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

July 1, 2019

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

RE: Deferral Request
Remuda 100 Battery
Remediation Permit Number 2RP-5336
Eddy County, New Mexico

Dear Mr. Bratcher

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following report detailing soil sampling and excavation activities at the Remuda 100 Battery (Site) in Unit E, Section 25, Township 23 South, Range 29 East, in Eddy County, New Mexico (Figure 1). The purpose of the soil sampling and excavation activities was to address impacts to soil after a produced water release at the Site.

On March 14, 2019, a failed gasket on a produced water line resulted in the release of 8 barrels (bbls) of produced water. A vacuum truck was dispatched to the Site to recover free-standing fluid; approximately 1 bbl of fluid was recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 on March 28, 2019, and was assigned Remediation Permit (RP) Number 2RP-5336 (Attachment 1). Based on the excavation activities and results of the soil sampling events, XTO is submitting this deferral request, describing remediation that has occurred and requesting deferral of final remediation.

BACKGROUND

LTE characterized the Site according to Table 1, *Closure Criteria for Soils Impacted by a Release*, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Depth to groundwater at the Site is estimated to be less than 50 feet below ground surface (bgs) based on the nearest water well data. The nearest permitted water well with depth to water data is United States Geological Survey (USGS) well 321717103561001 located approximately 4,584 feet northeast of the Site. The water well has a depth to groundwater of 50.26 feet. The total depth of the water well was not available. Ground surface elevation at the water well location is 3,033 feet, which is 38 feet lower in elevation than the Site. The closest continuously flowing water or significant watercourse to the Site is a lower grade tributary located approximately 195 feet northeast of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school,

hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is located in a medium potential karst area. Based on these criteria, the following NMOCD Table 1 closure criteria were applied: 10 milligrams per kilogram (mg/kg) benzene; 50 mg/kg total benzene, toluene, ethylbenzene, and total xylenes (BTEX); 100 mg/kg total petroleum hydrocarbons (TPH); and 600 mg/kg chloride.

PRELIMINARY SOIL SAMPLING

On March 20, 2019, LTE personnel inspected the Site to evaluate the release extent. Surface staining was observed in the release area on the well pad and into the pasture area north of the well pad. The release extent was mapped using a handheld Global Positing System (GPS) unit and is depicted on Figure 2. LTE personnel collected five preliminary soil samples (SS01 through SS05) within the release area from a depth of 0.5 feet bgs to assess the lateral extent of soil impacts. The soil samples were screened for volatile aromatic hydrocarbons and chlorides using a photo-ionization detector (PID) and Hach® chloride QuanTab® test strips. The soil samples were placed directly into pre-cleaned glass jars, labeled with location, date, time, sampler, and method of analysis, and immediately placed on ice. The samples were shipped to Xenco Laboratories (Xenco) in Midland, Texas, at 4 degrees Celsius (°C) under strict chain-of-custody procedures for analysis of BTEX by United States Environmental Protection Agency (EPA) Method 8021B, TPH-gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH-oil range organics (ORO) by EPA Method 8015M/D, and chloride by EPA Method 300.0. The soil sample locations are presented on Figure 2.

Laboratory analytical results indicated that TPH and chloride concentrations exceeded the NMOCD Table 1 closure criteria in preliminary soil sample SS01; and chloride concentrations exceeded the NMOCD Table 1 closure criteria in preliminary soil samples SS01 through SS05. Based on the laboratory analytical results, excavation of impacted soil was warranted. Laboratory analytical results are presented on Figure 2 and summarized in Table 1, and the laboratory analytical report is included as Attachment 2.

EXCAVATION ACTIVITIES

On April 16 and April 17, 2019, LTE personnel returned to the Site to oversee excavation of impacted soil as indicated by laboratory analytical results and visual surface staining. To direct excavation activities, LTE screened soil samples using a PID and Hach® chloride QuanTab® test strips. Due to the presence of active production equipment and pipelines in the release area, impacted soil was excavated to the extent possible to a depth ranging from 1 foot to 2 feet bgs. Following removal of impacted soil, LTE collected 5-point composite soil samples every 200 square feet from the sidewalls and floor of the excavation. The 5-point composite samples were collected by depositing 5 aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples SW01 through SW12 were collected

from the sidewalls of the excavation from depths 0 to 1 foot bgs and 0 to 2 feet bgs. Composite soil samples FS01 through FS40 were collected from the floor of the excavation from depths ranging from 1 foot to 2 feet bgs. The excavation soil samples were collected, handled, and analyzed as described above and submitted to Xenco in Midland, Texas. The excavation soil sample locations are presented on Figure 3.

Laboratory analytical results indicated that benzene, BTEX, TPH, and chloride concentrations were compliant with the NMOCD Table 1 closure criteria in excavation soil samples SW01 through SW03, SW07, SW08, SW10, SW11, FS01 through FS25, and FS28 through FS40, collected from the floor and sidewalls of the excavation. Laboratory analytical results for SW04 through SW06, SW09, SW12, FS26, and FS27 indicated that TPH and/or chloride concentrations exceeding the NMOCD Table 1 closure criteria.

Further excavation of impacted soil was required, and subsequent excavation floor samples FS26A and FS27A, collected at 1.5 feet bgs, were collected in the areas of excavation floor samples FS26 and FS27, collected at 1 foot bgs. Laboratory analytical results indicated that benzene, BTEX, TPH, and chloride concentrations were compliant with the NMOCD Table 1 closure criteria in excavation floor samples FS26A and FS27A. Excavation in the areas of SW04 through SW06, SW09, and SW12 was limited due to the presence of active production equipment or pipelines.

The western portion of the excavation measured approximately 8,330 square feet in area. The eastern portion of the excavation measured approximately 1,905 square feet in area. The horizontal extent of the excavation is presented on Figure 3. A total of approximately 520 cubic yards of impacted soil were removed from the excavation. The impacted soil was transported and properly disposed of at the Lea Land landfill facility located in Hobbs, New Mexico.

DELINEATION ACTIVITIES

During April, May, and June 2019, LTE personnel returned to the Site to oversee potholing activities to delineate the lateral and vertical extent of impacted soil as indicated by laboratory analytical results. Potholes were advanced via hand auger in the areas of preliminary soil samples SS03 and SS04, and one additional vertical delineation sample was collected from each pothole at 1 foot bgs (soil samples SS03A and SS04A). Potholes SS06 through SS09 were advanced in and around the northern portion of the release area where excavation did not occur. Potholes SS10 through SS13 were advanced in areas near active equipment to delineate impacted soil being left in place. Two delineation soil samples were collected for laboratory analysis from each pothole from depths of 0.5 feet and 1 foot bgs. Soil was field screened in the potholes using a PID and Hach® chloride QuanTab® test strips. The delineation soil samples were collected, handled, and analyzed as described above and submitted to Xenco in Midland, Texas. The soil sample locations and depths are depicted on Figure 4 and soil sample logs are included as Attachment 3.

ANALYTICAL RESULTS

Laboratory analytical results indicated that TPH and/or chloride concentrations in preliminary soil samples SS01 through SS05 and excavation soil samples SW04 through SW06, SW09, SW12, FS26, and FS27 exceeded the NMOCD Table 1 closure criteria. Impacted soil was excavated to the extent possible. Laboratory analytical results for excavation floor samples FS26A and FS27A indicated that benzene, BTEX, TPH, and chloride concentrations were compliant with the NMOCD Table 1 closure criteria.

Further excavation of impacted soil beyond excavation sidewall samples SW04 through SW06, SW09, and SW12 was limited by the presence of active production equipment and pipelines. XTO safety policy restricts soil disturbing activities to a 2 foot radius of any on-site production equipment and pipelines. Excavation in the area of preliminary soil sample SS03 on the well pad and in the area of preliminary soil sample SS04 in the pasture was not practical due to the proximity of the active flare stack. XTO safety policy restricts soil disturbing activities to a 30 foot radius of an active flare stack. These XTO safety policies are established to protect workers and reduce the likelihood of compromising the foundation of the production equipment or pipelines. These policies were enforced where impacted soil was identified within 2 feet of active production equipment or pipelines, or within 30 feet of an active flare stack. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Attachment 2.

DEFERRAL REQUEST

A total of 520 cubic yards of impacted soil were excavated from the Site; however, residual impacted soil was left in place for compliance with the XTO safety policy regarding earth moving activities within 2 feet of active production equipment and pipelines, and within a 30 foot radius of an active flare stack. Laboratory analytical results for excavation sidewall samples SW04 through SW06, SW09, and SW12 collected from the final excavation extent, and preliminary soil sample SS04 indicated that soil with TPH and/or chloride concentrations exceeding the NMOCD Table 1 closure criteria was left in place within 2 feet of active production equipment or pipelines, or within 30 feet of an active flare stack. Impacted soil was excavated to the extent possible. Excavation in the area of preliminary soil sample SS04 was restricted due to the proximity of the active flare stack. The impacted soil remaining in place in this area is delineated vertically and laterally by delineation soil samples SS03A, SS06/SS06A, SS07/SS07A, SS08/SS08A, and SS09/SS09A; and excavation sidewall sample SW08. An estimated 120 cubic yards of impacted soil remains in place between 0.5 feet bgs and 1 foot bgs, assuming a maximum 1 foot depth based on delineation soil samples SS03A and SS06A through SS09A collected from a depth of 1 foot bgs that were compliant with the NMOCD Table 1 closure criteria.

The north, west, and east excavation sidewall samples are all compliant the NMOCD Table 1 closure criteria. The southern sidewall against the tank battery containment, in the area of SW04

through SW06, SW09, and SW12, represents soil remaining in place around the active truck loadout and loadout line north of the storage tank. The impacted soil remaining in place around and beneath the pipeline is delineated vertically and laterally by delineation soil samples SS10/SS10A, SS11/SS11A, SS12/SS12A, and SS13/SS13A, and excavation soil samples SW03, FS01 through FS06, FS13 through FS16, and FS20. An estimated 120 cubic yards of impacted soil remain in place between 1 foot and 2 feet bgs, assuming a maximum depth of 2 feet based on excavation soil samples FS03 and FS06 that were collected from a depth of 2 feet bgs that were compliant with the NMOCD Table 1 closure criteria.

XTO requests to backfill the existing excavation and complete remediation during any future major construction/alteration or final plugging and abandonment, whichever occurs first. LTE and XTO do not believe deferment will result in imminent risk to human health, the environment, or groundwater. XTO requests deferral of final remediation for RP Number 2RP-5336. Upon approval of this deferral request, XTO will backfill the excavation with material purchased locally and recontour the Site to match pre-existing site conditions. An updated NMOCD Form C-141 is included as Attachment 1. A photographic log of the Site is included as Attachment 4.

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

Sincerely,
LT ENVIRONMENTAL, INC.

Ashley L. Ager, P.G.
Senior Geologist

cc: Kyle Littrell, XTO
Robert Hamlet, NMOCD
Victoria Venegas, NMOCD
Ryan Mann, State Land Office

Attachments:

Figure 1	Site Location Map
Figure 2	Preliminary Soil Sample Locations
Figure 3	Excavation Soil Sample Locations
Figure 4	Delineation Soil Sample Locations
Table 1	Soil Analytical Reports
Attachment 1	Initial/Final NMOCD Form C-141 (2RP-5336)
Attachment 2	Laboratory Analytical Reports
Attachment 3	Soil Sample Logs
Attachment 4	Photographic Log

