26.19 15.32	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.26.19 15.32	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.26.19 15.32	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	114	%	70-130	01.26.19 15.32		
1,4-Difluorobenzene	540-36-3	111	%	70-130	01.26.19 15.32		



Certificate of Analytical Results 612242



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: FS52
Lab Sample Id: 612242-019

Matrix: Soil
Date Collected: 01.21.19 16.27

Date Received: 01.23.19 13.09
Sample Depth: 6 - 7 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3077148

Date Prep: 01.25.19 10.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	399	4.98	mg/kg	01.25.19 18.24		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3077209

Date Prep: 01.26.19 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	01.26.19 23.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	01.26.19 23.52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	01.26.19 23.52	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	01.26.19 23.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	01.26.19 23.52	
o-Terphenyl	84-15-1	98	%	70-135	01.26.19 23.52	



Certificate of Analytical Results 612242



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: FS52

Matrix: Soil

Date Received: 01.23.19 13.09

Lab Sample Id: 612242-019

Date Collected: 01.21.19 16.27

Sample Depth: 6 - 7 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 01.25.19 17.00

Basis: Wet Weight

Seq Number: 3077160

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.26.19 15.51	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.26.19 15.51	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.26.19 15.51	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.26.19 15.51	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.26.19 15.51	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.26.19 15.51	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.26.19 15.51	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	111	%	70-130	01.26.19 15.51		
4-Bromofluorobenzene	460-00-4	111	%	70-130	01.26.19 15.51		



Certificate of Analytical Results 612242

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: FS53
 Lab Sample Id: 612242-020

Matrix: Soil
 Date Collected: 01.21.19 11.25

Date Received: 01.23.19 13.09
 Sample Depth: 3 - 4 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3077148

Date Prep: 01.25.19 10.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	862	4.98	mg/kg	01.25.19 18.30		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3077209

Date Prep: 01.26.19 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.27.19 00.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.27.19 00.12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.27.19 00.12	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.27.19 00.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	01.27.19 00.12	
o-Terphenyl	84-15-1	101	%	70-135	01.27.19 00.12	



Certificate of Analytical Results 612242



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: FS53
Lab Sample Id: 612242-020

Matrix: Soil
Date Collected: 01.21.19 11.25

Date Received: 01.23.19 13.09
Sample Depth: 3 - 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3077319

Date Prep: 01.28.19 08.30

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	01.28.19 18.56	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.28.19 18.56	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.28.19 18.56	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	01.28.19 18.56	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.28.19 18.56	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.28.19 18.56	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.28.19 18.56	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	115	%	70-130	01.28.19 18.56		
1,4-Difluorobenzene	540-36-3	110	%	70-130	01.28.19 18.56		



Certificate of Analytical Results 612242



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: FS54
Lab Sample Id: 612242-021

Matrix: Soil
Date Collected: 01.21.19 11.20

Date Received: 01.23.19 13.09
Sample Depth: 2.5 - 4 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3077178

Date Prep: 01.25.19 12.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	751	4.96	mg/kg	01.25.19 19.10		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3077210

Date Prep: 01.26.19 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.27.19 01.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.27.19 01.52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.27.19 01.52	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.27.19 01.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	01.27.19 01.52	
o-Terphenyl	84-15-1	105	%	70-135	01.27.19 01.52	



Certificate of Analytical Results 612242



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS54**
Lab Sample Id: 612242-021

Matrix: Soil
Date Collected: 01.21.19 11.20

Date Received: 01.23.19 13.09
Sample Depth: 2.5 - 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3077319

Date Prep: 01.28.19 08.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.28.19 19.15	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.28.19 19.15	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.28.19 19.15	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.28.19 19.15	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.28.19 19.15	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.28.19 19.15	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.28.19 19.15	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	117	%	70-130	01.28.19 19.15		
1,4-Difluorobenzene	540-36-3	110	%	70-130	01.28.19 19.15		



Certificate of Analytical Results 612242

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: FS55
Lab Sample Id: 612242-022

Matrix: Soil
Date Collected: 01.21.19 11.15

Date Received: 01.23.19 13.09
Sample Depth: 3 - 4 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3077178

Date Prep: 01.25.19 12.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2280	49.6	mg/kg	01.26.19 18.54		10

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3077210

Date Prep: 01.26.19 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.27.19 02.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.27.19 02.52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.27.19 02.52	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.27.19 02.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	01.27.19 02.52	
o-Terphenyl	84-15-1	105	%	70-135	01.27.19 02.52	



Certificate of Analytical Results 612242



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: FS55
Lab Sample Id: 612242-022

Matrix: Soil
Date Collected: 01.21.19 11.15

Date Received: 01.23.19 13.09
Sample Depth: 3 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 01.28.19 08.30

Basis: Wet Weight

Seq Number: 3077319

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.28.19 19.34	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.28.19 19.34	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.28.19 19.34	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.28.19 19.34	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.28.19 19.34	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.28.19 19.34	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.28.19 19.34	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	116	%	70-130	01.28.19 19.34		
1,4-Difluorobenzene	540-36-3	110	%	70-130	01.28.19 19.34		



Certificate of Analytical Results 612242

LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: FS56
Lab Sample Id: 612242-023

Matrix: Soil
Date Collected: 01.18.19 11.57

Date Received: 01.23.19 13.09
Sample Depth: 6 ft

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 01.25.19 12.30

Basis: Wet Weight

Seq Number: 3077178

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	351	4.96	mg/kg	01.25.19 19.35		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 01.26.19 11.00

Basis: Wet Weight

Seq Number: 3077210

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.27.19 03.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.27.19 03.12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.27.19 03.12	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.27.19 03.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	01.27.19 03.12	
o-Terphenyl	84-15-1	105	%	70-135	01.27.19 03.12	



Certificate of Analytical Results 612242



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS56**
Lab Sample Id: 612242-023

Matrix: Soil
Date Collected: 01.18.19 11.57

Date Received: 01.23.19 13.09
Sample Depth: 6 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3077319

Date Prep: 01.28.19 08.30

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	01.28.19 19.53	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.28.19 19.53	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.28.19 19.53	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.28.19 19.53	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.28.19 19.53	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.28.19 19.53	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.28.19 19.53	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	117	%	70-130	01.28.19 19.53		
1,4-Difluorobenzene	540-36-3	110	%	70-130	01.28.19 19.53		



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.

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 Federal 16H

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3077148

MB Sample Id: 7670436-1-BLK

Matrix: Solid

LCS Sample Id: 7670436-1-BKS

Prep Method: E300P

Date Prep: 01.25.19

LCSD Sample Id: 7670436-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	228	91	235	94	90-110	3	20	mg/kg	01.25.19 15:08	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3077178

MB Sample Id: 7670483-1-BLK

Matrix: Solid

LCS Sample Id: 7670483-1-BKS

Prep Method: E300P

Date Prep: 01.25.19

LCSD Sample Id: 7670483-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	255	102	240	96	90-110	6	20	mg/kg	01.25.19 18:58	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3077148

Parent Sample Id: 612242-001

Matrix: Soil

MS Sample Id: 612242-001 S

Prep Method: E300P

Date Prep: 01.25.19

MSD Sample Id: 612242-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	269	250	529	104	484	86	90-110	9	20	mg/kg	01.25.19 15:27	X

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3077148

Parent Sample Id: 612242-011

Matrix: Soil

MS Sample Id: 612242-011 S

Prep Method: E300P

Date Prep: 01.25.19

MSD Sample Id: 612242-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	177	248	396	88	397	89	90-110	0	20	mg/kg	01.25.19 17:07	X

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3077178

Parent Sample Id: 612242-021

Matrix: Soil

MS Sample Id: 612242-021 S

Prep Method: E300P

Date Prep: 01.25.19

MSD Sample Id: 612242-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	751	248	1000	100	970	88	90-110	3	20	mg/kg	01.25.19 19:16	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 Federal 16H

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3077178

Parent Sample Id: 612243-008

Matrix: Soil

MS Sample Id: 612243-008 S

Prep Method: E300P

Date Prep: 01.25.19

MSD Sample Id: 612243-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	233	249	476	98	479	99	90-110	1	20	mg/kg	01.25.19 20:46	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3077209

MB Sample Id: 7670533-1-BLK

Matrix: Solid

LCS Sample Id: 7670533-1-BKS

Prep Method: TX1005P

Date Prep: 01.26.19

LCSD Sample Id: 7670533-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	900	90	982	98	70-135	9	20	mg/kg	01.26.19 15:56	
Diesel Range Organics (DRO)	<8.13	1000	1000	100	1100	110	70-135	10	20	mg/kg	01.26.19 15:56	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	97		125		130		70-135	%	01.26.19 15:56
o-Terphenyl	99		115		122		70-135	%	01.26.19 15:56

Analytical Method: TPH by SW8015 Mod

Seq Number: 3077210

MB Sample Id: 7670534-1-BLK

Matrix: Solid

LCS Sample Id: 7670534-1-BKS

Prep Method: TX1005P

Date Prep: 01.26.19

LCSD Sample Id: 7670534-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	911	91	895	90	70-135	2	20	mg/kg	01.27.19 10:14	
Diesel Range Organics (DRO)	<8.13	1000	1030	103	1000	100	70-135	3	20	mg/kg	01.27.19 10:14	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	98		126		124		70-135	%	01.27.19 10:14
o-Terphenyl	101		114		113		70-135	%	01.27.19 10:14