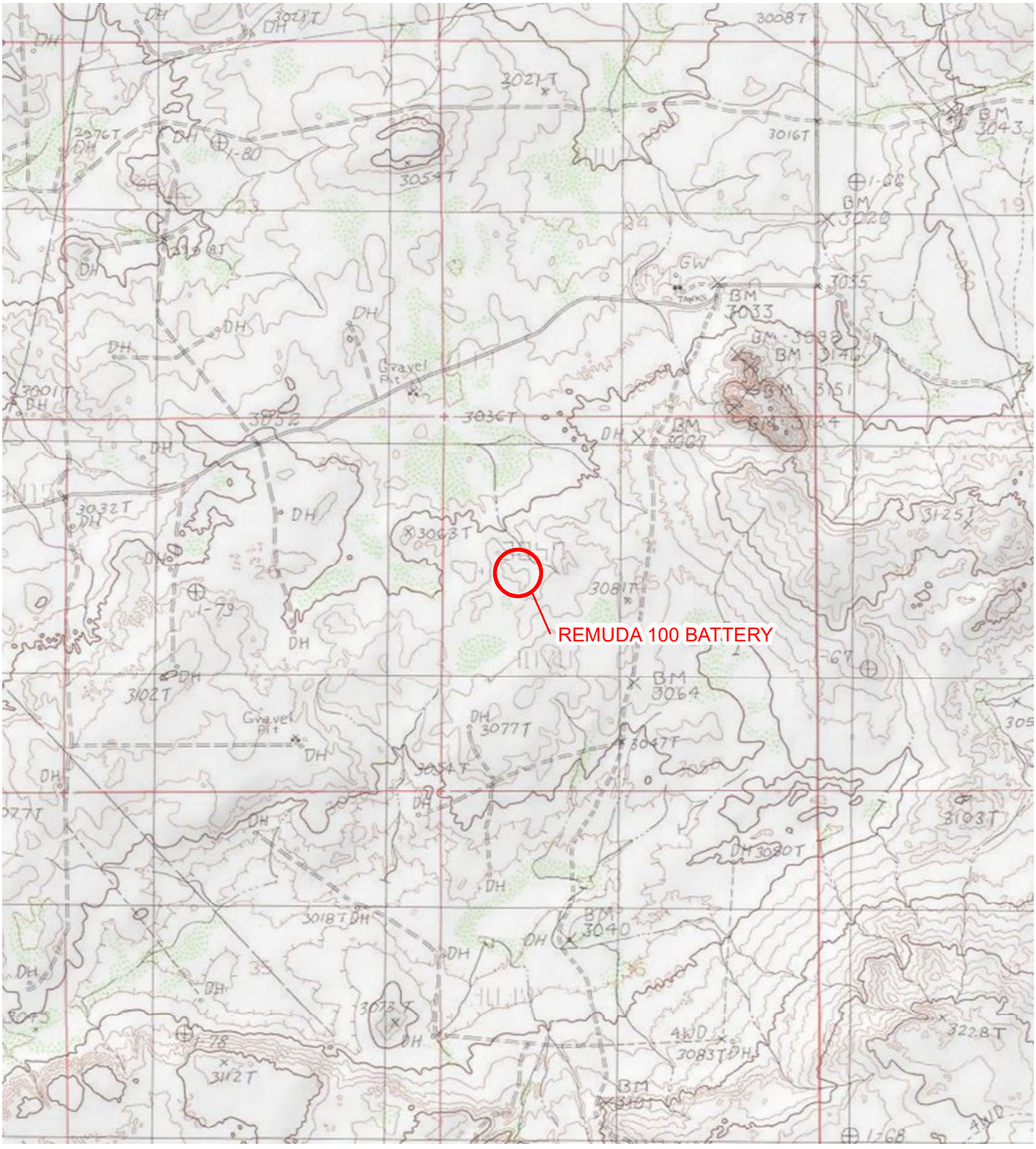


IMAGE COURTESY OF ESRI/USGS

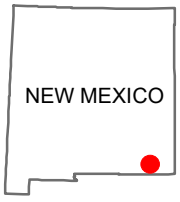
LEGEND

SITE LOCATION

0 2,000 4,000

Feet

N



NOTE: REMEDIATION PERMIT NUMBER 2RP-5336

FIGURE 1
SITE LOCATION MAP
REMUDA 100 BATTERY
UNIT E SEC 25 T23S R29E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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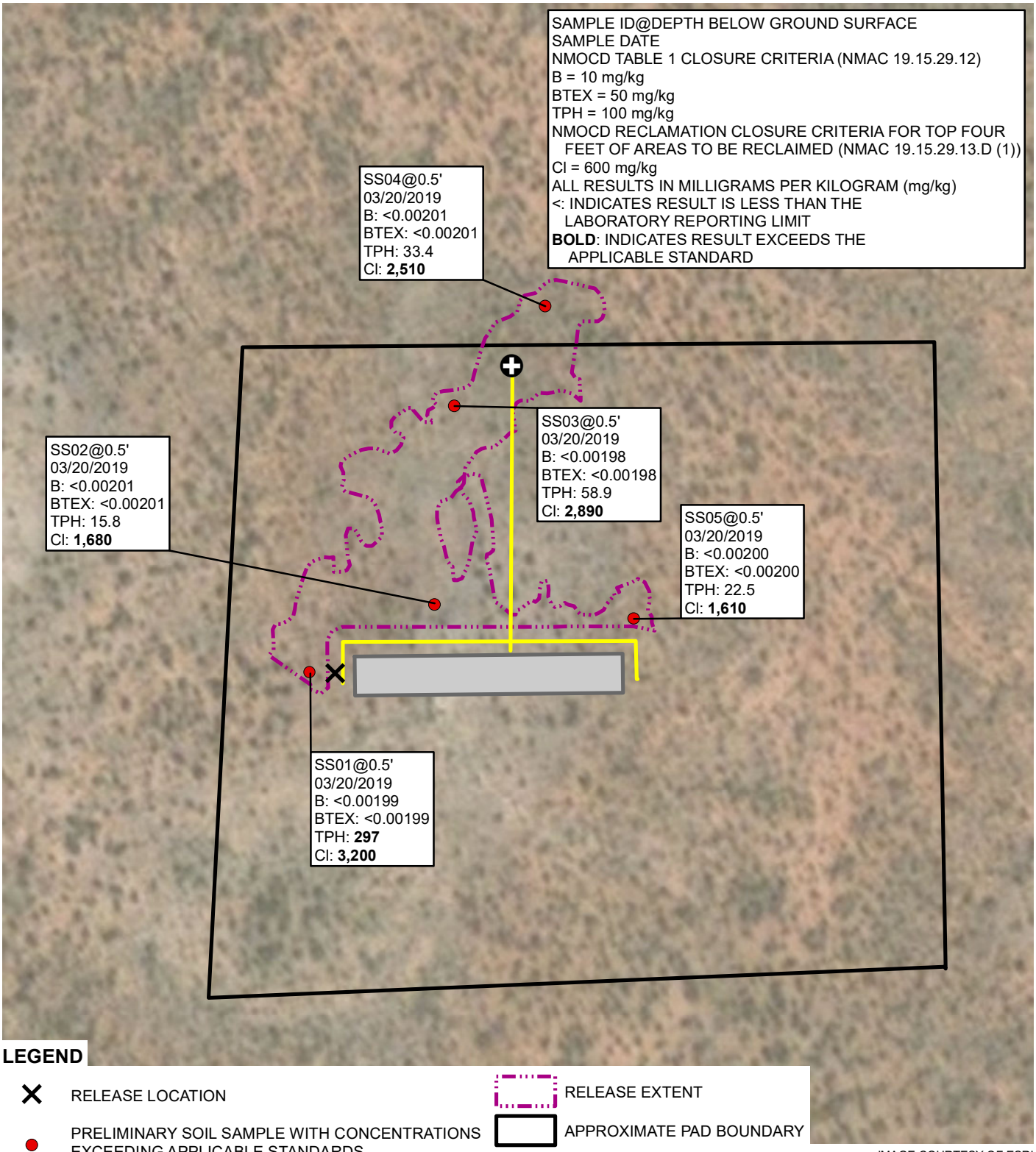

B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
TPH – TOTAL PETROLEUM HYDROCARBONS
Cl - CHLORIDE
NMAC – NEW MEXICO ADMINISTRATIVE CODE
NMOCD – NEW MEXICO OIL CONSERVATION DIVISION
NOTE: REMEDIATION PERMIT NUMBER 2RP-5336

FIGURE 2
PRELIMINARY SOIL SAMPLE LOCATIONS
REMUDA 100 BATTERY
UNIT E SEC 25 T23S R29E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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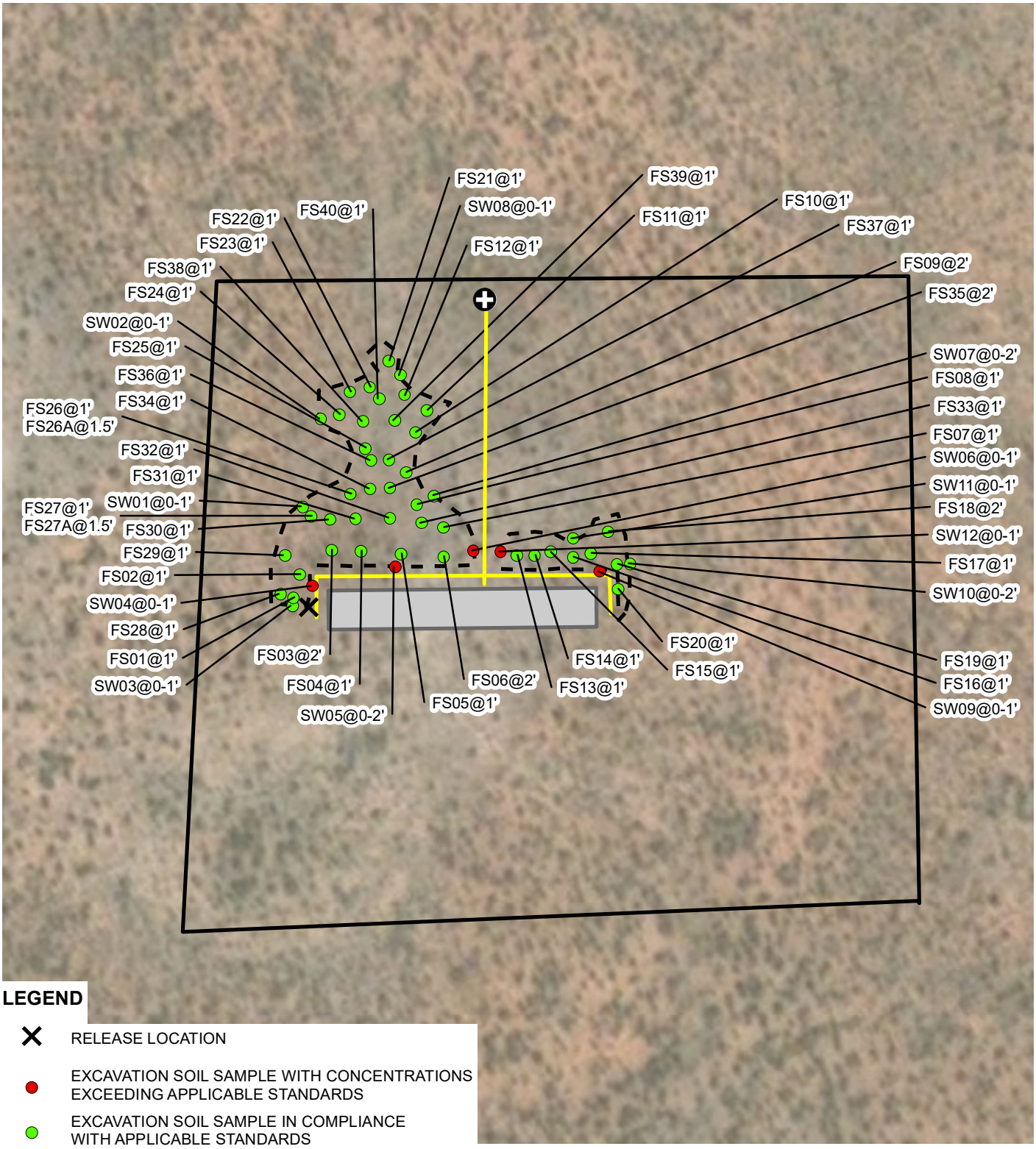

LEGEND

- RELEASE LOCATION
- EXCAVATION SOIL SAMPLE WITH CONCENTRATIONS EXCEEDING APPLICABLE STANDARDS
- EXCAVATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE STANDARDS
- FLARE STACK
- POLY LINE
- EXCAVATION EXTENT
- APPROXIMATE PAD BOUNDARY
- TANK BATTERY CONTAINMENT

SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)
NOTE: REMEDIATION PERMIT NUMBER 2RP-5336

IMAGE COURTESY OF ESRI

0 80 160
Feet

N

FIGURE 3
EXCAVATION SOIL SAMPLE LOCATIONS
REMUDA 100 BATTERY
UNIT E SEC 25 T23S R29E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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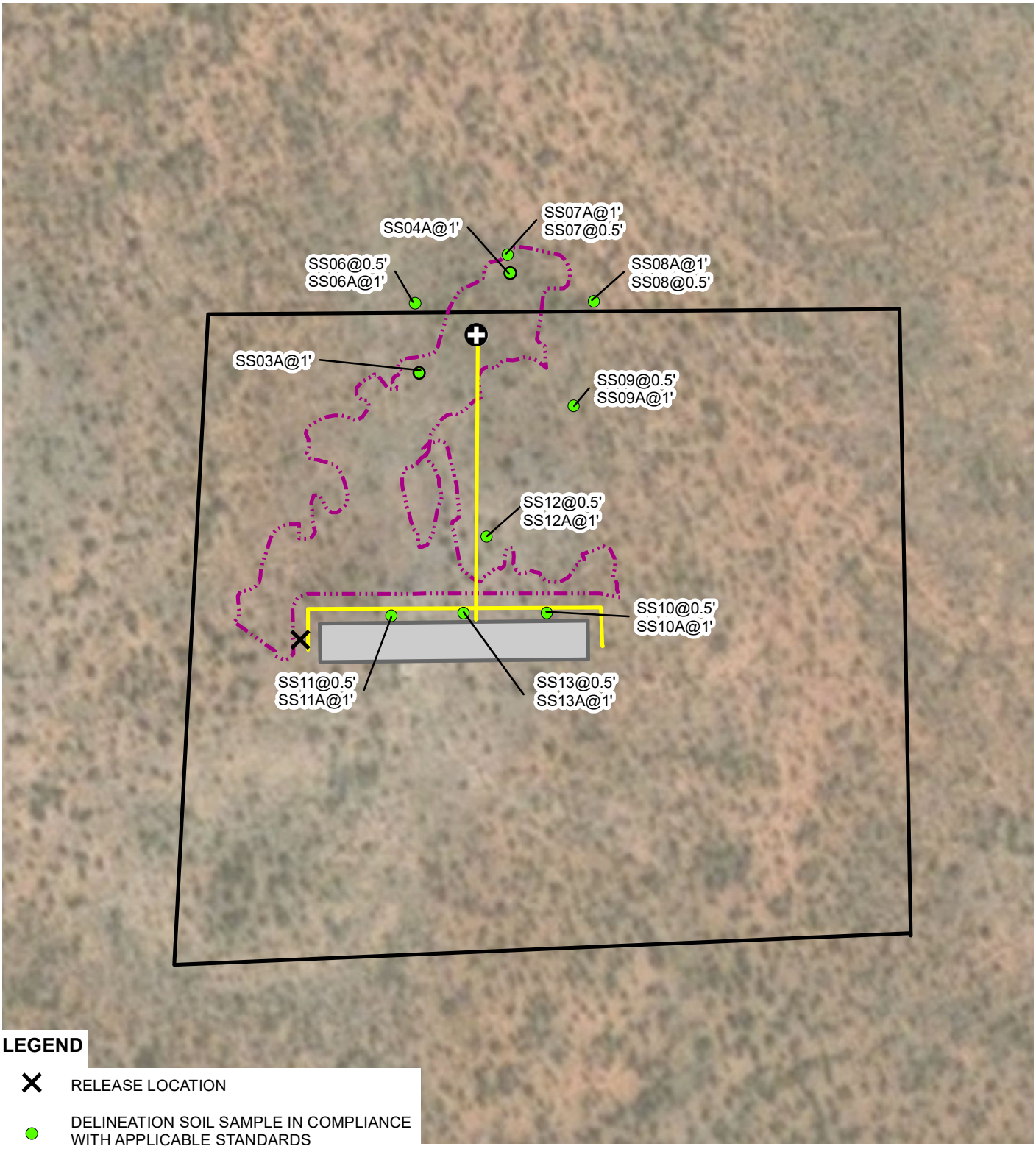

IMAGE COURTESY OF ESRI

LEGEND

- RELEASE LOCATION
- DELINEATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE STANDARDS
- FLARE STACK
- POLY LINE
- RELEASE EXTENT
- APPROXIMATE PAD BOUNDARY
- TANK BATTERY CONTAINMENT

SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)
NOTE: REMEDIATION PERMIT NUMBER 2RP-5336

0 80 160
Feet

N

FIGURE 4
DELINEATION SOIL SAMPLE LOCATIONS
REMUDA 100 BATTERY
UNIT E SEC 25 T23S R29E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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TABLE 1
SOIL ANALYTICAL RESULTS

REMUDA 100 BATTERY
REMEDIATION PERMIT NUMBER 2RP-5336
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
SS01	0.5	03/20/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<14.9	260	37.2	260	**297**	**3,200**
SS02	0.5	03/20/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	15.8	<15.0	15.8	15.8	**1,680**
SS03	0.5	03/20/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<14.9	58.9	<14.9	58.9	58.9	**2,890**
SS04	0.5	03/20/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	33.4	<15.0	33.4	33.4	**2,510**
SS05	0.5	03/20/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	22.5	<15.0	22.5	22.5	**1,610**
SW01	0 - 1	04/17/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	208
SW02	0 - 1	04/17/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	163
SW03	0 - 1	04/17/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	114
SW04	0 - 1	04/17/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	86.6	16.8	86.6	**103**	**2,420**
SW05	0 - 2	04/17/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	**794**
SW06	0 - 1	04/17/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	205	28.4	205	**233**	**951**
SW07	0 - 2	04/17/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<14.9	<14.9	<14.9	<14.9	<14.9	40.5
SW08	0 - 1	04/17/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<14.9	<14.9	<14.9	<14.9	<14.9	398
SW09	0 - 1	04/17/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	**2,660**
SW10	0 - 2	04/17/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	155
SW11	0 - 1	04/17/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	25.4
SW12	0 - 1	04/17/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	37.1	<15.0	37.1	37.1	**1,330**
FS01	1	04/16/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	285
FS02	1	04/16/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<14.9	<14.9	<14.9	<14.9	<14.9	385
FS03	2	04/16/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	176
FS04	1	04/16/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	403
FS05	1	04/16/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	414
FS06	2	04/16/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	27.9
FS07	1	04/16/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	559
FS08	1	04/16/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	376
FS09	2	04/16/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	48.1
FS10	1	04/16/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<14.9	<14.9	<14.9	<14.9	<14.9	505
FS11	1	04/16/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<14.9	<14.9	<14.9	<14.9	<14.9	303
FS12	1	04/16/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	151

TABLE 1
SOIL ANALYTICAL RESULTS

REMUDA 100 BATTERY
REMEDIATION PERMIT NUMBER 2RP-5336
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
FS13	1	04/16/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	182
FS14	1	04/16/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	113
FS15	1	04/16/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	125
FS16	1	04/16/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	63.7
FS17	1	04/16/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	127
FS18	2	04/16/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<14.9	<14.9	<14.9	<14.9	<14.9	34.7
FS19	1	04/16/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	518
FS20	1	04/16/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	506
FS21	1	04/16/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	102
FS22	1	04/16/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	218
FS23	1	04/16/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	342
FS24	1	04/16/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<14.9	<14.9	<14.9	<14.9	<14.9	84.4
FS25	1	04/16/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<14.9	<14.9	<14.9	<14.9	<14.9	188
FS26	1	04/16/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	**610**
FS27	1	04/16/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	**624**
FS28	1	04/17/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	226
FS29	1	04/17/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	178
FS30	1	04/17/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	142
FS31	1	04/17/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<14.9	<14.9	<14.9	<14.9	<14.9	137
FS32	1	04/17/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	62.9
FS33	1	04/17/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	33.0
FS34	1	04/17/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	96.1
FS35	2	04/17/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<14.9	<14.9	<14.9	<14.9	<14.9	47.6
FS36	1	04/17/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	130
FS37	1	04/17/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	140
FS38	1	04/17/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	309
FS39	1	04/17/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	336
FS40	1	04/17/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	446
SS06	0.5	04/22/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	117

TABLE 1
SOIL ANALYTICAL RESULTS

REMUDA 100 BATTERY
REMEDIATION PERMIT NUMBER 2RP-5336
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
SS07	0.5	04/22/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	44.4
SS08	0.5	04/22/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	96.5
SS09	0.5	04/22/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<14.9	<14.9	<14.9	<14.9	<14.9	329
SS10	0.5	04/22/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	39.9
SS11	0.5	04/22/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	67.7
SS03A	1	04/22/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	75.8
SS04A	1	04/22/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	386
SS06A	1	04/22/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<14.9	<14.9	<14.9	<14.9	<14.9	20.5
SS07A	1	04/22/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	16.2
SS08A	1	04/22/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	69.7
SS09A	1	04/22/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	431
SS10A	1	04/22/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	88.0
SS11A	1	04/22/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	81.1
SS12	0.5	05/23/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<14.9	<14.9	<14.9	<14.9	<14.9	314
SS13	0.5	05/23/2019	<0.00201	0.00839	0.00720	0.156	0.171	<15.0	<15.0	<15.0	<15.0	<15.0	135
SS12A	1	05/23/2019	<0.00200	<0.00200	<0.00200	0.0117	0.0117	<15.0	<15.0	<15.0	<15.0	<15.0	203
SS13A	1	05/23/2019	<0.00198	<0.00198	<0.00198	0.014	0.014	<15.0	<15.0	<15.0	<15.0	<15.0	63.4
FS26A	1.5	06/20/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<5.04
FS76A	1.5	06/20/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	136
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	NE	**100**	**600**

Notes:

bgs - below ground surface
BTEX - benzene, toluene, ethylbenzene, and total xylenes
DRO - diesel range organics
GRO - gasoline range organics
mg/kg - milligrams per kilogram
ORO - motor oil range organics
NMAC - New Mexico Administrative Code
NMOCD - New Mexico Oil Conservation Division
NE - not established
Bold - indicates result exceeds the applicable regulatory standard
< - indicates result is below laboratory reporting limits
Table 1 - closure criteria for soils impacted by a release per NMAC 19.15.29 August 2018
TPH - total petroleum hydrocarbons

ATTACHMENT 1: INITIAL/FINAL NMOCD FORM C-141 (2RP-5336)

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

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	NAB1909545089
District RP	2RP-5336
Facility ID	
Application ID	pAB1909544685

Release Notification

Responsible Party

Responsible Party XTO Energy	OGRID 5380
Contact Name Kyle Littrell	Contact Telephone 432-221-7331
Contact email Kyle_Littrell@xtoenergy.com	Incident # *(assigned by OCD)* NAB1909545089
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.276968° Longitude -103.943011°

(NAD 83 in decimal degrees to 5 decimal places)

Site Name Remuda 100 Battery	Site Type Bulk Storage and Separation Facility
Date Release Discovered 3/14/2019	API# *(if applicable)* 30-015-44231 Remuda N 25 St. 902H

Unit Letter	Section	Township	Range	County
E	25	23S	29E	Eddy

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 8	Volume Recovered (bbls) 1
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

A release occurred from the produced water line near the discharge side of the water transfer pumps. The release was due to a failed gasket on an 8" poly to stainless flange. A vacuum truck recovered standing fluid. Additional third party resources have been retained to assist with remediation.

State of New Mexico
Oil Conservation Division

Incident ID	NAB1909545089
District RP	2RP-5336
Facility ID	
Application ID	pAB1909544685

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

Initial Response

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

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

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

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

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 3/28/2019

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

OCD Only

Received by: Date: 4/05/2019

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5336
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	<50 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☒ Yes ☐ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☒ Yes ☐ No

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5336
Facility ID	
Application ID	

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

Printed Name: __Kyle Littrell_____ Title: _____SH&E Supervisor_____

Signature:_____ Date: _7/1/2019_____

email: ____Kyle_Littrell@xtoenergy.com_____ Telephone: __432-221-7331_____

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5336
Facility ID	
Application ID	

Remediation Plan

Remediation Plan Checklist: ***Each of the following items must be included in the plan.***

☐ Detailed description of proposed remediation technique
☐ Scaled sitemap with GPS coordinates showing delineation points
☐ Estimated volume of material to be remediated
☐ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
☐ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: ***Each of the following items must be confirmed as part of any request for deferral of remediation.***

☒ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.

☒ Extents of contamination must be fully delineated.

☒ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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

Printed Name: __Kyle Littrell_____ Title: _____SH&E Supervisor_____

Signature:_____ Date: _7/1/2019_____

email: ____Kyle_Littrell@xtoenergy.com_____ Telephone: __432-221-7331_____

OCD Only

Received by: _____ Date: _____

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature:_____ Date:_____

ATTACHMENT 2: LABORATORY ANALYTICAL REPORTS

Analytical Report 618604

for

LT Environmental, Inc.

Project Manager: Adrian Baker

Remunda 100 Battery

02-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)

02-APR-19

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

Reference: XENCO Report No(s): **618604**
Remunda 100 Battery
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) 618604. 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. 618604 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Kalei Stout
Midland Laboratory Director

Sample Cross Reference 618604

LT Environmental, Inc., Arvada, CO

Remunda 100 Battery

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	03-20-19 16:50	0.5 ft	618604-001
SS02	S	03-20-19 16:55	0.5 ft	618604-002
SS03	S	03-20-19 17:00	0.5 ft	618604-003
SS04	S	03-20-19 17:05	0.5 ft	618604-004
SS05	S	03-20-19 17:10	0.5 ft	618604-005

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3083844 BTEX by EPA 8021B

Lab Sample ID 618604-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 618604-001, -002, -003, -004, -005.

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

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

Surrogate 4-Bromofluorobenzene recovered above QC limits Data confirmed by re-analysis. Samples affected are: 7674535-1-BKS,7674535-1-BSD,618604-001 S,618604-001 SD,618604-001,618604-002,618604-003,618604-005.

Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene Relative Percent Difference (RPD) between matrix spike and duplicate were above quality control limits.

Samples in the analytical batch are: 618604-001, -002, -003, -004, -005

Certificate of Analysis Summary 618604

LT Environmental, Inc., Arvada, CO

Project Name: Remunda 100 Battery

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

Date Received in Lab: Fri Mar-22-19 11:55 am
Report Date: 02-APR-19
Project Manager: Kalei Stout

Analysis Requested											
	Lab Id:	618604-001		618604-002		618604-003		618604-004		618604-005	
	Field Id:	SS01		SS02		SS03		SS04		SS05	
	Depth:	0.5- ft		0.5- ft		0.5- ft		0.5- ft		0.5- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Mar-20-19 16:50		Mar-20-19 16:55		Mar-20-19 17:00		Mar-20-19 17:05		Mar-20-19 17:10	
BTEX by EPA 8021B	***Extracted:***	Mar-28-19 09:00		Mar-28-19 09:00		Mar-28-19 09:00		Mar-28-19 09:00		Mar-28-19 09:00	
	Analyzed:	Mar-28-19 22:45		Mar-28-19 12:01		Mar-28-19 12:20		Mar-28-19 12:40		Mar-28-19 12:59	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00199	0.00199	<0.00201	0.00201	<0.00198	0.00198	<0.00201	0.00201	<0.00200	0.00200
Toluene		<0.00199	0.00199	<0.00201	0.00201	<0.00198	0.00198	<0.00201	0.00201	<0.00200	0.00200
Ethylbenzene		<0.00199	0.00199	<0.00201	0.00201	<0.00198	0.00198	<0.00201	0.00201	<0.00200	0.00200
m,p-Xylenes		<0.00398	0.00398	<0.00402	0.00402	<0.00397	0.00397	<0.00402	0.00402	<0.00400	0.00400
o-Xylene		<0.00199	0.00199	<0.00201	0.00201	<0.00198	0.00198	<0.00201	0.00201	<0.00200	0.00200
Total Xylenes		<0.00199	0.00199	<0.00201	0.00201	<0.00198	0.00198	<0.00201	0.00201	<0.00200	0.00200
Total BTEX		<0.00199	0.00199	<0.00201	0.00201	<0.00198	0.00198	<0.00201	0.00201	<0.00200	0.00200
Inorganic Anions by EPA 300	***Extracted:***	Mar-23-19 18:30		Mar-23-19 18:30		Mar-23-19 18:30		Mar-23-19 18:30		Mar-23-19 18:30	
	Analyzed:	Mar-24-19 01:54		Mar-24-19 01:59		Mar-24-19 02:28		Mar-24-19 02:05		Mar-24-19 02:33	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		3200	24.8	1680	24.8	2890	25.1	2510	24.9	1610	24.8
TPH by SW8015 Mod	***Extracted:***	Mar-25-19 10:00		Mar-25-19 10:00		Mar-25-19 10:00		Mar-25-19 10:00		Mar-25-19 10:00	
	Analyzed:	Mar-25-19 18:52		Mar-25-19 19:11		Mar-25-19 19:30		Mar-25-19 19:49		Mar-25-19 20:09	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<14.9	14.9	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		260	14.9	15.8	15.0	58.9	14.9	33.4	15.0	22.5	15.0
Motor Oil Range Hydrocarbons (MRO)		37.2	14.9	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0
Total TPH		297	14.9	15.8	15.0	58.9	14.9	33.4	15.0	22.5	15.0

Kalei Stout
Midland Laboratory Director

Certificate of Analytical Results 618604

LT Environmental, Inc., Arvada, CO

Remunda 100 Battery

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	03.22.19 11.55
Lab Sample Id:	618604-001	Date Collected:	03.20.19 16.50	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.23.19 18.30	Basis:	Wet Weight
Seq Number:	3083132				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**3200**	24.8	mg/kg	03.24.19 01.54		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.25.19 10.00	Basis:	Wet Weight
Seq Number:	3083359				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	03.25.19 18.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	**260**	14.9	mg/kg	03.25.19 18.52		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**37.2**	14.9	mg/kg	03.25.19 18.52		1
Total TPH	PHC635	**297**	14.9	mg/kg	03.25.19 18.52		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	03.25.19 18.52	
o-Terphenyl	84-15-1	105	%	70-135	03.25.19 18.52	

Certificate of Analytical Results 618604

LT Environmental, Inc., Arvada, CO

Remunda 100 Battery

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	03.22.19 11.55
Lab Sample Id:	618604-001	Date Collected:	03.20.19 16.50	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.28.19 09.00	Basis:	Wet Weight
Seq Number:	3083844				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.28.19 22.45	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.28.19 22.45	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.28.19 22.45	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.28.19 22.45	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.28.19 22.45	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.28.19 22.45	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.28.19 22.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	133	%	70-130	03.28.19 22.45	**
1,4-Difluorobenzene	540-36-3	97	%	70-130	03.28.19 22.45	

Certificate of Analytical Results 618604

LT Environmental, Inc., Arvada, CO

Remunda 100 Battery

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	03.22.19 11.55
Lab Sample Id:	618604-002	Date Collected:	03.20.19 16.55	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.23.19 18.30	Basis:	Wet Weight
Seq Number:	3083132				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1680**	24.8	mg/kg	03.24.19 01.59		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.25.19 10.00	Basis:	Wet Weight
Seq Number:	3083359				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.25.19 19.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	**15.8**	15.0	mg/kg	03.25.19 19.11		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.25.19 19.11	U	1
Total TPH	PHC635	**15.8**	15.0	mg/kg	03.25.19 19.11		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	03.25.19 19.11	
o-Terphenyl	84-15-1	97	%	70-135	03.25.19 19.11	

Certificate of Analytical Results 618604

LT Environmental, Inc., Arvada, CO

Remunda 100 Battery

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	03.22.19 11.55
Lab Sample Id:	618604-002	Date Collected:	03.20.19 16.55	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.28.19 09.00	Basis:	Wet Weight
Seq Number:	3083844				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.28.19 12.01	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.28.19 12.01	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.28.19 12.01	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.28.19 12.01	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.28.19 12.01	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	03.28.19 12.01	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.28.19 12.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	03.28.19 12.01	
4-Bromofluorobenzene	460-00-4	142	%	70-130	03.28.19 12.01	**

LT Environmental, Inc., Arvada, CO

Remunda 100 Battery

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	03.22.19 11.55
Lab Sample Id:	618604-003	Date Collected:	03.20.19 17.00	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.23.19 18.30	Basis:	Wet Weight
Seq Number:	3083132				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2890**	25.1	mg/kg	03.24.19 02.28		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.25.19 10.00	Basis:	Wet Weight
Seq Number:	3083359				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	03.25.19 19.30	U	1
Diesel Range Organics (DRO)	C10C28DRO	**58.9**	14.9	mg/kg	03.25.19 19.30		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	03.25.19 19.30	U	1
Total TPH	PHC635	**58.9**	14.9	mg/kg	03.25.19 19.30		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	03.25.19 19.30	
o-Terphenyl	84-15-1	98	%	70-135	03.25.19 19.30	

Certificate of Analytical Results 618604

LT Environmental, Inc., Arvada, CO

Remunda 100 Battery

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	03.22.19 11.55
Lab Sample Id:	618604-003	Date Collected:	03.20.19 17.00	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.28.19 09.00	Basis:	Wet Weight
Seq Number:	3083844				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	03.28.19 12.20	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	03.28.19 12.20	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	03.28.19 12.20	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	03.28.19 12.20	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	03.28.19 12.20	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	03.28.19 12.20	U	1
Total BTEX		<0.00198	0.00198	mg/kg	03.28.19 12.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	03.28.19 12.20	
4-Bromofluorobenzene	460-00-4	145	%	70-130	03.28.19 12.20	**

Certificate of Analytical Results 618604

LT Environmental, Inc., Arvada, CO

Remunda 100 Battery

Sample Id:	**SS04**	Matrix:	Soil	Date Received:	03.22.19 11.55
Lab Sample Id:	618604-004	Date Collected:	03.20.19 17.05	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.23.19 18.30	Basis:	Wet Weight
Seq Number:	3083132				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2510**	24.9	mg/kg	03.24.19 02.05		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.25.19 10.00	Basis:	Wet Weight
Seq Number:	3083359				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.25.19 19.49	U	1
Diesel Range Organics (DRO)	C10C28DRO	**33.4**	15.0	mg/kg	03.25.19 19.49		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.25.19 19.49	U	1
Total TPH	PHC635	**33.4**	15.0	mg/kg	03.25.19 19.49		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	03.25.19 19.49	
o-Terphenyl	84-15-1	90	%	70-135	03.25.19 19.49	

Certificate of Analytical Results 618604

LT Environmental, Inc., Arvada, CO

Remunda 100 Battery

Sample Id:	**SS04**	Matrix:	Soil	Date Received:	03.22.19 11.55
Lab Sample Id:	618604-004	Date Collected:	03.20.19 17.05	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.28.19 09.00	Basis:	Wet Weight
Seq Number:	3083844				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.28.19 12.40	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.28.19 12.40	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.28.19 12.40	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.28.19 12.40	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.28.19 12.40	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	03.28.19 12.40	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.28.19 12.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	128	%	70-130	03.28.19 12.40	
1,4-Difluorobenzene	540-36-3	89	%	70-130	03.28.19 12.40	

Certificate of Analytical Results 618604

LT Environmental, Inc., Arvada, CO

Remunda 100 Battery

Sample Id:	**SS05**	Matrix:	Soil	Date Received:	03.22.19 11.55
Lab Sample Id:	618604-005	Date Collected:	03.20.19 17.10	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.23.19 18.30	Basis:	Wet Weight
Seq Number:	3083132				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1610**	24.8	mg/kg	03.24.19 02.33		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.25.19 10.00	Basis:	Wet Weight
Seq Number:	3083359				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.25.19 20.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	**22.5**	15.0	mg/kg	03.25.19 20.09		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.25.19 20.09	U	1
Total TPH	PHC635	**22.5**	15.0	mg/kg	03.25.19 20.09		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	03.25.19 20.09	
o-Terphenyl	84-15-1	95	%	70-135	03.25.19 20.09	

Certificate of Analytical Results 618604

LT Environmental, Inc., Arvada, CO

Remunda 100 Battery

Sample Id:	**SS05**	Matrix:	Soil	Date Received:	03.22.19 11.55
Lab Sample Id:	618604-005	Date Collected:	03.20.19 17.10	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.28.19 09.00	Basis:	Wet Weight
Seq Number:	3083844				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.28.19 12.59	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.28.19 12.59	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.28.19 12.59	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	03.28.19 12.59	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.28.19 12.59	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.28.19 12.59	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.28.19 12.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	145	%	70-130	03.28.19 12.59	**
1,4-Difluorobenzene	540-36-3	101	%	70-130	03.28.19 12.59	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 618604

LT Environmental, Inc.