Analytical Method: TPH by SW8015 Mod

Seq Number: 3077209

Parent Sample Id: 612242-001

Matrix: Soil

MS Sample Id: 612242-001 S

Prep Method: TX1005P

Date Prep: 01.26.19

MSD Sample Id: 612242-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	999	923	92	922	92	70-135	0	20	mg/kg	01.26.19 16:55	
Diesel Range Organics (DRO)	11.9	999	1050	104	1060	105	70-135	1	20	mg/kg	01.26.19 16:55	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	129		126		70-135	%	01.26.19 16:55
o-Terphenyl	114		114		70-135	%	01.26.19 16:55

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 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 Federal 16H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3077210

Parent Sample Id: 612242-021

Matrix: Soil

MS Sample Id: 612242-021 S

Prep Method: TX1005P

Date Prep: 01.26.19

MSD Sample Id: 612242-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	999	954	95	924	93	70-135	3	20	mg/kg	01.27.19 02:12	
Diesel Range Organics (DRO)	<8.12	999	1100	110	1060	106	70-135	4	20	mg/kg	01.27.19 02:12	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	127		127		70-135	%	01.27.19 02:12
o-Terphenyl	119		116		70-135	%	01.27.19 02:12

Analytical Method: BTEX by EPA 8021B

Seq Number: 3076948

MB Sample Id: 7670425-1-BLK

Matrix: Solid

LCS Sample Id: 7670425-1-BKS

Prep Method: SW5030B

Date Prep: 01.24.19

LCSD Sample Id: 7670425-1-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	0.118	118	0.112	112	70-130	5	35	mg/kg	01.24.19 15:07	
Toluene	<0.00200	0.100	0.103	103	0.0983	98	70-130	5	35	mg/kg	01.24.19 15:07	
Ethylbenzene	<0.00200	0.100	0.129	129	0.117	117	70-130	10	35	mg/kg	01.24.19 15:07	
m,p-Xylenes	<0.00401	0.200	0.241	121	0.235	118	70-130	3	35	mg/kg	01.24.19 15:07	
o-Xylene	<0.00200	0.100	0.125	125	0.110	110	70-130	13	35	mg/kg	01.24.19 15:07	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	97		116		128		70-130	%	01.24.19 15:07
4-Bromofluorobenzene	97		72		104		70-130	%	01.24.19 15:07

Analytical Method: BTEX by EPA 8021B

Seq Number: 3077160

MB Sample Id: 7670528-1-BLK

Matrix: Solid

LCS Sample Id: 7670528-1-BKS

Prep Method: SW5030B

Date Prep: 01.25.19

LCSD Sample Id: 7670528-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000386	0.100	0.114	114	0.105	105	70-130	8	35	mg/kg	01.26.19 08:49	
Toluene	<0.000457	0.100	0.0995	100	0.0925	93	70-130	7	35	mg/kg	01.26.19 08:49	
Ethylbenzene	<0.000567	0.100	0.0930	93	0.0864	87	70-130	7	35	mg/kg	01.26.19 08:49	
m,p-Xylenes	<0.00402	0.201	0.179	89	0.168	84	70-130	6	35	mg/kg	01.26.19 08:49	
o-Xylene	<0.000346	0.100	0.0925	93	0.0857	86	70-130	8	35	mg/kg	01.26.19 08:49	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		108		107		70-130	%	01.26.19 08:49
4-Bromofluorobenzene	94		104		103		70-130	%	01.26.19 08:49

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 Federal 16H

Analytical Method: BTEX by EPA 8021B

Seq Number: 3077319

MB Sample Id: 7670611-1-BLK

Matrix: Solid

LCS Sample Id: 7670611-1-BKS

Prep Method: SW5030B

Date Prep: 01.28.19

LCSD Sample Id: 7670611-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000386	0.100	0.115	115	0.0971	97	70-130	17	35	mg/kg	01.28.19 10:33	
Toluene	<0.000457	0.100	0.103	103	0.0893	89	70-130	14	35	mg/kg	01.28.19 10:33	
Ethylbenzene	<0.000567	0.100	0.0997	100	0.0862	86	70-130	15	35	mg/kg	01.28.19 10:33	
m,p-Xylenes	<0.00102	0.201	0.199	99	0.173	87	70-130	14	35	mg/kg	01.28.19 10:33	
o-Xylene	<0.000346	0.100	0.0982	98	0.0864	86	70-130	13	35	mg/kg	01.28.19 10:33	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		105		106		70-130	%	01.28.19 10:33
4-Bromofluorobenzene	94		103		107		70-130	%	01.28.19 10:33

Analytical Method: BTEX by EPA 8021B

Seq Number: 3076948

Parent Sample Id: 612242-001

Matrix: Soil

MS Sample Id: 612242-001 S

Prep Method: SW5030B

Date Prep: 01.24.19

MSD Sample Id: 612242-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.103	102	0.125	125	70-130	19	35	mg/kg	01.24.19 15:49	
Toluene	<0.00202	0.101	0.0921	91	0.109	109	70-130	17	35	mg/kg	01.24.19 15:49	
Ethylbenzene	<0.00202	0.101	0.114	113	0.125	125	70-130	9	35	mg/kg	01.24.19 15:49	
m,p-Xylenes	<0.00403	0.202	0.226	112	0.249	125	70-130	10	35	mg/kg	01.24.19 15:49	
o-Xylene	<0.00202	0.101	0.107	106	0.118	118	70-130	10	35	mg/kg	01.24.19 15:49	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	120		124		70-130	%	01.24.19 15:49
4-Bromofluorobenzene	113		104		70-130	%	01.24.19 15:49

Analytical Method: BTEX by EPA 8021B

Seq Number: 3077160

Parent Sample Id: 612061-001

Matrix: Soil

MS Sample Id: 612061-001 S

Prep Method: SW5030B

Date Prep: 01.25.19

MSD Sample Id: 612061-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000384	0.0998	0.101	101	0.101	101	70-130	0	35	mg/kg	01.26.19 09:27	
Toluene	<0.000455	0.0998	0.0894	90	0.0888	89	70-130	1	35	mg/kg	01.26.19 09:27	
Ethylbenzene	<0.000564	0.0998	0.0840	84	0.0837	84	70-130	0	35	mg/kg	01.26.19 09:27	
m,p-Xylenes	<0.00101	0.200	0.164	82	0.164	82	70-130	0	35	mg/kg	01.26.19 09:27	
o-Xylene	<0.000344	0.0998	0.0821	82	0.0818	82	70-130	0	35	mg/kg	01.26.19 09:27	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		108		70-130	%	01.26.19 09:27
4-Bromofluorobenzene	105		106		70-130	%	01.26.19 09:27

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

[D] = 100*(C-A) / B
RPD = 200 * |(C-E) / (C+E)|
[D] = 100 * (C) / [B]
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 Federal 16H

Analytical Method: BTEX by EPA 8021B

Seq Number: 3077319

Parent Sample Id: 612242-021

Matrix: Soil

MS Sample Id: 612242-021 S

Prep Method: SW5030B

Date Prep: 01.28.19

MSD Sample Id: 612242-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000386	0.100	0.0693	69	0.0908	90	70-130	27	35	mg/kg	01.28.19 11:06	X
Toluene	<0.000457	0.100	0.0656	66	0.0788	78	70-130	18	35	mg/kg	01.28.19 11:06	X
Ethylbenzene	<0.000566	0.100	0.0635	64	0.0730	72	70-130	14	35	mg/kg	01.28.19 11:06	X
m,p-Xylenes	<0.00102	0.200	0.130	65	0.144	72	70-130	10	35	mg/kg	01.28.19 11:06	X
o-Xylene	<0.000345	0.100	0.0643	64	0.0706	70	70-130	9	35	mg/kg	01.28.19 11:06	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		106		70-130	%	01.28.19 11:06
4-Bromofluorobenzene	106		102		70-130	%	01.28.19 11:06

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)356-3443 Lubbock, TX (806)794-1296
Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813) 233-3333
Hobbs, NM (575-392-7550)

Chain of Custody

Work Order No

912410

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

Work Order Comments	
Program: UST/PST ☐ RP ☐ Rowfields ☐ C ☐ perfund ☐	
State of Project:	
Reporting Level II ☐ Level III ☐ ST/UST ☐ RP ☐ Level IV ☐	
Deliverables: EDD ☐ ADAPT ☐ Other:	

Project Name: Coral Canyon Federal Wet		Turn Around		ANALYSIS REQUEST																Work Order Notes						
Project Number:		Routine ☒																								
P.O. Number: 2RP4929		Rush:																								
Sampler's Name: Anna Byers		Due Date:																								
SAMPLE RECEIPT				Temp Blank: Yes ☒ No	Wet Ice: Yes ☒ No																					
Temperature (°C): 0.36.2		Thermometer ID: 28																								
Received Intact: Yes ☒ No		Correction Factor: -0.1																								
Cooler Custody Seals: Yes ☒ No		Total Containers: 1																								
Sample Custody Seals: Yes ☒ No																										
				TAT starts the day received by the lab, if received by 4:30pm																						
				Sample Comments																						
Sample Identification				Matrix	Date Sampled	Time Sampled	Depth	Number of Containers																		
FS34				S	1/22/19	0935	6-7'	1																		
FS35				S		0950	6-7'	1																		
FS36				S		0955	6-8'	1																		
FS37				S		1000	7-10'	1																		
FS38				S		1650	8'	1																		
FS39				S		1700	4-10'	1																		
FS40				S		1655	4-10'	1																		
FS41				S		1200	8'	1																		
FS42				S		1630	8'	1																		
FS43				S	✓	1615	8'	1																		
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																						
Relinquished by: (Signature)				Receiver: (Signature)				Date/Time				Relinquished by: (Signature)				Received by: (Signature)				Date/Time						
1 Anna Byers				1 Paul M. Byers				1/22/19 @ 1200				2 Paul M. Byers				Paul M. Byers 1/22/19				1/22/19 15:35						
3								4																		
5								6																		