Remunda 100 Battery

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3083132 Matrix: Solid Date Prep: 03.23.19
MB Sample Id: 7674205-1-BLK LCS Sample Id: 7674205-1-BKS LCSD Sample Id: 7674205-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	253	101	250	100	90-110	1	20	mg/kg	03.24.19 00:40	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3083132 Matrix: Soil Date Prep: 03.23.19
Parent Sample Id: 618581-004 MS Sample Id: 618581-004 S MSD Sample Id: 618581-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	43.2	248	287	98	292	100	90-110	2	20	mg/kg	03.24.19 00:57	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3083132 Matrix: Soil Date Prep: 03.23.19
Parent Sample Id: 618605-001 MS Sample Id: 618605-001 S MSD Sample Id: 618605-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	141	251	388	98	398	102	90-110	3	20	mg/kg	03.24.19 02:16	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3083359 Matrix: Solid Date Prep: 03.25.19
MB Sample Id: 7674329-1-BLK LCS Sample Id: 7674329-1-BKS LCSD Sample Id: 7674329-1-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	1050	105	1050	105	70-135	0	20	mg/kg	03.25.19 11:38	
Diesel Range Organics (DRO)	<8.13	1000	1020	102	1080	108	70-135	6	20	mg/kg	03.25.19 11:38	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	105		129		128		70-135	%	03.25.19 11:38
o-Terphenyl	107		113		120		70-135	%	03.25.19 11:38

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

QC Summary 618604

LT Environmental, Inc.

Remunda 100 Battery

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3083359 Matrix: Soil Date Prep: 03.25.19
Parent Sample Id: 618604-005 MS Sample Id: 618604-005 S MSD Sample Id: 618604-005 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	998	1040	104	1050	105	70-135	1	20	mg/kg	03.25.19 20:28	
Diesel Range Organics (DRO)	22.5	998	1030	101	1040	102	70-135	1	20	mg/kg	03.25.19 20:28	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	119		119		70-135	%	03.25.19 20:28
o-Terphenyl	103		101		70-135	%	03.25.19 20:28

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3083844 Matrix: Solid Date Prep: 03.28.19
MB Sample Id: 7674535-1-BLK LCS Sample Id: 7674535-1-BKS LCSD Sample Id: 7674535-1-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	0.110	110	0.116	115	70-130	5	35	mg/kg	03.28.19 08:53	
Toluene	<0.000457	0.100	0.109	109	0.114	113	70-130	4	35	mg/kg	03.28.19 08:53	
Ethylbenzene	<0.000566	0.100	0.117	117	0.123	122	70-130	5	35	mg/kg	03.28.19 08:53	
m,p-Xylenes	<0.00102	0.200	0.227	114	0.239	118	70-130	5	35	mg/kg	03.28.19 08:53	
o-Xylene	<0.000345	0.100	0.116	116	0.123	122	70-130	6	35	mg/kg	03.28.19 08:53	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	94		102		103		70-130	%	03.28.19 08:53
4-Bromofluorobenzene	119		136	**	136	**	70-130	%	03.28.19 08:53

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3083844 Matrix: Soil Date Prep: 03.28.19
Parent Sample Id: 618604-001 MS Sample Id: 618604-001 S MSD Sample Id: 618604-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000385	0.100	0.105	105	0.0768	77	70-130	31	35	mg/kg	03.28.19 09:31	
Toluene	<0.000456	0.100	0.103	103	0.0686	69	70-130	40	35	mg/kg	03.28.19 09:31	XF
Ethylbenzene	<0.000565	0.100	0.108	108	0.0617	62	70-130	55	35	mg/kg	03.28.19 09:31	XF
m,p-Xylenes	0.00250	0.200	0.207	102	0.117	57	70-130	56	35	mg/kg	03.28.19 09:31	XF
o-Xylene	0.00131	0.100	0.105	104	0.0592	58	70-130	56	35	mg/kg	03.28.19 09:31	XF

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		102		70-130	%	03.28.19 09:31
4-Bromofluorobenzene	142	**	141	**	70-130	%	03.28.19 09:31

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

Chain of Custody

Work Order No: 619804

XENCO LABORATORIES

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

www.xenco.com Page 1 of 1

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

Work Order Comments

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

Project Name:	Remuda 100 Battery	Turn Around	
Project Number:		Routine	X
P.O. Number:		Rush:	STD
Sampler's Name:	Anna Byers	Due Date:	

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

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
SS01	S	3/20/19	1650	0.5'	1	X	X	X
SS02	S		1655		1	X	X	X
SS03	S		1700		1	X	X	X
SS04	S		1705		1	X	X	X
SS05	S		1710		1	X	X	X

Orb 03/20/19

Work Order Notes

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

Sample Comments

(32.27705, -103.943254)
(32.277117, -103.943069)
(32.277472, -103.943051)
(32.277627, -103.942884)
(32.27714, -103.942724)
SPILL DATE 3/14/19

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Anna Byers		3/20/19 1800	2		
3		RCV	3/20/19 1155	4		
5				6		03/21/19 10:15

Revised Date 051418 Rev. 2018.1

Final 1.000

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XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 03/22/2019 11:55:00 AM

Work Order #: 618604

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: 03/22/2019
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 03/22/2019
Jessica Kramer

Analytical Report 621562

for

LT Environmental, Inc.

Project Manager: Adrian Baker

Remuda 100 Br17

2RP-5336

25-APR-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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

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

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

25-APR-19

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

Reference: XENCO Report No(s): **621562**
Remuda 100 Br17
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) 621562. 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. 621562 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Kalei Stout
Carlsbad Laboratory Director

Sample Cross Reference 621562

LT Environmental, Inc., Arvada, CO

Remuda 100 Br17

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW04	S	04-17-19 10:45	0 - 1 ft	621562-001
SW05	S	04-17-19 10:50	0 - 2 ft	621562-002
SW06	S	04-17-19 11:00	0 - 1 ft	621562-003
SW08	S	04-17-19 11:30	0 - 1 ft	621562-004
SW09	S	04-17-19 11:45	0 - 1 ft	621562-005
SW12	S	04-17-19 12:10	0 - 1 ft	621562-006

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3086504 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Lab Sample ID 621562-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Benzene recovered below QC limits in the Matrix Spike. Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 621562-001, -002, -003, -004, -005, -006.
The Laboratory Control Sample for Toluene, Benzene, m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.

Certificate of Analysis Summary 621562

LT Environmental, Inc., Arvada, CO

Project Name: Remuda 100 Br17

Project Id: 2RP-5336
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Thu Apr-18-19 09:38 am
Report Date: 25-APR-19
Project Manager: Kalei Stout

Analysis Requested													
	Lab Id:	621562-001		621562-002		621562-003		621562-004		621562-005		621562-006	
	Field Id:	SW04		SW05		SW06		SW08		SW09		SW12	
	Depth:	0-1 ft		0-2 ft		0-1 ft		0-1 ft		0-1 ft		0-1 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Apr-17-19 10:45		Apr-17-19 10:50		Apr-17-19 11:00		Apr-17-19 11:30		Apr-17-19 11:45		Apr-17-19 12:10	
BTEX by EPA 8021B SUB: T104704400-18-16	***Extracted:***	Apr-19-19 14:00		Apr-19-19 14:00		Apr-19-19 14:00		Apr-19-19 14:00		Apr-19-19 14:00		Apr-19-19 14:00	
	Analyzed:	Apr-20-19 23:14		Apr-20-19 23:33		Apr-20-19 23:52		Apr-20-19 12:11		Apr-20-19 12:30		Apr-20-19 12:49	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00202	0.00202	<0.00202	0.00202	<0.00199	0.00199	<0.00198	0.00198	<0.00201	0.00201	<0.00200	0.00200
Toluene		<0.00202	0.00202	<0.00202	0.00202	<0.00199	0.00199	<0.00198	0.00198	<0.00201	0.00201	<0.00200	0.00200
Ethylbenzene		<0.00202	0.00202	<0.00202	0.00202	<0.00199	0.00199	<0.00198	0.00198	<0.00201	0.00201	<0.00200	0.00200
m,p-Xylenes		<0.00403	0.00403	<0.00404	0.00404	<0.00398	0.00398	<0.00397	0.00397	<0.00402	0.00402	<0.00399	0.00399
o-Xylene		<0.00202	0.00202	<0.00202	0.00202	<0.00199	0.00199	<0.00198	0.00198	<0.00201	0.00201	<0.00200	0.00200
Total Xylenes		<0.00202	0.00202	<0.00202	0.00202	<0.00199	0.00199	<0.00198	0.00198	<0.00201	0.00201	<0.00200	0.00200
Total BTEX		<0.00202	0.00202	<0.00202	0.00202	<0.00199	0.00199	<0.00198	0.00198	<0.00201	0.00201	<0.00200	0.00200
Chloride by EPA 300 SUB: T104704400-18-16	***Extracted:***	Apr-23-19 16:40		Apr-23-19 16:40		Apr-23-19 16:40		Apr-23-19 16:40		Apr-23-19 16:40		Apr-23-19 16:40	
	Analyzed:	Apr-23-19 18:28		Apr-23-19 18:32		Apr-23-19 18:52		Apr-23-19 18:57		Apr-23-19 19:11		Apr-23-19 19:16	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		2420	24.8	794	25.0	951	49.5	398	49.8	2660	50.4	1330	25.0
TPH by SW8015 Mod SUB: T104704400-18-16	***Extracted:***	Apr-20-19 11:00		Apr-20-19 11:00		Apr-20-19 11:00		Apr-20-19 11:00		Apr-20-19 11:00		Apr-20-19 11:00	
	Analyzed:	Apr-21-19 03:57		Apr-21-19 04:16		Apr-21-19 04:35		Apr-21-19 04:55		Apr-21-19 05:14		Apr-21-19 05:34	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		86.6	15.0	<15.0	15.0	205	15.0	<14.9	14.9	<15.0	15.0	37.1	15.0
Motor Oil Range Hydrocarbons (MRO)		16.8	15.0	<15.0	15.0	28.4	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0
Total TPH		103	15.0	<15.0	15.0	233	15.0	<14.9	14.9	<15.0	15.0	37.1	15.0
Total GRO-DRO		86.6	15.0	<15.0	15.0	205	15.0	<14.9	14.9	<15.0	15.0	37.1	15.0

Kalei Stout
Carlsbad Laboratory Director

Certificate of Analytical Results 621562

LT Environmental, Inc., Arvada, CO

Remuda 100 Br17

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	04.18.19 09.38
Lab Sample Id:	621562-001	Date Collected:	04.17.19 10.45	Sample Depth:	0 - 1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.23.19 16.40	Basis:	Wet Weight
Seq Number:	3086702			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2420**	24.8	mg/kg	04.23.19 18.28		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.20.19 11.00	Basis:	Wet Weight
Seq Number:	3086489			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.21.19 03.57	U	1
Diesel Range Organics (DRO)	C10C28DRO	**86.6**	15.0	mg/kg	04.21.19 03.57		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**16.8**	15.0	mg/kg	04.21.19 03.57		1
Total TPH	PHC635	**103**	15.0	mg/kg	04.21.19 03.57		1
Total GRO-DRO	PHC628	**86.6**	15.0	mg/kg	04.21.19 03.57		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	04.21.19 03.57	
o-Terphenyl	84-15-1	100	%	70-135	04.21.19 03.57	

Certificate of Analytical Results 621562

LT Environmental, Inc., Arvada, CO

Remuda 100 Br17

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	04.18.19 09.38
Lab Sample Id:	621562-001	Date Collected:	04.17.19 10.45	Sample Depth:	0 - 1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.19.19 14.00	Basis:	Wet Weight
Seq Number:	3086504			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	04.20.19 23.14	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	04.20.19 23.14	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	04.20.19 23.14	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	04.20.19 23.14	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	04.20.19 23.14	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	04.20.19 23.14	U	1
Total BTEX		<0.00202	0.00202	mg/kg	04.20.19 23.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	94	%	70-130	04.20.19 23.14	
1,4-Difluorobenzene	540-36-3	98	%	70-130	04.20.19 23.14	

Final 1.000

Certificate of Analytical Results 621562

LT Environmental, Inc., Arvada, CO

Remuda 100 Br17

Sample Id:	**SW05**	Matrix:	Soil	Date Received:	04.18.19 09.38
Lab Sample Id:	621562-002	Date Collected:	04.17.19 10.50	Sample Depth:	0 - 2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.23.19 16.40	Basis:	Wet Weight
Seq Number:	3086702			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**794**	25.0	mg/kg	04.23.19 18.32		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.20.19 11.00	Basis:	Wet Weight
Seq Number:	3086489			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.21.19 04.16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.21.19 04.16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.21.19 04.16	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.21.19 04.16	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.21.19 04.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	04.21.19 04.16	
o-Terphenyl	84-15-1	96	%	70-135	04.21.19 04.16	

Certificate of Analytical Results 621562

LT Environmental, Inc., Arvada, CO

Remuda 100 Br17

Sample Id:	**SW05**	Matrix:	Soil	Date Received:	04.18.19 09.38
Lab Sample Id:	621562-002	Date Collected:	04.17.19 10.50	Sample Depth:	0 - 2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.19.19 14.00	Basis:	Wet Weight
Seq Number:	3086504			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	04.20.19 23.33	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	04.20.19 23.33	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	04.20.19 23.33	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	04.20.19 23.33	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	04.20.19 23.33	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	04.20.19 23.33	U	1
Total BTEX		<0.00202	0.00202	mg/kg	04.20.19 23.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	77	%	70-130	04.20.19 23.33	
1,4-Difluorobenzene	540-36-3	84	%	70-130	04.20.19 23.33	

Certificate of Analytical Results 621562

LT Environmental, Inc., Arvada, CO

Remuda 100 Br17

Sample Id:	**SW06**	Matrix:	Soil	Date Received:	04.18.19 09.38
Lab Sample Id:	621562-003	Date Collected:	04.17.19 11.00	Sample Depth:	0 - 1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.23.19 16.40	Basis:	Wet Weight
Seq Number:	3086702			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**951**	49.5	mg/kg	04.23.19 18.52		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.20.19 11.00	Basis:	Wet Weight
Seq Number:	3086489			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.21.19 04.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	**205**	15.0	mg/kg	04.21.19 04.35		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**28.4**	15.0	mg/kg	04.21.19 04.35		1
Total TPH	PHC635	**233**	15.0	mg/kg	04.21.19 04.35		1
Total GRO-DRO	PHC628	**205**	15.0	mg/kg	04.21.19 04.35		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	04.21.19 04.35	
o-Terphenyl	84-15-1	105	%	70-135	04.21.19 04.35	

Certificate of Analytical Results 621562

LT Environmental, Inc., Arvada, CO

Remuda 100 Br17

Sample Id:	**SW06**	Matrix:	Soil	Date Received:	04.18.19 09.38
Lab Sample Id:	621562-003	Date Collected:	04.17.19 11.00	Sample Depth:	0 - 1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.19.19 14.00	Basis:	Wet Weight
Seq Number:	3086504			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.20.19 23.52	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.20.19 23.52	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.20.19 23.52	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.20.19 23.52	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.20.19 23.52	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.20.19 23.52	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.20.19 23.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	70-130	04.20.19 23.52	
4-Bromofluorobenzene	460-00-4	98	%	70-130	04.20.19 23.52	

Certificate of Analytical Results 621562

LT Environmental, Inc., Arvada, CO

Remuda 100 Br17

Sample Id:	**SW08**	Matrix:	Soil	Date Received:	04.18.19 09.38
Lab Sample Id:	621562-004	Date Collected:	04.17.19 11.30	Sample Depth:	0 - 1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.23.19 16.40	Basis:	Wet Weight
Seq Number:	3086702			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**398**	49.8	mg/kg	04.23.19 18.57		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.20.19 11.00	Basis:	Wet Weight
Seq Number:	3086489			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	04.21.19 04.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	04.21.19 04.55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	04.21.19 04.55	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	04.21.19 04.55	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	04.21.19 04.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	04.21.19 04.55	
o-Terphenyl	84-15-1	97	%	70-135	04.21.19 04.55	

Certificate of Analytical Results 621562

LT Environmental, Inc., Arvada, CO

Remuda 100 Br17

Sample Id:	**SW08**	Matrix:	Soil	Date Received:	04.18.19 09.38
Lab Sample Id:	621562-004	Date Collected:	04.17.19 11.30	Sample Depth:	0 - 1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.19.19 14.00	Basis:	Wet Weight
Seq Number:	3086504			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	04.20.19 12.11	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	04.20.19 12.11	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	04.20.19 12.11	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	04.20.19 12.11	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	04.20.19 12.11	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	04.20.19 12.11	U	1
Total BTEX		<0.00198	0.00198	mg/kg	04.20.19 12.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	96	%	70-130	04.20.19 12.11	
1,4-Difluorobenzene	540-36-3	95	%	70-130	04.20.19 12.11	

Certificate of Analytical Results 621562

LT Environmental, Inc., Arvada, CO

Remuda 100 Br17

Sample Id:	**SW09**	Matrix:	Soil	Date Received:	04.18.19 09.38
Lab Sample Id:	621562-005	Date Collected:	04.17.19 11.45	Sample Depth:	0 - 1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.23.19 16.40	Basis:	Wet Weight
Seq Number:	3086702			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2660**	50.4	mg/kg	04.23.19 19.11		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.20.19 11.00	Basis:	Wet Weight
Seq Number:	3086489			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.21.19 05.14	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.21.19 05.14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.21.19 05.14	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.21.19 05.14	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.21.19 05.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	04.21.19 05.14	
o-Terphenyl	84-15-1	93	%	70-135	04.21.19 05.14	

Certificate of Analytical Results 621562

LT Environmental, Inc., Arvada, CO

Remuda 100 Br17

Sample Id:	**SW09**	Matrix:	Soil	Date Received:	04.18.19 09.38
Lab Sample Id:	621562-005	Date Collected:	04.17.19 11.45	Sample Depth:	0 - 1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.19.19 14.00	Basis:	Wet Weight
Seq Number:	3086504			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.20.19 12.30	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.20.19 12.30	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.20.19 12.30	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.20.19 12.30	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.20.19 12.30	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.20.19 12.30	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.20.19 12.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	81	%	70-130	04.20.19 12.30	
1,4-Difluorobenzene	540-36-3	87	%	70-130	04.20.19 12.30	

Certificate of Analytical Results 621562

LT Environmental, Inc., Arvada, CO

Remuda 100 Br17

Sample Id:	**SW12**	Matrix:	Soil	Date Received:	04.18.19 09.38
Lab Sample Id:	621562-006	Date Collected:	04.17.19 12.10	Sample Depth:	0 - 1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.23.19 16.40	Basis:	Wet Weight
Seq Number:	3086702			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1330**	25.0	mg/kg	04.23.19 19.16		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.20.19 11.00	Basis:	Wet Weight
Seq Number:	3086489			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.21.19 05.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	**37.1**	15.0	mg/kg	04.21.19 05.34		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.21.19 05.34	U	1
Total TPH	PHC635	**37.1**	15.0	mg/kg	04.21.19 05.34		1
Total GRO-DRO	PHC628	**37.1**	15.0	mg/kg	04.21.19 05.34		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	04.21.19 05.34	
o-Terphenyl	84-15-1	100	%	70-135	04.21.19 05.34	

Certificate of Analytical Results 621562

LT Environmental, Inc., Arvada, CO

Remuda 100 Br17

Sample Id:	**SW12**	Matrix:	Soil	Date Received:	04.18.19 09.38
Lab Sample Id:	621562-006	Date Collected:	04.17.19 12.10	Sample Depth:	0 - 1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.19.19 14.00	Basis:	Wet Weight
Seq Number:	3086504			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.20.19 12.49	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.20.19 12.49	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.20.19 12.49	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	04.20.19 12.49	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.20.19 12.49	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.20.19 12.49	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.20.19 12.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	93	%	70-130	04.20.19 12.49	
4-Bromofluorobenzene	460-00-4	77	%	70-130	04.20.19 12.49	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 621562

LT Environmental, Inc.

Remuda 100 Br17

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3086702 Matrix: Solid Date Prep: 04.23.19
MB Sample Id: 7676391-1-BLK LCS Sample Id: 7676391-1-BKS LCSD Sample Id: 7676391-1-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	231	92	90-110	2	20	mg/kg	04.23.19 17:20	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3086702 Matrix: Soil Date Prep: 04.23.19
Parent Sample Id: 621528-001 MS Sample Id: 621528-001 S MSD Sample Id: 621528-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	69.2	249	353	114	367	120	90-110	4	20	mg/kg	04.23.19 17:34	X

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3086702 Matrix: Soil Date Prep: 04.23.19
Parent Sample Id: 621530-004 MS Sample Id: 621530-004 S MSD Sample Id: 621530-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	21.2	253	294	108	274	100	90-110	7	20	mg/kg	04.23.19 18:42	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3086489 Matrix: Solid Date Prep: 04.20.19
MB Sample Id: 7676241-1-BLK LCS Sample Id: 7676241-1-BKS LCSD Sample Id: 7676241-1-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	940	94	939	94	70-135	0	20	mg/kg	04.20.19 21:27	
Diesel Range Organics (DRO)	<8.13	1000	964	96	959	96	70-135	1	20	mg/kg	04.20.19 21:27	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	96		118		121		70-135	%	04.20.19 21:27
o-Terphenyl	96		113		118		70-135	%	04.20.19 21:27

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

QC Summary 621562

LT Environmental, Inc.

Remuda 100 Br17

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3086489 Matrix: Soil Date Prep: 04.20.19
Parent Sample Id: 621570-021 MS Sample Id: 621570-021 S MSD Sample Id: 621570-021 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)	8.50	998	903	90	904	90	70-135	0	20	mg/kg	04.20.19 22:26	
Diesel Range Organics (DRO)	<8.11	998	903	90	910	91	70-135	1	20	mg/kg	04.20.19 22:26	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	115		114		70-135	%	04.20.19 22:26
o-Terphenyl	111		107		70-135	%	04.20.19 22:26

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3086504 Matrix: Solid Date Prep: 04.19.19
MB Sample Id: 7676260-1-BLK LCS Sample Id: 7676260-1-BKS LCSD Sample Id: 7676260-1-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	0.0800	80	0.0830	83	70-130	4	35	mg/kg	04.20.19 09:20	
Toluene	<0.000454	0.0996	0.0813	82	0.0839	84	70-130	3	35	mg/kg	04.20.19 09:20	
Ethylbenzene	<0.000563	0.0996	0.0740	74	0.0762	76	70-130	3	35	mg/kg	04.20.19 09:20	
m,p-Xylenes	<0.00101	0.199	0.145	73	0.150	75	70-130	3	35	mg/kg	04.20.19 09:20	
o-Xylene	<0.000343	0.0996	0.0753	76	0.0800	80	70-130	6	35	mg/kg	04.20.19 09:20	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		98		101		70-130	%	04.20.19 09:20
4-Bromofluorobenzene	84		89		95		70-130	%	04.20.19 09:20

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3086504 Matrix: Soil Date Prep: 04.19.19
Parent Sample Id: 621562-001 MS Sample Id: 621562-001 S MSD Sample Id: 621562-001 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	0.0660	66	0.0741	75	70-130	12	35	mg/kg	04.20.19 09:58	X
Toluene	<0.000457	0.100	0.0605	61	0.0650	65	70-130	7	35	mg/kg	04.20.19 09:58	X
Ethylbenzene	<0.000566	0.100	0.0455	46	0.0467	47	70-130	3	35	mg/kg	04.20.19 09:58	X
m,p-Xylenes	<0.00102	0.200	0.0592	30	0.0486	24	70-130	20	35	mg/kg	04.20.19 09:58	X
o-Xylene	<0.000345	0.100	0.0607	61	0.0614	62	70-130	1	35	mg/kg	04.20.19 09:58	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		102		70-130	%	04.20.19 09:58
4-Bromofluorobenzene	100		100		70-130	%	04.20.19 09:58

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

Chain of Custody

XENCO LABORATORIES

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

Work Order No: 621562

Page 1 of 1

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

Work Order Comments

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

Project Name:	Remuda 100 Batt.	Turn Around	
Project Number:	2RP-5336	Routine	☑
P.O. Number:		Rush:	
Sampler's Name:	Benjamin Belill	Due Date:	

SAMPLE RECEIPT				
Temperature (°C):	4	Temp Blank:	Yes No	Wet Ice: Yes No
Received Intact:	Yes No	Thermometer ID	IR400	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	0.2	
Sample Custody Seals:	Yes No N/A	Total Containers:	6	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
SW04	S	4/17/19	1045	0-1'	1	X	X	X
SW05			1050	0-2'		X	X	X
SW06			1100	0-1'		X	X	X
SW08			1130	0-1'		X	X	X
SW09			1145	0-1'		X	X	X
SW12			1210	0-1'		X	X	X

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

Composite

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			4/17/19 @ 1900	2		04/18/19 9:30
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

Final 1.000

Page 21 of 23

Inter-Office Shipment

IOS Number **37360**

Date/Time: 04/18/19 16:41
Lab# From: **Carlsbad**
Lab# To: **Midland**

Created by: Martha Castro
Delivery Priority:
Air Bill No.:

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

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
621562-001	S	SW04	04/17/19 10:45	E300_CL	Chloride by EPA 300	04/24/19	05/15/19	KLS	CL	
621562-001	S	SW04	04/17/19 10:45	SW8015MOD_NM	TPH by SW8015 Mod	04/24/19	05/01/19	KLS	GRO-DRO PHCC10C28 PI	
621562-001	S	SW04	04/17/19 10:45	SW8021B	BTEX by EPA 8021B	04/24/19	05/01/19	KLS	BR4FBZ BZ BZME EBZ X	
621562-002	S	SW05	04/17/19 10:50	E300_CL	Chloride by EPA 300	04/24/19	05/15/19	KLS	CL	
621562-002	S	SW05	04/17/19 10:50	SW8021B	BTEX by EPA 8021B	04/24/19	05/01/19	KLS	BR4FBZ BZ BZME EBZ X	
621562-002	S	SW05	04/17/19 10:50	SW8015MOD_NM	TPH by SW8015 Mod	04/24/19	05/01/19	KLS	GRO-DRO PHCC10C28 PI	
621562-003	S	SW06	04/17/19 11:00	SW8015MOD_NM	TPH by SW8015 Mod	04/24/19	05/01/19	KLS	GRO-DRO PHCC10C28 PI	
621562-003	S	SW06	04/17/19 11:00	E300_CL	Chloride by EPA 300	04/24/19	05/15/19	KLS	CL	
621562-003	S	SW06	04/17/19 11:00	SW8021B	BTEX by EPA 8021B	04/24/19	05/01/19	KLS	BR4FBZ BZ BZME EBZ X	
621562-004	S	SW08	04/17/19 11:30	SW8015MOD_NM	TPH by SW8015 Mod	04/24/19	05/01/19	KLS	GRO-DRO PHCC10C28 PI	
621562-004	S	SW08	04/17/19 11:30	E300_CL	Chloride by EPA 300	04/24/19	05/15/19	KLS	CL	
621562-004	S	SW08	04/17/19 11:30	SW8021B	BTEX by EPA 8021B	04/24/19	05/01/19	KLS	BR4FBZ BZ BZME EBZ X	
621562-005	S	SW09	04/17/19 11:45	E300_CL	Chloride by EPA 300	04/24/19	05/15/19	KLS	CL	
621562-005	S	SW09	04/17/19 11:45	SW8021B	BTEX by EPA 8021B	04/24/19	05/01/19	KLS	BR4FBZ BZ BZME EBZ X	
621562-005	S	SW09	04/17/19 11:45	SW8015MOD_NM	TPH by SW8015 Mod	04/24/19	05/01/19	KLS	GRO-DRO PHCC10C28 PI	
621562-006	S	SW12	04/17/19 12:10	E300_CL	Chloride by EPA 300	04/24/19	05/15/19	KLS	CL	
621562-006	S	SW12	04/17/19 12:10	SW8021B	BTEX by EPA 8021B	04/24/19	05/01/19	KLS	BR4FBZ BZ BZME EBZ X	
621562-006	S	SW12	04/17/19 12:10	SW8015MOD_NM	TPH by SW8015 Mod	04/24/19	05/01/19	KLS	GRO-DRO PHCC10C28 PI	

Inter Office Shipment or Sample Comments:

Relinquished By: Martha Castro

Date Relinquished: 04/18/2019

Received By: Katie Lowe

Date Received: 04/19/2019 00:00

Cooler Temperature: 4.0

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 04/18/2019 09:38:00 AM

Work Order #: 621562

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

Temperature Measuring device used : TNM007

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)?	**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: Martha Castro Date: 04/18/2019

Checklist reviewed by: Kalei Stout Date: 04/18/2019

Analytical Report 621564

for

LT Environmental, Inc.