Chain of Custody

Work Order No:

017242

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

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Page 2 of 3

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

Program: UST/PST	☐ RP	☐ rowfields	☐ c	☐ pfund
State of Project:				
Reporting Level I	☐ Level III	☐ ST/UST	☐ RP	☐ Level IV
Deliverables: EDD	☐	Adapt	☐	Other:

Project Name:	Central Canyon Federal Wet	Turn Around	
Project Number:	22P4929	Routine	☒
P.O. Number:		Rush:	
Sampler's Name:	Anna Byers	Due Date:	

SAMPLE RECEIPT	Temp Blank:	Yes ☐ No ☒	Wet Ice:	Yes ☐ No ☒
Temperature (°C):	0.362	Thermometer ID:		
Received Inact:	Yes ☒ No ☐	Correction Factor:	-0.1	
Cooler Custody Seals:	Yes ☒ No ☐	Total Containers:		
Sample Custody Seals:	Yes ☒ No ☐			

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers			ANALYSIS REQUEST										Work Order Notes	
					TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)												
FS44	S	12/19	1555	4-8'	1														
FS45	S		1635	8'	1														
FS46	S		1620	8'	1														
FS47	S		1600	4-8'	1														
FS48	S		1005	7-8'	1														
FS49	S		1625	7-8'	1														
FS50	S		1610	4-8'	1														
FS51	S		1640	6-7'	1														
FS52	S		1627	6-7'	1														
FS53	S		1125	3-4'	1														

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	TCIP / SPLP 6010: 8RCRA	Sb	As	Ba	Be	Cd	Cr	Co	Cu	Pb	Mn	Mo	Ni	Se	Ag	Ti	U														

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Anna Byers	Anna Byers	12/21/19 12:00	Anna Byers	Anna Byers	12/21/19 15:30



Chain of Custody

Work Order No:

1012242

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

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Page 3 of 3

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

Program: UST/PST	☐ RP	☐ Rowfields	☐ C	☐ Iperfund
State of Project:				
Reporting Level II	☐ Level III	☐ ST/UST	☐ RP	☐ Level IV
Deliverables: EDD	☐	ADAPT	☐	Other:

Project Name:	Central Canyon Federal Wet	Turn Around		ANALYSIS REQUEST										Work Order Notes
Project Number:	22P4929	Routine	☒											
P.O. Number:		Rush:												
Sampler's Name:	Anna Byers	Due Date:												

SAMPLE RECEIPT				Temp Blank:		Yes	No	Wet Ice:	(Yes)	No
Temperature (°C):	0.710°C	Thermometer ID:	12							
Received Intact:	Yes	No								
Cooler Custody Seals:	Yes	No	N/A							
Sample Custody Seals:	Yes	No	N/A							
				Correction Factor:		-0.1				
				Total Containers:						

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers																
					TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)														
FS54	S	1/21/19	1120	2.5-4'	1	X	X	X													
FS55	S	1/21/19	1115	3-4'	1	X	X	X													
FS56	S	1/18/19	1157	6'	1	X	X	X													

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

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 Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U

1631 / 245.1 / 7470 / 7471 : Hg

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Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Anna Byers	Anna Byers	1/22/19 12:00	Anna Byers	Anna Byers	1/22/19 15:30

ORIGIN ID:CAOA (5/5) 887-6245	SHIP DATE: 22JAN19
XENCO	ACTWTG: 57.00 LB
PAC N MAIL	CAD: 101813706/NET4100
910 W PIERCE ST	DIMS: 28x14x16 IN
CARLSBAD, NM 88220	BILL RECIPIENT
UNITED STATES US	
TO HOLD FOR XENCO	
FEDEX EXPRESS SHIP CENTER	
FEDEX SHIP CENTER	
3600 COUNTY RD 1276 S	
MIDLAND TX 79711	
(806) 794-1296	REF:
PO:	DEPT:

TRK# 7742 8371 8130	WED - 23 JAN HOLD
0201	STANDARD OVERNIGHT
41 MAFA	HLD
TX-US	MAFA
LBB	



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Client: LT Environmental, Inc.

Date/ Time Received: 01/23/2019 01:09:00 PM

Work Order #: 612242

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist

Comments

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

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Brianna Teel

Date: 01/23/2019

Checklist reviewed by:

Jessica Kramer

Date: 01/23/2019

Analytical Report 620070

for
LT Environmental, Inc.

Project Manager: Adrian Baker

Coral Canyon Federal 6H

--

12-APR-19

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-18-28), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)

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

Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)

Xenco-Atlanta (LELAP Lab ID #04176)

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

Xenco-Lakeland: Florida (E84098)



12-APR-19

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

Reference: XENCO Report No(s): **620070**
Coral Canyon Federal 6H
Project Address: ---

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 620070. 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. 620070 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads 'Kalei Stout'.

Kalei Stout

Midland Laboratory Director

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

Certified and approved by numerous States and Agencies.

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

**Sample Cross Reference 620070****LT Environmental, Inc., Arvada, CO**

Coral Canyon Federal 6H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS19A	S	04-01-19 14:20	9 ft	620070-001
FS28A	S	04-01-19 14:15	7 - 8 ft	620070-002
FS31A	S	04-01-19 14:16	8 ft	620070-003
FS53A	S	04-01-19 15:30	2 - 4.5 ft	620070-004
FS54A	S	04-01-19 15:40	2 - 4.5 ft	620070-005
FS55A	S	04-01-19 15:25	2 - 4.5 ft	620070-006



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *Coral Canyon Federal 6H*

Project ID: --
Work Order Number(s): 620070

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

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3085314 BTEX by EPA 8021B

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



Certificate of Analysis Summary 620070

LT Environmental, Inc., Arvada, CO

Project Name: Coral Canyon Federal 6H

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

Date Received in Lab: Thu Apr-04-19 11:35 am
Report Date: 12-APR-19
Project Manager: Kalei Stout

Analysis Requested	Lab Id:	620070-001	620070-002	620070-003	620070-004	620070-005	620070-006
	Field Id:	FS19A	FS28A	FS31A	FS53A	FS54A	FS55A
	Depth:	9- ft	7-8 ft	8- ft	2-4.5 ft	2-4.5 ft	2-4.5 ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Apr-01-19 14:20	Apr-01-19 14:15	Apr-01-19 14:16	Apr-01-19 15:30	Apr-01-19 15:40	Apr-01-19 15:25
BTEX by EPA 8021B	Extracted:	Apr-10-19 14:30	Apr-10-19 14:30	Apr-10-19 14:30	Apr-10-19 14:30	Apr-10-19 14:30	Apr-10-19 14:30
	Analyzed:	Apr-10-19 22:29	Apr-10-19 22:48	Apr-10-19 23:07	Apr-10-19 23:26	Apr-10-19 23:45	Apr-11-19 00:04
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199
Toluene		<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199
Ethylbenzene		<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199
m,p-Xylenes		<0.00396 0.00396	<0.00401 0.00401	<0.00398 0.00398	<0.00398 0.00398	<0.00399 0.00399	<0.00398 0.00398
o-Xylene		<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199
Total Xylenes		<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199
Total BTEX		<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199
Inorganic Anions by EPA 300 SUB: T104704215-19-29	Extracted:	Apr-09-19 14:53	Apr-09-19 14:53	Apr-09-19 14:53	Apr-09-19 14:53	Apr-09-19 14:53	Apr-09-19 14:53
	Analyzed:	Apr-10-19 01:45	Apr-10-19 02:11	Apr-10-19 02:55	Apr-10-19 03:04	Apr-10-19 03:13	Apr-10-19 03:21
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		253 10.0	780 10.0	966 9.90	247 9.98	375 9.94	129 9.90
TPH by SW8015 Mod	Extracted:	Apr-08-19 16:00	Apr-08-19 16:00	Apr-08-19 16:00	Apr-08-19 16:00	Apr-08-19 16:00	Apr-08-19 16:00
	Analyzed:	Apr-09-19 02:14	Apr-09-19 03:11	Apr-09-19 03:30	Apr-09-19 03:49	Apr-09-19 04:08	Apr-09-19 04:27
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total TPH		<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total GRO-DRO		<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0

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

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

Kalei Stout
Midland Laboratory Director



Certificate of Analytical Results 620070



LT Environmental, Inc., Arvada, CO

Coral Canyon Federal 6H

Sample Id: **FS19A**
Lab Sample Id: 620070-001

Matrix: Soil
Date Collected: 04.01.19 14.20

Date Received: 04.04.19 11.35
Sample Depth: 9 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: JYM

Analyst: JYM

Seq Number: 3085116

Date Prep: 04.09.19 14.53

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	253	10.0	mg/kg	04.10.19 01.45		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085090