Project Manager: Adrian Baker

Remuda 100 Batt

2RP-5336

25-APR-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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

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

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

25-APR-19

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

Reference: XENCO Report No(s): **621564**
Remuda 100 Batt
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) 621564. 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. 621564 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Kalei Stout
Carlsbad Laboratory Director

Sample Cross Reference 621564

LT Environmental, Inc., Arvada, CO

Remuda 100 Batt

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW01	S	04-17-19 09:20	0 - 1 ft	621564-001
SW02	S	04-17-19 09:30	0 - 1 ft	621564-002
FS28	S	04-17-19 09:50	1 ft	621564-003
FS29	S	04-17-19 10:00	1 ft	621564-004
SW03	S	04-17-19 10:30	0 - 1 ft	621564-005
SW07	S	04-17-19 11:15	0 - 2 ft	621564-006
SW10	S	04-17-19 11:50	0 - 2 ft	621564-007
SW11	S	04-17-19 12:00	0 - 1 ft	621564-008
FS30	S	04-17-19 13:00	1 ft	621564-009
FS31	S	04-17-19 13:10	1 ft	621564-010
FS32	S	04-17-19 13:15	1 ft	621564-011
FS33	S	04-17-19 13:25	1 ft	621564-012
FS34	S	04-17-19 13:35	1 ft	621564-013
FS35	S	04-17-19 13:40	2 ft	621564-014
FS36	S	04-17-19 13:45	1 ft	621564-015
FS37	S	04-17-19 13:50	1 ft	621564-016
FS38	S	04-17-19 13:55	1 ft	621564-017
FS39	S	04-17-19 14:00	1 ft	621564-018
FS40	S	04-17-19 14:10	1 ft	621564-019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3086504 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Surrogate 4-Bromofluorobenzene recovered below QC limits. Matrix interferences is suspected.
Samples affected are: 621564-007.

Batch: LBA-3086558 BTEX by EPA 8021B
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.
Samples affected are: 621564-015,621564-013.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 621564

LT Environmental, Inc., Arvada, CO

Project Name: Remuda 100 Batt

Project Id: 2RP-5336
Contact: Adrian Baker
Project Location: ---

Date Received in Lab: Thu Apr-18-19 09:39 am
Report Date: 25-APR-19
Project Manager: Kalei Stout

Analysis Requested													
	Lab Id:	621564-001		621564-002		621564-003		621564-004		621564-005		621564-006	
	Field Id:	SW01		SW02		FS28		FS29		SW03		SW07	
	Depth:	0-1 ft		0-1 ft		1- ft		1- ft		0-1 ft		0-2 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Apr-17-19 09:20		Apr-17-19 09:30		Apr-17-19 09:50		Apr-17-19 10:00		Apr-17-19 10:30		Apr-17-19 11:15	
BTEX by EPA 8021B SUB: T104704400-18-16	***Extracted:***	Apr-19-19 14:00		Apr-19-19 14:00		Apr-19-19 14:00		Apr-19-19 14:00		Apr-19-19 14:00		Apr-19-19 14:00	
	Analyzed:	Apr-20-19 13:46		Apr-20-19 14:05		Apr-20-19 15:19		Apr-20-19 15:38		Apr-20-19 15:57		Apr-20-19 16:16	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00198	0.00198
Toluene		<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00198	0.00198
Ethylbenzene		<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00198	0.00198
m,p-Xylenes		<0.00400	0.00400	<0.00403	0.00403	<0.00398	0.00398	<0.00400	0.00400	<0.00402	0.00402	<0.00397	0.00397
o-Xylene		<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00198	0.00198
Total Xylenes		<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00198	0.00198
Total BTEX		<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00198	0.00198
Chloride by EPA 300 SUB: T104704400-18-16	***Extracted:***	Apr-23-19 16:40		Apr-23-19 16:40		Apr-23-19 16:40		Apr-23-19 16:40		Apr-23-19 16:40		Apr-23-19 16:55	
	Analyzed:	Apr-23-19 19:21		Apr-23-19 19:26		Apr-23-19 19:31		Apr-23-19 19:35		Apr-23-19 19:40		Apr-23-19 20:24	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		208	25.0	163	25.0	226	5.00	178	5.03	114	4.96	40.5	25.2
TPH by SW8015 Mod SUB: T104704400-18-16	***Extracted:***	Apr-21-19 10:00		Apr-21-19 10:00		Apr-21-19 10:00		Apr-21-19 10:00		Apr-21-19 10:00		Apr-21-19 10:00	
	Analyzed:	Apr-22-19 01:18		Apr-22-19 02:16		Apr-22-19 02:35		Apr-22-19 02:55		Apr-22-19 03:14		Apr-22-19 03:34	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<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	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9
Total TPH		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9
Total GRO-DRO		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9

Kalei Stout
Carlsbad Laboratory Director

Certificate of Analysis Summary 621564

LT Environmental, Inc., Arvada, CO

Project Name: Remuda 100 Batt

Project Id: 2RP-5336
Contact: Adrian Baker
Project Location: ---

Date Received in Lab: Thu Apr-18-19 09:39 am
Report Date: 25-APR-19
Project Manager: Kalei Stout

Analysis Requested													
	Lab Id:	621564-007		621564-008		621564-009		621564-010		621564-011		621564-012	
	Field Id:	SW10		SW11		FS30		FS31		FS32		FS33	
	Depth:	0-2 ft		0-1 ft		1- ft		1- ft		1- ft		1- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Apr-17-19 11:50		Apr-17-19 12:00		Apr-17-19 13:00		Apr-17-19 13:10		Apr-17-19 13:15		Apr-17-19 13:25	
BTEX by EPA 8021B SUB: T104704400-18-16	***Extracted:***	Apr-19-19 14:00		Apr-19-19 14:00		Apr-19-19 14:00		Apr-19-19 14:00		Apr-19-19 14:00		Apr-19-19 14:00	
	Analyzed:	Apr-20-19 16:35		Apr-20-19 16:54		Apr-20-19 17:13		Apr-20-19 17:32		Apr-20-19 17:51		Apr-20-19 18:11	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00199	0.00199	<0.00202	0.00202
Toluene		<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00199	0.00199	<0.00202	0.00202
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00199	0.00199	<0.00202	0.00202
m,p-Xylenes		<0.00401	0.00401	<0.00399	0.00399	<0.00402	0.00402	<0.00398	0.00398	<0.00398	0.00398	<0.00403	0.00403
o-Xylene		<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00199	0.00199	<0.00202	0.00202
Total Xylenes		<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00199	0.00199	<0.00202	0.00202
Total BTEX		<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00199	0.00199	<0.00202	0.00202
Chloride by EPA 300 SUB: T104704400-18-16	***Extracted:***	Apr-23-19 16:55		Apr-23-19 16:55		Apr-23-19 16:55		Apr-23-19 16:55		Apr-23-19 16:55		Apr-23-19 16:55	
	Analyzed:	Apr-23-19 20:09		Apr-23-19 20:29		Apr-23-19 20:34		Apr-23-19 20:39		Apr-23-19 20:53		Apr-24-19 10:52	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		155	4.95	25.4	24.9	142	49.9	137	50.4	62.9	25.0	33.0	4.97
TPH by SW8015 Mod SUB: T104704400-18-16	***Extracted:***	Apr-21-19 10:00		Apr-21-19 10:00		Apr-21-19 10:00		Apr-21-19 10:00		Apr-21-19 10:00		Apr-21-19 10:00	
	Analyzed:	Apr-22-19 03:53		Apr-22-19 04:13		Apr-22-19 04:32		Apr-22-19 04:52		Apr-22-19 05:50		Apr-22-19 06:09	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0
Total TPH		<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0
Total GRO-DRO		<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0

Kalei Stout
Carlsbad Laboratory Director

Certificate of Analysis Summary 621564

LT Environmental, Inc., Arvada, CO

Project Name: Remuda 100 Batt

Project Id: 2RP-5336
Contact: Adrian Baker
Project Location: ---

Date Received in Lab: Thu Apr-18-19 09:39 am
Report Date: 25-APR-19
Project Manager: Kalei Stout

Analysis Requested													
	Lab Id:	621564-013		621564-014		621564-015		621564-016		621564-017		621564-018	
	Field Id:	FS34		FS35		FS36		FS37		FS38		FS39	
	Depth:	1- ft		2- ft		1- ft		1- ft		1- ft		1- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Apr-17-19 13:35		Apr-17-19 13:40		Apr-17-19 13:45		Apr-17-19 13:50		Apr-17-19 13:55		Apr-17-19 14:00	
BTEX by EPA 8021B SUB: T104704400-18-16	***Extracted:***	Apr-22-19 16:00		Apr-22-19 16:00		Apr-22-19 16:00		Apr-22-19 16:00		Apr-22-19 16:00		Apr-22-19 16:00	
	Analyzed:	Apr-23-19 08:02		Apr-23-19 08:21		Apr-23-19 08:40		Apr-23-19 08:59		Apr-23-19 09:18		Apr-23-19 09:37	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00198	0.00198	<0.00202	0.00202
Toluene		<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00198	0.00198	<0.00202	0.00202
Ethylbenzene		<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00198	0.00198	<0.00202	0.00202
m,p-Xylenes		<0.00399	0.00399	<0.00402	0.00402	<0.00398	0.00398	<0.00401	0.00401	<0.00397	0.00397	<0.00403	0.00403
o-Xylene		<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00198	0.00198	<0.00202	0.00202
Total Xylenes		<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00198	0.00198	<0.00202	0.00202
Total BTEX		<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00198	0.00198	<0.00202	0.00202
Chloride by EPA 300 SUB: T104704400-18-16	***Extracted:***	Apr-23-19 16:55		Apr-23-19 16:55		Apr-23-19 16:55		Apr-23-19 16:55		Apr-23-19 16:55		Apr-23-19 16:55	
	Analyzed:	Apr-23-19 21:03		Apr-23-19 21:17		Apr-23-19 21:08		Apr-23-19 21:13		Apr-23-19 21:32		Apr-23-19 21:37	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		96.1	25.1	47.6	4.99	130	49.7	140	49.5	309	50.0	336	5.03
TPH by SW8015 Mod SUB: T104704400-18-16	***Extracted:***	Apr-21-19 10:00		Apr-21-19 10:00		Apr-21-19 10:00		Apr-21-19 10:00		Apr-21-19 10:00		Apr-21-19 10:00	
	Analyzed:	Apr-22-19 06:28		Apr-22-19 06:48		Apr-22-19 07:07		Apr-22-19 07:27		Apr-22-19 07:46		Apr-22-19 08:06	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total GRO-DRO		<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0

Kalei Stout
Carlsbad Laboratory Director

Certificate of Analysis Summary 621564

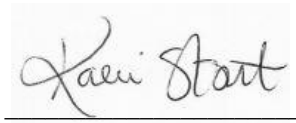
LT Environmental, Inc., Arvada, CO

Project Name: Remuda 100 Batt

Project Id: 2RP-5336
Contact: Adrian Baker
Project Location: ---

Date Received in Lab: Thu Apr-18-19 09:39 am
Report Date: 25-APR-19
Project Manager: Kalei Stout

Analysis Requested							
	Lab Id:	621564-019					
	Field Id:	FS40					
	Depth:	1- ft					
	Matrix:	SOIL					
	Sampled:	Apr-17-19 14:10					
BTEX by EPA 8021B **SUB: T104704400-18-16**	***Extracted:***	Apr-22-19 16:00					
	Analyzed:	Apr-23-19 09:56					
	Units/RL:	mg/kg	RL				
Benzene		<0.00199	0.00199				
Toluene		<0.00199	0.00199				
Ethylbenzene		<0.00199	0.00199				
m,p-Xylenes		<0.00398	0.00398				
o-Xylene		<0.00199	0.00199				
Total Xylenes		<0.00199	0.00199				
Total BTEX		<0.00199	0.00199				
Chloride by EPA 300 **SUB: T104704400-18-16**	***Extracted:***	Apr-23-19 16:55					
	Analyzed:	Apr-23-19 21:51					
	Units/RL:	mg/kg	RL				
Chloride		446	4.97				
TPH by SW8015 Mod **SUB: T104704400-18-16**	***Extracted:***	Apr-21-19 10:00					
	Analyzed:	Apr-22-19 08:26					
	Units/RL:	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0				
Diesel Range Organics (DRO)		<15.0	15.0				
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0				
Total TPH		<15.0	15.0				
Total GRO-DRO		<15.0	15.0				



Kalei Stout
Carlsbad Laboratory Director

Certificate of Analytical Results 621564

LT Environmental, Inc., Arvada, CO

Remuda 100 Batt

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	04.18.19 09.39
Lab Sample Id:	621564-001	Date Collected:	04.17.19 09.20	Sample Depth:	0 - 1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.23.19 16.40	Basis:	Wet Weight
Seq Number:	3086702			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**208**	25.0	mg/kg	04.23.19 19.21		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.21.19 10.00	Basis:	Wet Weight
Seq Number:	3086495			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.22.19 01.18	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.22.19 01.18	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.22.19 01.18	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.22.19 01.18	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.22.19 01.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	04.22.19 01.18	
o-Terphenyl	84-15-1	99	%	70-135	04.22.19 01.18	

Certificate of Analytical Results 621564

LT Environmental, Inc., Arvada, CO

Remuda 100 Batt

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	04.18.19 09.39
Lab Sample Id:	621564-001	Date Collected:	04.17.19 09.20	Sample Depth:	0 - 1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.19.19 14.00	Basis:	Wet Weight
Seq Number:	3086504			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.20.19 13.46	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.20.19 13.46	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.20.19 13.46	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	04.20.19 13.46	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.20.19 13.46	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.20.19 13.46	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.20.19 13.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	83	%	70-130	04.20.19 13.46	
1,4-Difluorobenzene	540-36-3	87	%	70-130	04.20.19 13.46	

Certificate of Analytical Results 621564

LT Environmental, Inc., Arvada, CO

Remuda 100 Batt

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	04.18.19 09.39
Lab Sample Id:	621564-002	Date Collected:	04.17.19 09.30	Sample Depth:	0 - 1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.23.19 16.40	Basis:	Wet Weight
Seq Number:	3086702			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**163**	25.0	mg/kg	04.23.19 19.26		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.21.19 10.00	Basis:	Wet Weight
Seq Number:	3086495			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.22.19 02.16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.22.19 02.16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.22.19 02.16	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.22.19 02.16	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.22.19 02.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	04.22.19 02.16	
o-Terphenyl	84-15-1	97	%	70-135	04.22.19 02.16	

Certificate of Analytical Results 621564

LT Environmental, Inc., Arvada, CO

Remuda 100 Batt

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	04.18.19 09.39
Lab Sample Id:	621564-002	Date Collected:	04.17.19 09.30	Sample Depth:	0 - 1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.19.19 14.00	Basis:	Wet Weight
Seq Number:	3086504			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	04.20.19 14.05	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	04.20.19 14.05	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	04.20.19 14.05	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	04.20.19 14.05	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	04.20.19 14.05	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	04.20.19 14.05	U	1
Total BTEX		<0.00202	0.00202	mg/kg	04.20.19 14.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	96	%	70-130	04.20.19 14.05	
4-Bromofluorobenzene	460-00-4	77	%	70-130	04.20.19 14.05	

Certificate of Analytical Results 621564

LT Environmental, Inc., Arvada, CO

Remuda 100 Batt

Sample Id:	**FS28**	Matrix:	Soil	Date Received:	04.18.19 09.39
Lab Sample Id:	621564-003	Date Collected:	04.17.19 09.50	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.23.19 16.40	Basis:	Wet Weight
Seq Number:	3086702			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**226**	5.00	mg/kg	04.23.19 19.31		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.21.19 10.00	Basis:	Wet Weight
Seq Number:	3086495			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.22.19 02.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.22.19 02.35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.22.19 02.35	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.22.19 02.35	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.22.19 02.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	04.22.19 02.35	
o-Terphenyl	84-15-1	97	%	70-135	04.22.19 02.35	

Certificate of Analytical Results 621564

LT Environmental, Inc., Arvada, CO

Remuda 100 Batt

Sample Id:	**FS28**	Matrix:	Soil	Date Received:	04.18.19 09.39
Lab Sample Id:	621564-003	Date Collected:	04.17.19 09.50	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.19.19 14.00	Basis:	Wet Weight
Seq Number:	3086504			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.20.19 15.19	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.20.19 15.19	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.20.19 15.19	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.20.19 15.19	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.20.19 15.19	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.20.19 15.19	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.20.19 15.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	79	%	70-130	04.20.19 15.19	
1,4-Difluorobenzene	540-36-3	83	%	70-130	04.20.19 15.19	

Certificate of Analytical Results 621564

LT Environmental, Inc., Arvada, CO

Remuda 100 Batt

Sample Id:	**FS29**	Matrix:	Soil	Date Received:	04.18.19 09.39
Lab Sample Id:	621564-004	Date Collected:	04.17.19 10.00	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.23.19 16.40	Basis:	Wet Weight
Seq Number:	3086702			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**178**	5.03	mg/kg	04.23.19 19.35		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.21.19 10.00	Basis:	Wet Weight
Seq Number:	3086495			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.22.19 02.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.22.19 02.55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.22.19 02.55	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.22.19 02.55	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.22.19 02.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	04.22.19 02.55	
o-Terphenyl	84-15-1	97	%	70-135	04.22.19 02.55	

Certificate of Analytical Results 621564

LT Environmental, Inc., Arvada, CO

Remuda 100 Batt

Sample Id:	**FS29**	Matrix:	Soil	Date Received:	04.18.19 09.39
Lab Sample Id:	621564-004	Date Collected:	04.17.19 10.00	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.19.19 14.00	Basis:	Wet Weight
Seq Number:	3086504			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.20.19 15.38	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.20.19 15.38	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.20.19 15.38	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	04.20.19 15.38	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.20.19 15.38	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.20.19 15.38	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.20.19 15.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	82	%	70-130	04.20.19 15.38	
1,4-Difluorobenzene	540-36-3	83	%	70-130	04.20.19 15.38	

Certificate of Analytical Results 621564

LT Environmental, Inc., Arvada, CO

Remuda 100 Batt

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	04.18.19 09.39
Lab Sample Id:	621564-005	Date Collected:	04.17.19 10.30	Sample Depth:	0 - 1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.23.19 16.40	Basis:	Wet Weight
Seq Number:	3086702			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**114**	4.96	mg/kg	04.23.19 19.40		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.21.19 10.00	Basis:	Wet Weight
Seq Number:	3086495			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.22.19 03.14	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.22.19 03.14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.22.19 03.14	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.22.19 03.14	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.22.19 03.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	04.22.19 03.14	
o-Terphenyl	84-15-1	100	%	70-135	04.22.19 03.14	

Certificate of Analytical Results 621564

LT Environmental, Inc., Arvada, CO

Remuda 100 Batt

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	04.18.19 09.39
Lab Sample Id:	621564-005	Date Collected:	04.17.19 10.30	Sample Depth:	0 - 1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.19.19 14.00	Basis:	Wet Weight
Seq Number:	3086504			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.20.19 15.57	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.20.19 15.57	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.20.19 15.57	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.20.19 15.57	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.20.19 15.57	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.20.19 15.57	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.20.19 15.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	04.20.19 15.57	
4-Bromofluorobenzene	460-00-4	94	%	70-130	04.20.19 15.57	

Certificate of Analytical Results 621564

LT Environmental, Inc., Arvada, CO

Remuda 100 Batt

Sample Id:	**SW07**	Matrix:	Soil	Date Received:	04.18.19 09.39
Lab Sample Id:	621564-006	Date Collected:	04.17.19 11.15	Sample Depth:	0 - 2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.23.19 16.55	Basis:	Wet Weight
Seq Number:	3086707			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**40.5**	25.2	mg/kg	04.23.19 20.24		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.21.19 10.00	Basis:	Wet Weight
Seq Number:	3086495			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	04.22.19 03.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	04.22.19 03.34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	04.22.19 03.34	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	04.22.19 03.34	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	04.22.19 03.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	04.22.19 03.34	
o-Terphenyl	84-15-1	99	%	70-135	04.22.19 03.34	

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Sample Id:	**SW07**	Matrix:	Soil	Date Received:	04.18.19 09.39
Lab Sample Id:	621564-006	Date Collected:	04.17.19 11.15	Sample Depth:	0 - 2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.19.19 14.00	Basis:	Wet Weight
Seq Number:	3086504			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	04.20.19 16.16	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	04.20.19 16.16	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	04.20.19 16.16	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	04.20.19 16.16	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	04.20.19 16.16	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	04.20.19 16.16	U	1
Total BTEX		<0.00198	0.00198	mg/kg	04.20.19 16.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	70	%	70-130	04.20.19 16.16	
1,4-Difluorobenzene	540-36-3	85	%	70-130	04.20.19 16.16	

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Sample Id:	**SW10**	Matrix:	Soil	Date Received:	04.18.19 09.39
Lab Sample Id:	621564-007	Date Collected:	04.17.19 11.50	Sample Depth:	0 - 2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.23.19 16.55	Basis:	Wet Weight
Seq Number:	3086707			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**155**	4.95	mg/kg	04.23.19 20.09		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.21.19 10.00	Basis:	Wet Weight
Seq Number:	3086495			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.22.19 03.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.22.19 03.53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.22.19 03.53	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.22.19 03.53	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.22.19 03.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	04.22.19 03.53	
o-Terphenyl	84-15-1	101	%	70-135	04.22.19 03.53	

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Sample Id:	**SW10**	Matrix:	Soil	Date Received:	04.18.19 09.39
Lab Sample Id:	621564-007	Date Collected:	04.17.19 11.50	Sample Depth:	0 - 2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.19.19 14.00	Basis:	Wet Weight
Seq Number:	3086504			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.20.19 16.35	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.20.19 16.35	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.20.19 16.35	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	04.20.19 16.35	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.20.19 16.35	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.20.19 16.35	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.20.19 16.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	68	%	70-130	04.20.19 16.35	**
1,4-Difluorobenzene	540-36-3	83	%	70-130	04.20.19 16.35	

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Sample Id:	**SW11**	Matrix:	Soil	Date Received:	04.18.19 09.39
Lab Sample Id:	621564-008	Date Collected:	04.17.19 12.00	Sample Depth:	0 - 1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.23.19 16.55	Basis:	Wet Weight
Seq Number:	3086707			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**25.4**	24.9	mg/kg	04.23.19 20.29		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.21.19 10.00	Basis:	Wet Weight
Seq Number:	3086495			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.22.19 04.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.22.19 04.13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.22.19 04.13	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.22.19 04.13	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.22.19 04.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	04.22.19 04.13	
o-Terphenyl	84-15-1	99	%	70-135	04.22.19 04.13	

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Sample Id:	**SW11**	Matrix:	Soil	Date Received:	04.18.19 09.39
Lab Sample Id:	621564-008	Date Collected:	04.17.19 12.00	Sample Depth:	0 - 1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.19.19 14.00	Basis:	Wet Weight
Seq Number:	3086504			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.20.19 16.54	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.20.19 16.54	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.20.19 16.54	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	04.20.19 16.54	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.20.19 16.54	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.20.19 16.54	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.20.19 16.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	70	%	70-130	04.20.19 16.54	
1,4-Difluorobenzene	540-36-3	85	%	70-130	04.20.19 16.54	

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Sample Id:	**FS30**	Matrix:	Soil	Date Received:	04.18.19 09.39
Lab Sample Id:	621564-009	Date Collected:	04.17.19 13.00	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.23.19 16.55	Basis:	Wet Weight
Seq Number:	3086707			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**142**	49.9	mg/kg	04.23.19 20.34		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.21.19 10.00	Basis:	Wet Weight
Seq Number:	3086495			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.22.19 04.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.22.19 04.32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.22.19 04.32	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.22.19 04.32	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.22.19 04.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	04.22.19 04.32	
o-Terphenyl	84-15-1	99	%	70-135	04.22.19 04.32	

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Sample Id:	**FS30**	Matrix:	Soil	Date Received:	04.18.19 09.39
Lab Sample Id:	621564-009	Date Collected:	04.17.19 13.00	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.19.19 14.00	Basis:	Wet Weight
Seq Number:	3086504			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.20.19 17.13	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.20.19 17.13	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.20.19 17.13	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.20.19 17.13	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.20.19 17.13	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.20.19 17.13	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.20.19 17.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	70-130	04.20.19 17.13	
1,4-Difluorobenzene	540-36-3	100	%	70-130	04.20.19 17.13	

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Sample Id:	**FS31**	Matrix:	Soil	Date Received:	04.18.19 09.39
Lab Sample Id:	621564-010	Date Collected:	04.17.19 13.10	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.23.19 16.55	Basis:	Wet Weight
Seq Number:	3086707			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**137**	50.4	mg/kg	04.23.19 20.39		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.21.19 10.00	Basis:	Wet Weight
Seq Number:	3086495			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	04.22.19 04.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	04.22.19 04.52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	04.22.19 04.52	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	04.22.19 04.52	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	04.22.19 04.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	04.22.19 04.52	
o-Terphenyl	84-15-1	100	%	70-135	04.22.19 04.52	

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Sample Id:	**FS31**	Matrix:	Soil	Date Received:	04.18.19 09.39
Lab Sample Id:	621564-010	Date Collected:	04.17.19 13.10	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.19.19 14.00	Basis:	Wet Weight
Seq Number:	3086504			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.20.19 17.32	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.20.19 17.32	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.20.19 17.32	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.20.19 17.32	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.20.19 17.32	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.20.19 17.32	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.20.19 17.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	87	%	70-130	04.20.19 17.32	
1,4-Difluorobenzene	540-36-3	93	%	70-130	04.20.19 17.32	

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Sample Id:	**FS32**	Matrix:	Soil	Date Received:	04.18.19 09.39
Lab Sample Id:	621564-011	Date Collected:	04.17.19 13.15	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.23.19 16.55	Basis:	Wet Weight
Seq Number:	3086707			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**62.9**	25.0	mg/kg	04.23.19 20.53		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.21.19 10.00	Basis:	Wet Weight
Seq Number:	3086495			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.22.19 05.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.22.19 05.50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.22.19 05.50	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.22.19 05.50	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.22.19 05.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	04.22.19 05.50	
o-Terphenyl	84-15-1	102	%	70-135	04.22.19 05.50	

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Sample Id:	**FS32**	Matrix:	Soil	Date Received:	04.18.19 09.39
Lab Sample Id:	621564-011	Date Collected:	04.17.19 13.15	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.19.19 14.00	Basis:	Wet Weight
Seq Number:	3086504			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.20.19 17.51	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.20.19 17.51	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.20.19 17.51	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.20.19 17.51	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.20.19 17.51	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.20.19 17.51	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.20.19 17.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	04.20.19 17.51	
4-Bromofluorobenzene	460-00-4	102	%	70-130	04.20.19 17.51	

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Sample Id:	**FS33**	Matrix:	Soil	Date Received:	04.18.19 09.39
Lab Sample Id:	621564-012	Date Collected:	04.17.19 13.25	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.23.19 16.55	Basis:	Wet Weight
Seq Number:	3086707			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**33.0**	4.97	mg/kg	04.24.19 10.52		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.21.19 10.00	Basis:	Wet Weight
Seq Number:	3086495			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.22.19 06.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.22.19 06.09	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.22.19 06.09	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.22.19 06.09	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.22.19 06.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	04.22.19 06.09	
o-Terphenyl	84-15-1	101	%	70-135	04.22.19 06.09	

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Sample Id:	**FS33**	Matrix:	Soil	Date Received:	04.18.19 09.39
Lab Sample Id:	621564-012	Date Collected:	04.17.19 13.25	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.19.19 14.00	Basis:	Wet Weight
Seq Number:	3086504			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	04.20.19 18.11	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	04.20.19 18.11	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	04.20.19 18.11	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	04.20.19 18.11	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	04.20.19 18.11	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	04.20.19 18.11	U	1
Total BTEX		<0.00202	0.00202	mg/kg	04.20.19 18.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	04.20.19 18.11	
4-Bromofluorobenzene	460-00-4	100	%	70-130	04.20.19 18.11	

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LT Environmental, Inc., Arvada, CO

Remuda 100 Batt

Sample Id:	**FS34**	Matrix:	Soil	Date Received:	04.18.19 09.39
Lab Sample Id:	621564-013	Date Collected:	04.17.19 13.35	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.23.19 16.55	Basis:	Wet Weight
Seq Number:	3086707			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**96.1**	25.1	mg/kg	04.23.19 21.03		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.21.19 10.00	Basis:	Wet Weight
Seq Number:	3086495			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.22.19 06.28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.22.19 06.28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.22.19 06.28	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.22.19 06.28	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.22.19 06.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	04.22.19 06.28	
o-Terphenyl	84-15-1	97	%	70-135	04.22.19 06.28	

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LT Environmental, Inc., Arvada, CO

Remuda 100 Batt

Sample Id:	**FS34**	Matrix:	Soil	Date Received:	04.18.19 09.39
Lab Sample Id:	621564-013	Date Collected:	04.17.19 13.35	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.22.19 16.00	Basis:	Wet Weight
Seq Number:	3086558			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.23.19 08.02	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.23.19 08.02	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.23.19 08.02	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	04.23.19 08.02	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.23.19 08.02	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.23.19 08.02	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.23.19 08.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	97	%	70-130	04.23.19 08.02	
4-Bromofluorobenzene	460-00-4	133	%	70-130	04.23.19 08.02	**

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LT Environmental, Inc., Arvada, CO

Remuda 100 Batt

Sample Id:	**FS35**	Matrix:	Soil	Date Received:	04.18.19 09.39
Lab Sample Id:	621564-014	Date Collected:	04.17.19 13.40	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.23.19 16.55	Basis:	Wet Weight
Seq Number:	3086707			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**47.6**	4.99	mg/kg	04.23.19 21.17		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.21.19 10.00	Basis:	Wet Weight
Seq Number:	3086495			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	04.22.19 06.48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	04.22.19 06.48	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	04.22.19 06.48	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	04.22.19 06.48	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	04.22.19 06.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	04.22.19 06.48	
o-Terphenyl	84-15-1	97	%	70-135	04.22.19 06.48	

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LT Environmental, Inc., Arvada, CO

Remuda 100 Batt

Sample Id:	**FS35**	Matrix:	Soil	Date Received:	04.18.19 09.39
Lab Sample Id:	621564-014	Date Collected:	04.17.19 13.40	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.22.19 16.00	Basis:	Wet Weight
Seq Number:	3086558			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.23.19 08.21	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.23.19 08.21	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.23.19 08.21	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.23.19 08.21	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.23.19 08.21	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.23.19 08.21	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.23.19 08.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	119	%	70-130	04.23.19 08.21	
1,4-Difluorobenzene	540-36-3	101	%	70-130	04.23.19 08.21	