Date Prep: 04.08.19 16.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.09.19 02.14	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.09.19 02.14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.09.19 02.14	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.09.19 02.14	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.09.19 02.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	04.09.19 02.14	
o-Terphenyl	84-15-1	95	%	70-135	04.09.19 02.14	



Certificate of Analytical Results 620070



LT Environmental, Inc., Arvada, CO

Coral Canyon Federal 6H

Sample Id: **FS19A**
Lab Sample Id: 620070-001

Matrix: Soil
Date Collected: 04.01.19 14.20

Date Received: 04.04.19 11.35
Sample Depth: 9 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 04.10.19 14.30

Basis: Wet Weight

Seq Number: 3085314

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	04.10.19 22.29	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	04.10.19 22.29	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	04.10.19 22.29	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	04.10.19 22.29	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	04.10.19 22.29	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	04.10.19 22.29	U	1
Total BTEX		<0.00198	0.00198	mg/kg	04.10.19 22.29	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	04.10.19 22.29		
4-Bromofluorobenzene	460-00-4	112	%	70-130	04.10.19 22.29		



Certificate of Analytical Results 620070



LT Environmental, Inc., Arvada, CO

Coral Canyon Federal 6H

Sample Id: **FS28A**
Lab Sample Id: 620070-002

Matrix: Soil
Date Collected: 04.01.19 14.15

Date Received: 04.04.19 11.35
Sample Depth: 7 - 8 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: JYM

Analyst: JYM

Seq Number: 3085116

Date Prep: 04.09.19 14.53

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	780	10.0	mg/kg	04.10.19 02.11		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085090

Date Prep: 04.08.19 16.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.09.19 03.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.09.19 03.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.09.19 03.11	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.09.19 03.11	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.09.19 03.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	04.09.19 03.11	
o-Terphenyl	84-15-1	93	%	70-135	04.09.19 03.11	



Certificate of Analytical Results 620070



LT Environmental, Inc., Arvada, CO

Coral Canyon Federal 6H

Sample Id: **FS28A**
Lab Sample Id: 620070-002

Matrix: Soil
Date Collected: 04.01.19 14.15

Date Received: 04.04.19 11.35
Sample Depth: 7 - 8 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 04.10.19 14.30

Basis: Wet Weight

Seq Number: 3085314

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.10.19 22.48	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.10.19 22.48	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.10.19 22.48	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	04.10.19 22.48	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.10.19 22.48	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.10.19 22.48	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.10.19 22.48	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	120	%	70-130	04.10.19 22.48		
1,4-Difluorobenzene	540-36-3	105	%	70-130	04.10.19 22.48		



Certificate of Analytical Results 620070



LT Environmental, Inc., Arvada, CO

Coral Canyon Federal 6H

Sample Id: **FS31A**
Lab Sample Id: 620070-003

Matrix: Soil
Date Collected: 04.01.19 14.16

Date Received: 04.04.19 11.35
Sample Depth: 8 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: JYM

Analyst: JYM

Seq Number: 3085116

Date Prep: 04.09.19 14.53

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	966	9.90	mg/kg	04.10.19 02.55		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085090

Date Prep: 04.08.19 16.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	04.09.19 03.30	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	04.09.19 03.30	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	04.09.19 03.30	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	04.09.19 03.30	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	04.09.19 03.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	04.09.19 03.30	
o-Terphenyl	84-15-1	93	%	70-135	04.09.19 03.30	



Certificate of Analytical Results 620070



LT Environmental, Inc., Arvada, CO

Coral Canyon Federal 6H

Sample Id: **FS31A**
Lab Sample Id: 620070-003

Matrix: Soil
Date Collected: 04.01.19 14.16

Date Received: 04.04.19 11.35
Sample Depth: 8 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 04.10.19 14.30

Basis: Wet Weight

Seq Number: 3085314

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.10.19 23.07	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.10.19 23.07	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.10.19 23.07	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.10.19 23.07	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.10.19 23.07	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.10.19 23.07	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.10.19 23.07	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	120	%	70-130	04.10.19 23.07		
1,4-Difluorobenzene	540-36-3	104	%	70-130	04.10.19 23.07		



Certificate of Analytical Results 620070



LT Environmental, Inc., Arvada, CO

Coral Canyon Federal 6H

Sample Id: FS53A
Lab Sample Id: 620070-004

Matrix: Soil
Date Collected: 04.01.19 15.30

Date Received: 04.04.19 11.35
Sample Depth: 2 - 4.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: JYM

Analyst: JYM

Seq Number: 3085116

Date Prep: 04.09.19 14.53

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	247	9.98	mg/kg	04.10.19 03.04		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085090

Date Prep: 04.08.19 16.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.09.19 03.49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.09.19 03.49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.09.19 03.49	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.09.19 03.49	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.09.19 03.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	04.09.19 03.49	
o-Terphenyl	84-15-1	93	%	70-135	04.09.19 03.49	



Certificate of Analytical Results 620070



LT Environmental, Inc., Arvada, CO

Coral Canyon Federal 6H

Sample Id: **FS53A**
Lab Sample Id: 620070-004

Matrix: Soil
Date Collected: 04.01.19 15.30

Date Received: 04.04.19 11.35
Sample Depth: 2 - 4.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3085314

Prep Method: SW5030B

% Moisture:

Date Prep: 04.10.19 14.30

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.10.19 23.26	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.10.19 23.26	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.10.19 23.26	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.10.19 23.26	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.10.19 23.26	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.10.19 23.26	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.10.19 23.26	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	04.10.19 23.26		
4-Bromofluorobenzene	460-00-4	120	%	70-130	04.10.19 23.26		



Certificate of Analytical Results 620070



LT Environmental, Inc., Arvada, CO

Coral Canyon Federal 6H

Sample Id: **FS54A**
Lab Sample Id: 620070-005

Matrix: Soil
Date Collected: 04.01.19 15.40

Date Received: 04.04.19 11.35
Sample Depth: 2 - 4.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: JYM

Analyst: JYM

Seq Number: 3085116

Date Prep: 04.09.19 14.53

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	375	9.94	mg/kg	04.10.19 03.13		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085090

Date Prep: 04.08.19 16.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.09.19 04.08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.09.19 04.08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.09.19 04.08	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.09.19 04.08	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.09.19 04.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	04.09.19 04.08	
o-Terphenyl	84-15-1	89	%	70-135	04.09.19 04.08	



Certificate of Analytical Results 620070



LT Environmental, Inc., Arvada, CO

Coral Canyon Federal 6H

Sample Id: **FS54A**
Lab Sample Id: 620070-005

Matrix: Soil
Date Collected: 04.01.19 15.40

Date Received: 04.04.19 11.35
Sample Depth: 2 - 4.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 04.10.19 14.30

Basis: Wet Weight

Seq Number: 3085314

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.10.19 23.45	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.10.19 23.45	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.10.19 23.45	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	04.10.19 23.45	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.10.19 23.45	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.10.19 23.45	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.10.19 23.45	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	120	%	70-130	04.10.19 23.45		
1,4-Difluorobenzene	540-36-3	104	%	70-130	04.10.19 23.45		



Certificate of Analytical Results 620070



LT Environmental, Inc., Arvada, CO

Coral Canyon Federal 6H

Sample Id: FS55A
Lab Sample Id: 620070-006

Matrix: Soil
Date Collected: 04.01.19 15.25

Date Received: 04.04.19 11.35
Sample Depth: 2 - 4.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: JYM

Analyst: JYM

Seq Number: 3085116

Date Prep: 04.09.19 14.53

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	129	9.90	mg/kg	04.10.19 03.21		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085090

Date Prep: 04.08.19 16.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.09.19 04.27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.09.19 04.27	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.09.19 04.27	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.09.19 04.27	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.09.19 04.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	04.09.19 04.27	
o-Terphenyl	84-15-1	91	%	70-135	04.09.19 04.27	



Certificate of Analytical Results 620070



LT Environmental, Inc., Arvada, CO

Coral Canyon Federal 6H

Sample Id: FS55A
Lab Sample Id: 620070-006

Matrix: Soil
Date Collected: 04.01.19 15.25

Date Received: 04.04.19 11.35
Sample Depth: 2 - 4.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3085314

Date Prep: 04.10.19 14.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.11.19 00.04	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.11.19 00.04	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.11.19 00.04	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.11.19 00.04	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.11.19 00.04	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.11.19 00.04	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.11.19 00.04	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	04.11.19 00.04		
4-Bromofluorobenzene	460-00-4	119	%	70-130	04.11.19 00.04		



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.
Coral Canyon Federal 6H

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3085116

MB Sample Id: 7675357-1-BLK

Matrix: Solid

LCS Sample Id: 7675357-1-BKS

Prep Method: E300P

Date Prep: 04.09.19

LCSD Sample Id: 7675357-1-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	100	103	103	103	103	80-120	0	20	mg/kg	04.09.19 23:32	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3085116

Parent Sample Id: 620070-001

Matrix: Soil

MS Sample Id: 620070-001 S

Prep Method: E300P

Date Prep: 04.09.19

MSD Sample Id: 620070-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	253	100	356	103	357	104	80-120	0	20	mg/kg	04.10.19 01:53	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3085116

Parent Sample Id: 620070-002

Matrix: Soil

MS Sample Id: 620070-002 S

Prep Method: E300P

Date Prep: 04.09.19

MSD Sample Id: 620070-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	780	100	874	94	870	90	80-120	0	20	mg/kg	04.10.19 02:20	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3085090

MB Sample Id: 7675365-1-BLK

Matrix: Solid

LCS Sample Id: 7675365-1-BKS

Prep Method: TX1005P

Date Prep: 04.08.19

LCSD Sample Id: 7675365-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	968	97	1010	101	70-135	4	20	mg/kg	04.09.19 01:35	
Diesel Range Organics (DRO)	<8.13	1000	1050	105	1110	111	70-135	6	20	mg/kg	04.09.19 01:35	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	104		127		123		70-135	%	04.09.19 01:35
o-Terphenyl	106		122		128		70-135	%	04.09.19 01:35

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.

Coral Canyon Federal 6H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3085090

Parent Sample Id: 620070-001

Matrix: Soil

MS Sample Id: 620070-001 S

Prep Method: TX1005P

Date Prep: 04.08.19

MSD Sample Id: 620070-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	999	921	92	927	93	70-135	1	20	mg/kg	04.09.19 02:33	
Diesel Range Organics (DRO)	<8.12	999	1020	102	1020	102	70-135	0	20	mg/kg	04.09.19 02:33	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	116		118		70-135	%	04.09.19 02:33
o-Terphenyl	95		109		70-135	%	04.09.19 02:33

Analytical Method: BTEX by EPA 8021B

Seq Number: 3085314

MB Sample Id: 7675535-1-BLK

Matrix: Solid

LCS Sample Id: 7675535-1-BKS

Prep Method: SW5030B

Date Prep: 04.10.19

LCSD Sample Id: 7675535-1-BSO

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00198	0.0992	0.0999	101	0.101	101	70-130	1	35	mg/kg	04.10.19 16:25	
Toluene	<0.00198	0.0992	0.0939	95	0.0959	96	70-130	2	35	mg/kg	04.10.19 16:25	
Ethylbenzene	<0.00198	0.0992	0.0960	97	0.0986	99	70-130	3	35	mg/kg	04.10.19 16:25	
m,p-Xylenes	<0.00101	0.198	0.192	97	0.197	99	70-130	3	35	mg/kg	04.10.19 16:25	
o-Xylene	<0.00198	0.0992	0.0971	98	0.0992	99	70-130	2	35	mg/kg	04.10.19 16:25	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		101		100		70-130	%	04.10.19 16:25
4-Bromofluorobenzene	100		102		100		70-130	%	04.10.19 16:25

Analytical Method: BTEX by EPA 8021B

Seq Number: 3085314

Parent Sample Id: 620065-001

Matrix: Soil

MS Sample Id: 620065-001 S

Prep Method: SW5030B

Date Prep: 04.10.19

MSD Sample Id: 620065-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000386	0.100	0.0945	95	0.0869	86	70-130	8	35	mg/kg	04.10.19 17:03	
Toluene	0.00105	0.100	0.0887	88	0.0856	84	70-130	4	35	mg/kg	04.10.19 17:03	
Ethylbenzene	0.000614	0.100	0.0889	88	0.0861	85	70-130	3	35	mg/kg	04.10.19 17:03	
m,p-Xylenes	0.00170	0.201	0.177	87	0.174	85	70-130	2	35	mg/kg	04.10.19 17:03	
o-Xylene	0.000694	0.100	0.0904	90	0.0890	87	70-130	2	35	mg/kg	04.10.19 17:03	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		97		70-130	%	04.10.19 17:03
4-Bromofluorobenzene	104		109		70-130	%	04.10.19 17:03

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:

1620070

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

www.xenco.com

Page 1 of 1

Project Manager:		Adrian Baker		Bill to: (if different)		Kyle Littell	
Company Name:		LT Environmental Inc		Company Name:		XTD	
Address:		3300 North A Street		Address:		304 E Grene Street	
City, State ZIP:		Midland TX 79705		City, State ZIP:		Lubbock NM 88220	
Phone:		432 704 5178		Email:		abaker@ltenv.com & abaker@xenco.com	
Project Name:		Carnel Canyon Federal 101		Turn Around		Routine ☒ Rush: ☐	
P.O. Number:		2804929		Due Date:			
Sampler's Name:		Anna Byers		Temp Blank:		Yes ☐ No ☒	
Temperature (°C):		0.504		Thermometer ID:		B	
Received Intact:		Yes ☒ No ☐		Correction Factor:		-0.1	
Cooler Custody Seals:		Yes ☒ No ☐		Total Containers:			
Sample Custody Seals:		Yes ☒ No ☐					

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	ANALYSIS REQUEST	Work Order Notes
FS19A	S	4/1/19	1420	9'	1	TPH (EPA 8015)	TAT starts the day received by the lab, if received by 4:30pm
FS28A	S	4/1/19	1415	7-8'	1	BTEX (EPA 8021)	
FS31A	S	4/1/19	1416	8'	1	Chloride (EPA 300.0)	
FS53A	S	4/1/19	1530	2-4.5'	1		
FS54A	S	4/1/19	1546	2-4.5'	1		
FS55A	S	4/1/19	1525	2-4.5'	1		

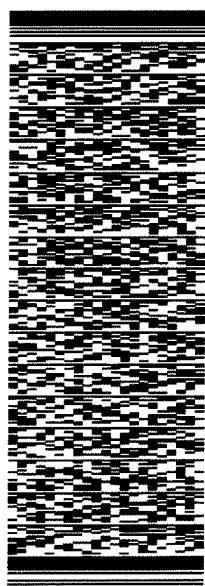
Total 200.7 / 6010		200.8 / 6020:		8RCRA 13PPM Texas 11		Al Sb As Ba Be B-Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn	
Circle Method(s) and Metal(s) to be analyzed		TCLP/SPLP 6010: 8RCRA		Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U		1631 / 245.1 / 7470 / 7471 : Hg	

Relinquished by: (Signature)		Received by: (Signature)		Date/Time		Relinquished by: (Signature)		Received by: (Signature)		Date/Time	
1 <i>Anna Byers</i>		1 <i>Anna Byers</i>		4/1/19 6:30		2 <i>[Signature]</i>		2 <i>[Signature]</i>		4/1/19 1:35	
3		3				4		4			
5		5				6		6			

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.

ORIGIN ID:CAOA (575) 887-6245 XENCO PAC N MAIL 910 W PIERCE ST CARLSBAD, NM 88220 UNITED STATES US		SHIP DATE: 03APR19 ACTWGT: 39.00 LB CAD: 101813706/INET4100 DIMS: 26x15x14 IN
TO HOLD FOR XENCO FEDEX EXPRESS SHIP CENTER FEDEX SHIP CENTER 3600 COUNTY RD 1276 S MIDLAND TX 79711		BILL RECIPIENT
TRK# 0201 7748 7833 8790	THU - 04 APR HOLD STANDARD OVERNIGHT HLD MAFA TX-US LBB	

565J1/D7E5/23AD

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Inter-Office Shipment

IOS Number : **126124**

Date/Time: 04.08.2019 11:09 Created by: Katie Lowe

Lab# From: **Midland**

Delivery Priority:

Lab# To: **Houston**

Air Bill No.: 0774915573670

Please send report to: Kalei Stout

Address: 1211 W. Florida Ave

E-Mail: kalei.stout@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
620070-001	S	FS19A	04.01.2019 14:20	E300	Inorganic Anions by EPA 300	04.10.2019	04.29.2019	KLS	CL	
620070-002	S	FS28A	04.01.2019 14:15	E300	Inorganic Anions by EPA 300	04.10.2019	04.29.2019	KLS	CL	
620070-003	S	FS31A	04.01.2019 14:16	E300	Inorganic Anions by EPA 300	04.10.2019	04.29.2019	KLS	CL	
620070-004	S	FS53A	04.01.2019 15:30	E300	Inorganic Anions by EPA 300	04.10.2019	04.29.2019	KLS	CL	
620070-005	S	FS54A	04.01.2019 15:40	E300	Inorganic Anions by EPA 300	04.10.2019	04.29.2019	KLS	CL	
620070-006	S	FS55A	04.01.2019 15:25	E300	Inorganic Anions by EPA 300	04.10.2019	04.29.2019	KLS	CL	

Inter Office Shipment or Sample Comments:

Relinquished By:



Katie Lowe

Date Relinquished: 04.08.2019

Received By: _____

Date Received: 04.09.2019 09:00

Cooler Temperature: 3.4



Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 126124

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : hou-068

Sent By: Katie Lowe

Date Sent: 04/08/2019 11:09 AM

Received By: Taha Hedib

Date Received: 04/09/2019 09:00 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	3.4
#2 *Shipping container in good condition?	Yes
#3 *Samples received with appropriate temperature?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 *Custody Seals Signed and dated for Containers/coolers	Yes
#6 *IOS present?	Yes
#7 Any missing/extra samples?	No
#8 IOS agrees with sample label(s)/matrix?	Yes
#9 Sample matrix/ properties agree with IOS?	Yes
#10 Samples in proper container/ bottle?	Yes
#11 Samples properly preserved?	Yes
#12 Sample container(s) intact?	Yes
#13 Sufficient sample amount for indicated test(s)?	Yes
#14 All samples received within hold time?	Yes

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ Contacted by : _____ Date: _____

Checklist reviewed by: _____

Date: 04/09/2019



Client: LT Environmental, Inc.

Date/ Time Received: 04/04/2019 11:35:00 AM

Work Order #: 620070

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist

Comments

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

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Brianna Teel

Date: 04/04/2019

Checklist reviewed by:

Kalei Stout

Date: 04/05/2019

Analytical Report 622977

for
LT Environmental, Inc.

Project Manager: Ashley Ager
Corral Canyon Federal 16H

03-MAY-19

Collected By: Client



1211 W. Florida Ave
Midland TX 79701

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

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

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



03-MAY-19

Project Manager: **Ashley Ager**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **622977**

Corral Canyon Federal 16H

Project Address: Delaware Basin

Ashley Ager:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 622977. 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. 622977 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.

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**Sample Cross Reference 622977****LT Environmental, Inc., Arvada, CO**

Corral Canyon Federal 16H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS31B	S	04-30-19 13:15	8 - 10 ft	622977-001
FS28B	S	04-30-19 09:35	8 - 10 ft	622977-002



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Corral Canyon Federal 16H

Project ID:

Work Order Number(s): 622977

Report Date: 03-MAY-19

Date Received: 05/02/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3087779 BTEX by EPA 8021B

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



Certificate of Analysis Summary 622977

LT Environmental, Inc., Arvada, CO

Project Name: Corral Canyon Federal 16H

Project Id:

Contact: Ashley Ager

Project Location: Delaware Basin

Date Received in Lab: Thu May-02-19 11:05 am

Report Date: 03-MAY-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	622977-001	622977-002				
	Field Id:	FS31B	FS28B				
	Depth:	8-10 ft	8-10 ft				
	Matrix:	SOIL	SOIL				
	Sampled:	Apr-30-19 13:15	Apr-30-19 09:35				
BTEX by EPA 8021B	Extracted:	May-02-19 16:00	May-02-19 16:00				
	Analyzed:	May-02-19 19:00	May-02-19 19:19				
	Units/RL:	mg/kg RL	mg/kg RL				
	Benzene	<0.00201 0.00201	<0.00200 0.00200				
	Toluene	<0.00201 0.00201	<0.00200 0.00200				
Ethylbenzene		<0.00201 0.00201	<0.00200 0.00200				
m,p-Xylenes		<0.00402 0.00402	<0.00399 0.00399				
o-Xylene		<0.00201 0.00201	<0.00200 0.00200				
Total Xylenes		<0.00201 0.00201	<0.00200 0.00200				
Total BTEX		<0.00201 0.00201	<0.00200 0.00200				
Chloride by EPA 300	Extracted:	May-03-19 09:00	May-03-19 09:00				
	Analyzed:	May-03-19 10:30	May-03-19 10:47				
	Units/RL:	mg/kg RL	mg/kg RL				
	Chloride	129 5.01	130 5.04				
TPH by SW8015 Mod	Extracted:	May-02-19 15:00	May-02-19 15:00				
	Analyzed:	May-03-19 04:03	May-03-19 04:23				
	Units/RL:	mg/kg RL	mg/kg RL				
	Gasoline Range Hydrocarbons (GRO)	<15.0 15.0	<15.0 15.0				
	Diesel Range Organics (DRO)	<15.0 15.0	<15.0 15.0				
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0				
Total TPH		<15.0 15.0	<15.0 15.0				
Total GRO-DRO		<15.0 15.0	<15.0 15.0				

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

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

Version: 1.0%

Jessica Kramer
Project Assistant



Certificate of Analytical Results 622977



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS31B**
Lab Sample Id: 622977-001

Matrix: Soil
Date Collected: 04.30.19 13.15

Date Received: 05.02.19 11.05
Sample Depth: 8 - 10 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3087832

Date Prep: 05.03.19 09.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	129	5.01	mg/kg	05.03.19 10.30		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3087798

Date Prep: 05.02.19 15.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.03.19 04.03	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.03.19 04.03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.03.19 04.03	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.03.19 04.03	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.03.19 04.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	05.03.19 04.03	
o-Terphenyl	84-15-1	105	%	70-135	05.03.19 04.03	



Certificate of Analytical Results 622977



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS31B**
Lab Sample Id: 622977-001

Matrix: Soil
Date Collected: 04.30.19 13.15

Date Received: 05.02.19 11.05
Sample Depth: 8 - 10 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3087779

Date Prep: 05.02.19 16.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	05.02.19 19.00	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	05.02.19 19.00	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	05.02.19 19.00	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	05.02.19 19.00	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	05.02.19 19.00	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	05.02.19 19.00	U	1
Total BTEX		<0.00201	0.00201	mg/kg	05.02.19 19.00	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	109	%	70-130	05.02.19 19.00		
1,4-Difluorobenzene	540-36-3	101	%	70-130	05.02.19 19.00		



Certificate of Analytical Results 622977



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS28B**
Lab Sample Id: 622977-002

Matrix: Soil
Date Collected: 04.30.19 09.35

Date Received: 05.02.19 11.05
Sample Depth: 8 - 10 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3087832

Date Prep: 05.03.19 09.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	130	5.04	mg/kg	05.03.19 10.47		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3087798

Date Prep: 05.02.19 15.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.03.19 04.23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.03.19 04.23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.03.19 04.23	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.03.19 04.23	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.03.19 04.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	05.03.19 04.23	
o-Terphenyl	84-15-1	103	%	70-135	05.03.19 04.23	



Certificate of Analytical Results 622977



LT Environmental, Inc., Arvada, CO

Corral Canyon Federal 16H

Sample Id: **FS28B**
Lab Sample Id: 622977-002

Matrix: Soil
Date Collected: 04.30.19 09.35

Date Received: 05.02.19 11.05
Sample Depth: 8 - 10 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3087779

Date Prep: 05.02.19 16.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.02.19 19.19	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.02.19 19.19	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.02.19 19.19	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	05.02.19 19.19	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.02.19 19.19	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.02.19 19.19	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.02.19 19.19	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	102	%	70-130	05.02.19 19.19		
4-Bromofluorobenzene	460-00-4	114	%	70-130	05.02.19 19.19		



Flagging Criteria



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

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

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



LT Environmental, Inc.

Corral Canyon Federal 16H

Analytical Method: Chloride by EPA 300

Seq Number: 3087832

MB Sample Id: 7677073-1-BLK

Matrix: Solid

LCS Sample Id: 7677073-1-BKS

Prep Method: E300P

Date Prep: 05.03.19

LCSD Sample Id: 7677073-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	248	99	249	100	90-110	0	20	mg/kg	05.03.19 09:44	

Analytical Method: Chloride by EPA 300

Seq Number: 3087832

Parent Sample Id: 622955-002

Matrix: Soil

MS Sample Id: 622955-002 S

Prep Method: E300P

Date Prep: 05.03.19

MSD Sample Id: 622955-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	147	250	392	98	393	98	90-110	0	20	mg/kg	05.03.19 10:01	

Analytical Method: Chloride by EPA 300

Seq Number: 3087832

Parent Sample Id: 622956-005

Matrix: Soil

MS Sample Id: 622956-005 S

Prep Method: E300P

Date Prep: 05.03.19

MSD Sample Id: 622956-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	408	250	629	88	630	89	90-110	0	20	mg/kg	05.03.19 11:22	X

Analytical Method: TPH by SW8015 Mod

Seq Number: 3087798

MB Sample Id: 7677066-1-BLK

Matrix: Solid

LCS Sample Id: 7677066-1-BKS

Prep Method: TX1005P

Date Prep: 05.02.19

LCSD Sample Id: 7677066-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	1010	101	993	99	70-135	2	20	mg/kg	05.02.19 22:24	
Diesel Range Organics (DRO)	<8.13	1000	1020	102	989	99	70-135	3	20	mg/kg	05.02.19 22:24	

Surrogate

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	104		129		127		70-135	%	05.02.19 22:24
o-Terphenyl	106		126		128		70-135	%	05.02.19 22:24

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 Federal 16H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3087798

Parent Sample Id: 622954-001

Matrix: Soil

MS Sample Id: 622954-001 S

Prep Method: TX1005P

Date Prep: 05.02.19

MSD Sample Id: 622954-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<7.97	996	1000	100	1030	103	70-135	3	20	mg/kg	05.02.19 23:23	
Diesel Range Organics (DRO)	9.72	996	1030	102	1030	102	70-135	0	20	mg/kg	05.02.19 23:23	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	123		125		70-135	%	05.02.19 23:23
o-Terphenyl	118		120		70-135	%	05.02.19 23:23

Analytical Method: BTEX by EPA 8021B

Seq Number: 3087779

MB Sample Id: 7677040-1-BLK

Matrix: Solid

LCS Sample Id: 7677040-1-BKS

Prep Method: SW5030B

Date Prep: 05.02.19

LCSD Sample Id: 7677040-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.0985	99	0.101	102	70-130	3	35	mg/kg	05.02.19 17:07	
Toluene	<0.00199	0.0996	0.0972	98	0.0984	99	70-130	1	35	mg/kg	05.02.19 17:07	
Ethylbenzene	<0.00199	0.0996	0.106	106	0.107	108	70-130	1	35	mg/kg	05.02.19 17:07	
m,p-Xylenes	<0.00398	0.199	0.223	112	0.224	113	70-130	0	35	mg/kg	05.02.19 17:07	
o-Xylene	<0.00199	0.0996	0.107	107	0.108	109	70-130	1	35	mg/kg	05.02.19 17:07	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		92		94		70-130	%	05.02.19 17:07
4-Bromofluorobenzene	106		97		100		70-130	%	05.02.19 17:07

Analytical Method: BTEX by EPA 8021B

Seq Number: 3087779

Parent Sample Id: 622977-001

Matrix: Soil

MS Sample Id: 622977-001 S

Prep Method: SW5030B

Date Prep: 05.02.19

MSD Sample Id: 622977-001 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	0.0882	88	0.0877	87	70-130	1	35	mg/kg	05.02.19 17:45	
Toluene	<0.00200	0.100	0.0850	85	0.0835	83	70-130	2	35	mg/kg	05.02.19 17:45	
Ethylbenzene	<0.00200	0.100	0.0906	91	0.0886	88	70-130	2	35	mg/kg	05.02.19 17:45	
m,p-Xylenes	<0.00400	0.200	0.190	95	0.186	92	70-130	2	35	mg/kg	05.02.19 17:45	
o-Xylene	<0.00200	0.100	0.0927	93	0.0909	90	70-130	2	35	mg/kg	05.02.19 17:45	

Surrogate

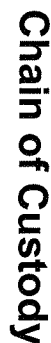
	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	96		97		70-130	%	05.02.19 17:45
4-Bromofluorobenzene	107		108		70-130	%	05.02.19 17:45

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

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

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

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



Work Order No:

11626

www.xenco.com Page 1 of 1

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:	

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

1. *Chlorophyll a* (Chl *a*)

2. *Chlorophyll b* (Chl *b*)

3. *Chlorophyll c* (Chl *c*)

4. *Chlorophyll d* (Chl *d*)

5. *Chlorophyll e* (Chl *e*)

6. *Chlorophyll f* (Chl *f*)

7. *Chlorophyll g* (Chl *g*)

8. *Chlorophyll h* (Chl *h*)

9. *Chlorophyll i* (Chl *i*)

10. *Chlorophyll j* (Chl *j*)

11. *Chlorophyll k* (Chl *k*)

12. *Chlorophyll l* (Chl *l*)

13. *Chlorophyll m* (Chl *m*)

14. *Chlorophyll n* (Chl *n*)

15. *Chlorophyll o* (Chl *o*)

16. *Chlorophyll p* (Chl *p*)

17. *Chlorophyll q* (Chl *q*)

18. *Chlorophyll r* (Chl *r*)

19. *Chlorophyll s* (Chl *s*)

20. *Chlorophyll t* (Chl *t*)

21. *Chlorophyll u* (Chl *u*)

22. *Chlorophyll v* (Chl *v*)

23. *Chlorophyll w* (Chl *w*)

24. *Chlorophyll x* (Chl *x*)

25. *Chlorophyll y* (Chl *y*)

26. *Chlorophyll z* (Chl *z*)

27. *Chlorophyll aa* (Chl *aa*)

28. *Chlorophyll ab* (Chl *ab*)

29. *Chlorophyll ac* (Chl *ac*)

30. *Chlorophyll ad* (Chl *ad*)

31. *Chlorophyll ae* (Chl *ae*)

32. *Chlorophyll af* (Chl *af*)

33. *Chlorophyll ag* (Chl *ag*)

34. *Chlorophyll ah* (Chl *ah*)

35. *Chlorophyll ai* (Chl *ai*)

36. *Chlorophyll aj* (Chl *aj*)

37. *Chlorophyll ak* (Chl *ak*)

38. *Chlorophyll al* (Chl *al*)

39. *Chlorophyll am* (Chl *am*)

40. *Chlorophyll an* (Chl *an*)

41. *Chlorophyll ao* (Chl *ao*)

42. *Chlorophyll ap* (Chl *ap*)

43. *Chlorophyll aq* (Chl *aq*)

44. *Chlorophyll ar* (Chl *ar*)

45. *Chlorophyll as* (Chl *as*)

46. *Chlorophyll at* (Chl *at*)

47. *Chlorophyll au* (Chl *au*)

48. *Chlorophyll av* (Chl *av*)

49. *Chlorophyll aw* (Chl *aw*)

50. *Chlorophyll ax* (Chl *ax*)

51. *Chlorophyll ay* (Chl *ay*)

52. *Chlorophyll az* (Chl *az*)

53. *Chlorophyll a1* (Chl *a1*)

54. *Chlorophyll a2* (Chl *a2*)

55. *Chlorophyll a3* (Chl *a3*)

56. *Chlorophyll a4* (Chl *a4*)

57. *Chlorophyll a5* (Chl *a5*)

58. *Chlorophyll a6* (Chl *a6*)

59. *Chlorophyll a7* (Chl *a7*)

60. *Chlorophyll a8* (Chl *a8*)

61. *Chlorophyll a9* (Chl *a9*)

62. *Chlorophyll a10* (Chl *a10*)

63. *Chlorophyll a11* (Chl *a11*)

64. *Chlorophyll a12* (Chl *a12*)

65. *Chlorophyll a13* (Chl *a13*)

66. *Chlorophyll a14* (Chl *a14*)

67. *Chlorophyll a15* (Chl *a15*)

68. *Chlorophyll a16* (Chl *a16*)

69. *Chlorophyll a17* (Chl *a17*)

70. *Chlorophyll a18* (Chl *a18*)

71. *Chlorophyll a19* (Chl *a19*)

72. *Chlorophyll a20* (Chl *a20*)

73. *Chlorophyll a21* (Chl *a21*)

74. *Chlorophyll a22* (Chl *a22*)

75. *Chlorophyll a23* (Chl *a23*)

76. *Chlorophyll a24* (Chl *a24*)

77. *Chlorophyll a25* (Chl *a25*)

78. *Chlorophyll a26* (Chl *a26*)

79. *Chlorophyll a27* (Chl *a27*)

80. *Chlorophyll a28* (Chl *a28*)

81. *Chlorophyll a29* (Chl *a29*)

82. *Chlorophyll a30* (Chl *a30*)

83. *Chlorophyll a31* (Chl *a31*)

84. *Chlorophyll a32* (Chl *a32*)

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86. *Chlorophyll a34* (Chl *a34*)

87. *Chlorophyll a35* (Chl *a35*)

88. *Chlorophyll a36* (Chl *a36*)

89. *Chlorophyll a37* (Chl *a37*)

90. *Chlorophyll a38* (Chl *a38*)

91. *Chlorophyll a39* (Chl *a39*)

92. *Chlorophyll a40* (Chl *a40*)

93. *Chlorophyll a41* (Chl *a41*)

94. *Chlorophyll a42* (Chl *a42*)

95. *Chlorophyll a43* (Chl *a43*)

96. *Chlorophyll a44* (Chl *a44*)

97. *Chlorophyll a45* (Chl *a45*)

98. *Chlorophyll a46* (Chl *a46*)

99. *Chlorophyll a47* (Chl *a47*)

100. *Chlorophyll a48* (Chl *a48*)

101. *Chlorophyll a49* (Chl *a49*)

102. *Chlorophyll a50* (Chl *a50*)

103. *Chlorophyll a51* (Chl *a51*)

104. *Chlorophyll a52* (Chl *a52*)

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106. *Chlorophyll a54* (Chl *a54*)

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108. *Chlorophyll a56* (Chl *a56*)

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117. *Chlorophyll a65* (Chl *a65*)

118. *Chlorophyll a66* (Chl *a66*)

119. *Chlorophyll a67* (Chl *a67*)

120. *Chlorophyll a68* (Chl *a68*)

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130. *Chlorophyll a78* (Chl *a78*)

131. *Chlorophyll a79* (Chl *a79*)

132. *Chlorophyll a80* (Chl *a80*)

133. *Chlorophyll a81* (Chl *a81*)

134. <

Released to Imagi

ORIGIN ID: CAOA (281) 240-4200
SAMPLE CUSTODY
XENOCO LABORATORIES NM
1089 N CANAL ST
CARLSBAD, NM 88220
UNITED STATES US

SHIP DATE: 01MAY19
ACTWGT: 56.00 LB
CAD: 11448676/NET 4100
DIMS: 24x14x14 IN
BILL SENDER

TO SAMPLE RECEIVING

3600 S COUNTY ROAD 1276

MIDLAND TX 79706

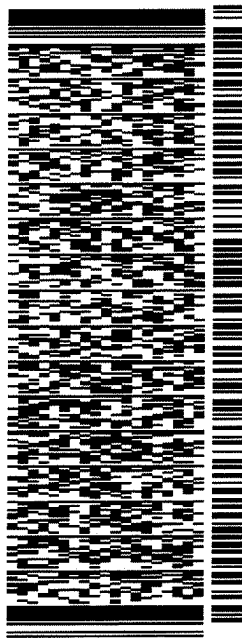
REF: (432) 704-5440

REF:

PO:

DEPT:

565J1/D66C/23AD



THU - 02 MAY HOLD

PRIORITY OVERNIGHT

TRK# 7751 1156 8166
0201

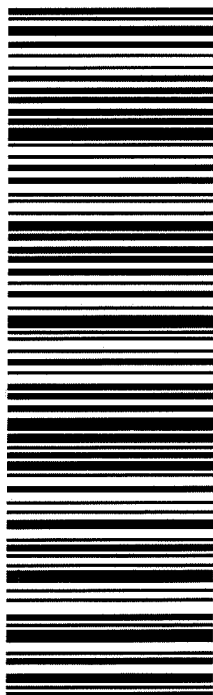
HLD

79706

TX-US

LBB

41 MAFA



After printing this label:

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

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.

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Client: LT Environmental, Inc.

Date/ Time Received: 05/02/2019 11:05:00 AM

Work Order #: 622977

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist

Comments

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

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Brianna Teel

Date: 05/02/2019

Checklist reviewed by:

Jessica Kramer

Date: 05/02/2019

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1220 S. St Francis Dr.
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QUESTIONS

Action 494611

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 494611
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	nMAP1823050748
Incident Name	NMAP1823050748 CORRAL CANYON FEDERAL COM #016H @ 30-015-42928
Incident Type	Produced Water Release
Incident Status	Remediation Closure Report Received
Incident Well	[30-015-42928] CORRAL CANYON FEDERAL COM #016H

Location of Release Source	
<i>Please answer all the questions in this group.</i>	
Site Name	CORRAL CANYON FEDERAL COM #016H
Date Release Discovered	08/03/2018
Surface Owner	Federal

Incident Details	
<i>Please answer all the questions in this group.</i>	
Incident Type	Produced Water Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release	
<i>Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.</i>	
Crude Oil Released (bbls) Details	Cause: Fire Tank (Any) Crude Oil Released: 1 BBL Recovered: 1 BBL Lost: 0 BBL.
Produced Water Released (bbls) Details	Cause: Fire Tank (Any) Produced Water Released: 95 BBL Recovered: 79 BBL Lost: 16 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
Condensate Released (bbls) Details	Not answered.
Natural Gas Vented (Mcf) Details	Not answered.
Natural Gas Flared (Mcf) Details	Not answered.
Other Released Details	Not answered.
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	Not answered.

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QUESTIONS, Page 2

Action 494611

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
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	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	No, according to supplied volumes this does not appear to be a "gas only" report.
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	Yes
Reasons why this would be considered a submission for a notification of a major release	From paragraph A. "Major release" determine using: (1) an unauthorized release of a volume, excluding gases, of 25 barrels or more; (2) an unauthorized release of a volume that: (a) results in a fire or is the result of a fire.
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.	

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	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	Not answered.

Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.

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.

I hereby agree and sign off to the above statement	Name: Robert Woodall Title: Environmental Analyst Email: robert.d.woodall@exxonmobil.com Date: 08/12/2025
--	--

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QUESTIONS, Page 3

Action 494611

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:
	5380
	Action Number:
	494611
Action Type:	
[C-141] Remediation Closure Request C-141 (C-141-v-Closure)	

QUESTIONS

Site Characterization	
<i>Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.</i>	
What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 51 and 75 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Between 1000 (ft.) and ½ (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1 and 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Greater than 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 1 and 5 (mi.)
Any other fresh water well or spring	Between ½ and 1 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between 1000 (ft.) and ½ (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Zero feet, overlying, or within area
Categorize the risk of this well / site being in a karst geology	Medium
A 100-year floodplain	Between 1000 (ft.) and ½ (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

Remediation Plan	
<i>Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.</i>	
Requesting a remediation plan approval with this submission	Yes
<i>Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.</i>	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)	
Chloride (EPA 300.0 or SM4500 Cl B)	2280
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	330
GRO+DRO (EPA SW-846 Method 8015M)	120
BTEX (EPA SW-846 Method 8021B or 8260B)	0
Benzene (EPA SW-846 Method 8021B or 8260B)	0
<i>Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.</i>	
On what estimated date will the remediation commence	08/03/2018
On what date will (or did) the final sampling or liner inspection occur	
On what date will (or was) the remediation complete(d)	04/30/2019
What is the estimated surface area (in square feet) that will be reclaimed	10627
What is the estimated volume (in cubic yards) that will be reclaimed	1968
What is the estimated surface area (in square feet) that will be remediated	10627
What is the estimated volume (in cubic yards) that will be remediated	1968
<i>These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.</i>	
<i>The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.</i>	

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QUESTIONS, Page 4

Action 494611

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:
	5380
	Action Number:
	494611
	Action Type:
	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Remediation Plan (continued)	
<i>Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.</i>	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
<i>(Select all answers below that apply.)</i>	
(Ex Situ) Excavation and off-site disposal (i.e. dig and haul, hydrovac, etc.)	No
(Ex Situ) Excavation and on-site remediation (i.e. On-Site Land Farms)	Not answered.
(In Situ) Soil Vapor Extraction	Not answered.
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	Not answered.
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	Not answered.
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	Not answered.
Ground Water Abatement pursuant to 19.15.30 NMAC	Not answered.
OTHER (Non-listed remedial process)	Yes
Other Non-listed Remedial Process. Please specify	Ex-Situ excavation. Soils were transported and disposed of at the R360 Landfill Facility in Orla, Texas.
<i>Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.</i>	
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.	
I hereby agree and sign off to the above statement	Name: Robert Woodall Title: Environmental Analyst Email: robert.d.woodall@exxonmobil.com Date: 08/12/2025
<i>The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.</i>	

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QUESTIONS, Page 5

Action 494611

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 494611
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Deferral Requests Only	
Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

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QUESTIONS, Page 6

Action 494611

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
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	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	466869
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	01/04/2019
What was the (estimated) number of samples that were to be gathered	53
What was the sampling surface area in square feet	10627

Remediation Closure Request	
<i>Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.</i>	
Requesting a remediation closure approval with this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	Yes
What was the total surface area (in square feet) remediated	10627
What was the total volume (cubic yards) remediated	1968
All areas not reasonably needed for production or subsequent drilling operations have been reclaimed to contain a minimum of four feet of non-waste contain earthen material with concentrations less than 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene	Yes
What was the total surface area (in square feet) reclaimed	10627
What was the total volume (in cubic yards) reclaimed	1968
Summarize any additional remediation activities not included by answers (above)	Excavation activities were conducted at the Site to address the August 2018 release of crude oil and produced water. Laboratory analytical results for all final excavation soil samples indicated all COC concentrations were compliant with the Closure Criteria. Based on the soil sample laboratory analytical results, no further remediation is required. XTO believes these remedial actions are protective of human health, the environment, and groundwater. As such, XTO respectfully requests closure for Incident Number nMAP1823050748, Remediation Permit Number 2RP-4929.
<i>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 (in .pdf format) 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.</i>	
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.	
I hereby agree and sign off to the above statement	Name: Robert Woodall Title: Environmental Analyst Email: robert.d.woodall@exxonmobil.com Date: 08/12/2025

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Action 494611

QUESTIONS (continued)

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	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Reclamation Report	
Only answer the questions in this group if all reclamation steps have been completed.	
Requesting a reclamation approval with this submission	No

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CONDITIONS

Action 494611

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:
	5380
	Action Number:
	494611
Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)	

CONDITIONS

Created By	Condition	Condition Date
michael.buchanan	Remediation closure is approved.	9/18/2025
michael.buchanan	The reclamation report will need to include: Executive Summary of the reclamation activities; Scaled Site Map including sampling locations; Analytical results including, but not limited to, results showing that any remaining impacts meet the reclamation standards and results to prove the backfill is non-waste containing; At least one (1) representative 5-point composite sample will need to be collected from the backfill material that will be used for the reclamation of the top four feet of the excavation. The OCD reserves the right to request additional sampling if needed; pictures of the backfilled areas showing that the area is back, as nearly as practical, to the original condition or the final land use and maintain those areas to control dust and minimize erosion to the extent practical; pictures of the top layer, which is either the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater; and a revegetation plan.	9/18/2025
michael.buchanan	A reclamation report will not be accepted until reclamation of the release area, including areas reasonably needed for production or drilling activities, is complete and meet the requirements of 19.15.29.13 NMAC. Areas not reasonably needed for production or drilling activities will still need to be reclaimed and revegetated as early as practicable.	9/18/2025
michael.buchanan	All revegetation activities will need to be documented and included in the revegetation report. The revegetation report will need to include: An executive summary of the revegetation activities including: Seed mix, Method of seeding, dates of when the release area was reseeded, information pertinent to inspections, information about any amendments added to the soil, information on how the vegetative cover established meets the life-form ratio of plus or minus fifty percent of pre-disturbance levels and a total percent plant cover of at least seventy percent of pre-disturbance levels, excluding noxious weeds per 19.15.29.13 D.(3) NMAC, and any additional information; a scaled Site Map including area that was revegetated in square feet; and pictures of the revegetated areas during reseeding activities, inspections, and final pictures when revegetation is achieved.	9/18/2025
michael.buchanan	A revegetation report will not be accepted until revegetation of the release area, including areas reasonably needed for production or drilling activities, is complete and meet the requirements of 19.15.29.13 NMAC. Areas not reasonably needed for production or drilling activities will still need to be reclaimed and revegetated as early as practicable.	9/18/2025
michael.buchanan	Per 19.15.29.13 E. NMAC, if a reclamation and revegetation report has been submitted to the surface owner, it may be used if the requirements of the surface owner provide equal or better protection of freshwater, human health, and the environment. A copy of the approval of the reclamation and revegetation report from the surface owner and a copy of the approved reclamation and revegetation report will need to be submitted to the OCD via the Permitting website.	9/18/2025