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LT Environmental, Inc., Arvada, CO

Remuda 100 Batt

Sample Id:	**FS36**	Matrix:	Soil	Date Received:	04.18.19 09.39
Lab Sample Id:	621564-015	Date Collected:	04.17.19 13.45	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.23.19 16.55	Basis:	Wet Weight
Seq Number:	3086707			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**130**	49.7	mg/kg	04.23.19 21.08		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.21.19 10.00	Basis:	Wet Weight
Seq Number:	3086495			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.22.19 07.07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.22.19 07.07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.22.19 07.07	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.22.19 07.07	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.22.19 07.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	04.22.19 07.07	
o-Terphenyl	84-15-1	97	%	70-135	04.22.19 07.07	

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LT Environmental, Inc., Arvada, CO

Remuda 100 Batt

Sample Id:	**FS36**	Matrix:	Soil	Date Received:	04.18.19 09.39
Lab Sample Id:	621564-015	Date Collected:	04.17.19 13.45	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.22.19 16.00	Basis:	Wet Weight
Seq Number:	3086558			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.23.19 08.40	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.23.19 08.40	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.23.19 08.40	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.23.19 08.40	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.23.19 08.40	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.23.19 08.40	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.23.19 08.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	95	%	70-130	04.23.19 08.40	
4-Bromofluorobenzene	460-00-4	142	%	70-130	04.23.19 08.40	**

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Remuda 100 Batt

Sample Id:	**FS37**	Matrix:	Soil	Date Received:	04.18.19 09.39
Lab Sample Id:	621564-016	Date Collected:	04.17.19 13.50	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.23.19 16.55	Basis:	Wet Weight
Seq Number:	3086707			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**140**	49.5	mg/kg	04.23.19 21.13		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.21.19 10.00	Basis:	Wet Weight
Seq Number:	3086495			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.22.19 07.27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.22.19 07.27	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.22.19 07.27	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.22.19 07.27	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.22.19 07.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	04.22.19 07.27	
o-Terphenyl	84-15-1	101	%	70-135	04.22.19 07.27	

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Remuda 100 Batt

Sample Id:	**FS37**	Matrix:	Soil	Date Received:	04.18.19 09.39
Lab Sample Id:	621564-016	Date Collected:	04.17.19 13.50	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.22.19 16.00	Basis:	Wet Weight
Seq Number:	3086558			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.23.19 08.59	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.23.19 08.59	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.23.19 08.59	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	04.23.19 08.59	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.23.19 08.59	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.23.19 08.59	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.23.19 08.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	04.23.19 08.59	
4-Bromofluorobenzene	460-00-4	116	%	70-130	04.23.19 08.59	

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Sample Id:	**FS38**	Matrix:	Soil	Date Received:	04.18.19 09.39
Lab Sample Id:	621564-017	Date Collected:	04.17.19 13.55	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.23.19 16.55	Basis:	Wet Weight
Seq Number:	3086707			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**309**	50.0	mg/kg	04.23.19 21.32		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.21.19 10.00	Basis:	Wet Weight
Seq Number:	3086495			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.22.19 07.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.22.19 07.46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.22.19 07.46	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.22.19 07.46	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.22.19 07.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	04.22.19 07.46	
o-Terphenyl	84-15-1	95	%	70-135	04.22.19 07.46	

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Sample Id:	**FS38**	Matrix:	Soil	Date Received:	04.18.19 09.39
Lab Sample Id:	621564-017	Date Collected:	04.17.19 13.55	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.22.19 16.00	Basis:	Wet Weight
Seq Number:	3086558			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	04.23.19 09.18	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	04.23.19 09.18	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	04.23.19 09.18	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	04.23.19 09.18	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	04.23.19 09.18	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	04.23.19 09.18	U	1
Total BTEX		<0.00198	0.00198	mg/kg	04.23.19 09.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	96	%	70-130	04.23.19 09.18	
4-Bromofluorobenzene	460-00-4	155	%	70-130	04.23.19 09.18	**

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Remuda 100 Batt

Sample Id:	**FS39**	Matrix:	Soil	Date Received:	04.18.19 09.39
Lab Sample Id:	621564-018	Date Collected:	04.17.19 14.00	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.23.19 16.55	Basis:	Wet Weight
Seq Number:	3086707			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**336**	5.03	mg/kg	04.23.19 21.37		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.21.19 10.00	Basis:	Wet Weight
Seq Number:	3086495			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.22.19 08.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.22.19 08.06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.22.19 08.06	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.22.19 08.06	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.22.19 08.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	04.22.19 08.06	
o-Terphenyl	84-15-1	95	%	70-135	04.22.19 08.06	

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Remuda 100 Batt

Sample Id:	**FS39**	Matrix:	Soil	Date Received:	04.18.19 09.39
Lab Sample Id:	621564-018	Date Collected:	04.17.19 14.00	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.22.19 16.00	Basis:	Wet Weight
Seq Number:	3086558			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	04.23.19 09.37	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	04.23.19 09.37	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	04.23.19 09.37	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	04.23.19 09.37	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	04.23.19 09.37	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	04.23.19 09.37	U	1
Total BTEX		<0.00202	0.00202	mg/kg	04.23.19 09.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	96	%	70-130	04.23.19 09.37	
4-Bromofluorobenzene	460-00-4	152	%	70-130	04.23.19 09.37	**

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LT Environmental, Inc., Arvada, CO

Remuda 100 Batt

Sample Id:	**FS40**	Matrix:	Soil	Date Received:	04.18.19 09.39
Lab Sample Id:	621564-019	Date Collected:	04.17.19 14.10	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.23.19 16.55	Basis:	Wet Weight
Seq Number:	3086707			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**446**	4.97	mg/kg	04.23.19 21.51		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.21.19 10.00	Basis:	Wet Weight
Seq Number:	3086495			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.22.19 08.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.22.19 08.26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.22.19 08.26	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.22.19 08.26	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.22.19 08.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	04.22.19 08.26	
o-Terphenyl	84-15-1	94	%	70-135	04.22.19 08.26	

Certificate of Analytical Results 621564

LT Environmental, Inc., Arvada, CO

Remuda 100 Batt

Sample Id:	**FS40**	Matrix:	Soil	Date Received:	04.18.19 09.39
Lab Sample Id:	621564-019	Date Collected:	04.17.19 14.10	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.22.19 16.00	Basis:	Wet Weight
Seq Number:	3086558			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.23.19 09.56	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.23.19 09.56	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.23.19 09.56	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.23.19 09.56	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.23.19 09.56	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.23.19 09.56	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.23.19 09.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	04.23.19 09.56	
4-Bromofluorobenzene	460-00-4	118	%	70-130	04.23.19 09.56	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 621564

LT Environmental, Inc.

Remuda 100 Batt

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3086702 Matrix: Solid Date Prep: 04.23.19
MB Sample Id: 7676391-1-BLK LCS Sample Id: 7676391-1-BKS LCSD Sample Id: 7676391-1-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	231	92	90-110	2	20	mg/kg	04.23.19 17:20	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3086707 Matrix: Solid Date Prep: 04.23.19
MB Sample Id: 7676392-1-BLK LCS Sample Id: 7676392-1-BKS LCSD Sample Id: 7676392-1-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	239	96	239	96	90-110	0	20	mg/kg	04.23.19 20:00	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3086702 Matrix: Soil Date Prep: 04.23.19
Parent Sample Id: 621528-001 MS Sample Id: 621528-001 S MSD Sample Id: 621528-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	69.2	249	353	114	367	120	90-110	4	20	mg/kg	04.23.19 17:34	X

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3086702 Matrix: Soil Date Prep: 04.23.19
Parent Sample Id: 621530-004 MS Sample Id: 621530-004 S MSD Sample Id: 621530-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	21.2	253	294	108	274	100	90-110	7	20	mg/kg	04.23.19 18:42	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3086707 Matrix: Soil Date Prep: 04.23.19
Parent Sample Id: 621564-007 MS Sample Id: 621564-007 S MSD Sample Id: 621564-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	155	248	393	96	392	96	90-110	0	20	mg/kg	04.23.19 20:14	

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

QC Summary 621564

LT Environmental, Inc.

Remuda 100 Batt

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3086707 Matrix: Soil Date Prep: 04.23.19
Parent Sample Id: 621564-014 MS Sample Id: 621564-014 S MSD Sample Id: 621564-014 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	47.6	250	307	104	303	102	90-110	1	20	mg/kg	04.23.19 21:22	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3086495 Matrix: Solid Date Prep: 04.21.19
MB Sample Id: 7676245-1-BLK LCS Sample Id: 7676245-1-BKS LCSD Sample Id: 7676245-1-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	927	93	960	96	70-135	3	20	mg/kg	04.22.19 00:39	
Diesel Range Organics (DRO)	<8.13	1000	944	94	986	99	70-135	4	20	mg/kg	04.22.19 00:39	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	101		119		121		70-135	%	04.22.19 00:39
o-Terphenyl	103		114		102		70-135	%	04.22.19 00:39

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3086495 Matrix: Soil Date Prep: 04.21.19
Parent Sample Id: 621564-001 MS Sample Id: 621564-001 S MSD Sample Id: 621564-001 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	916	92	904	91	70-135	1	20	mg/kg	04.22.19 01:37	
Diesel Range Organics (DRO)	14.6	997	932	92	926	91	70-135	1	20	mg/kg	04.22.19 01:37	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	120		119		70-135	%	04.22.19 01:37
o-Terphenyl	100		102		70-135	%	04.22.19 01:37

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

QC Summary 621564

LT Environmental, Inc.

Remuda 100 Batt

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3086504 Matrix: Solid Date Prep: 04.19.19
MB Sample Id: 7676260-1-BLK LCS Sample Id: 7676260-1-BKS LCSD Sample Id: 7676260-1-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	0.0800	80	0.0830	83	70-130	4	35	mg/kg	04.20.19 09:20	
Toluene	<0.000454	0.0996	0.0813	82	0.0839	84	70-130	3	35	mg/kg	04.20.19 09:20	
Ethylbenzene	<0.000563	0.0996	0.0740	74	0.0762	76	70-130	3	35	mg/kg	04.20.19 09:20	
m,p-Xylenes	<0.00101	0.199	0.145	73	0.150	75	70-130	3	35	mg/kg	04.20.19 09:20	
o-Xylene	<0.000343	0.0996	0.0753	76	0.0800	80	70-130	6	35	mg/kg	04.20.19 09:20	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		98		101		70-130	%	04.20.19 09:20
4-Bromofluorobenzene	84		89		95		70-130	%	04.20.19 09:20

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3086558 Matrix: Solid Date Prep: 04.22.19
MB Sample Id: 7676304-1-BLK LCS Sample Id: 7676304-1-BKS LCSD Sample Id: 7676304-1-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	0.0896	90	0.0904	91	70-130	1	35	mg/kg	04.23.19 01:07	
Toluene	<0.00200	0.100	0.0919	92	0.0934	94	70-130	2	35	mg/kg	04.23.19 01:07	
Ethylbenzene	<0.00200	0.100	0.0963	96	0.0976	98	70-130	1	35	mg/kg	04.23.19 01:07	
m,p-Xylenes	<0.00400	0.200	0.193	97	0.196	98	70-130	2	35	mg/kg	04.23.19 01:07	
o-Xylene	<0.00200	0.100	0.0976	98	0.0993	100	70-130	2	35	mg/kg	04.23.19 01:07	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		95		95		70-130	%	04.23.19 01:07
4-Bromofluorobenzene	101		99		97		70-130	%	04.23.19 01:07

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3086504 Matrix: Soil Date Prep: 04.19.19
Parent Sample Id: 621562-001 MS Sample Id: 621562-001 S MSD Sample Id: 621562-001 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	0.0660	66	0.0741	75	70-130	12	35	mg/kg	04.20.19 09:58	X
Toluene	<0.000457	0.100	0.0605	61	0.0650	65	70-130	7	35	mg/kg	04.20.19 09:58	X
Ethylbenzene	<0.000566	0.100	0.0455	46	0.0467	47	70-130	3	35	mg/kg	04.20.19 09:58	X
m,p-Xylenes	<0.00102	0.200	0.0592	30	0.0486	24	70-130	20	35	mg/kg	04.20.19 09:58	X
o-Xylene	<0.000345	0.100	0.0607	61	0.0614	62	70-130	1	35	mg/kg	04.20.19 09:58	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		102		70-130	%	04.20.19 09:58
4-Bromofluorobenzene	100		100		70-130	%	04.20.19 09:58

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

QC Summary 621564

LT Environmental, Inc.

Remuda 100 Batt

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

Seq Number: 3086558 Matrix: Soil Date Prep: 04.22.19

Parent Sample Id: 621698-001 MS Sample Id: 621698-001 S MSD Sample Id: 621698-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.0475	48	0.0595	59	70-130	22	35	mg/kg	04.23.19 01:45	X
Toluene	<0.00199	0.0996	0.0592	59	0.0687	68	70-130	15	35	mg/kg	04.23.19 01:45	X
Ethylbenzene	<0.00199	0.0996	0.0651	65	0.0768	76	70-130	16	35	mg/kg	04.23.19 01:45	X
m,p-Xylenes	<0.00398	0.199	0.107	54	0.154	77	70-130	36	35	mg/kg	04.23.19 01:45	XF
o-Xylene	<0.00199	0.0996	0.0578	58	0.0874	87	70-130	41	35	mg/kg	04.23.19 01:45	XF

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	94		89		70-130	%	04.23.19 01:45
4-Bromofluorobenzene	124		121		70-130	%	04.23.19 01:45

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

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

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

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

Chain of Custody

XENCO LABORATORIES

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

Work Order No: 621564

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

Work Order Comments

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

Project Name:	Remuda 100 Batt.	Turn Around	
Project Number:	2RP-5336	Routine	☑
P.O. Number:		Rush:	
Sampler's Name:	Benjamin Belill	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Temperature (°C):	4	Thermometer ID	TNM007	
Received Intact:	Yes No			
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No N/A	Total Containers:	10	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
SW01	S	4/17/19	0920	0-1'	1	X	X	X
SW02			0930	0-1'		X	X	X
FS28			0950	1'		X	X	X
FS29			1000	1'		X	X	X
SW03			1030	0-1'		X	X	X
SW07			1115	0-2'		X	X	X
SW10			1150	0-2'		X	X	X
SW11			1200	0-2'		X	X	X
FS30			1300	1'		X	X	X
FS31			1310	1'		X	X	X

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

Composite

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

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		4/17/19 1930	2		04/18/19 9:37
			4		
			6		

Revised Date 051418 Rev. 2018.1

Final 1.000

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Chain of Custody

Work Order No: _____

XENCO LABORATORIES

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

www.xenco.com Page 2 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:	3104 E. Green St.
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.704.5178	Email:	bbedill@ltenv.com

Work Order Comments

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

Project Name:	Remuda 100 Batt.	Turn Around	
Project Number:	2RP-5336	Routine	☑
P.O. Number:		Rush:	
Sampler's Name:		Due Date:	

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)	Work Order Notes / Sample Comments
FS32	S	4/17/19	1315	1'	1	X	X	X	Composite
FS33			1325	1'		X	X	X	
FS34			1335	1'		X	X	X	
FS35			1340	2'		X	X	X	
FS36			1345	1'		X	X	X	
FS37			1350	1'		X	X	X	
FS38			1355	1'		X	X	X	
FS39			1400	1'		X	X	X	
FS40			1410	1'		X	X	X	

ANALYSIS REQUEST

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

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 B.T. Ba		4/17/19 @ 1900	2		04/18/19 9:30
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

Final 1.000

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Inter-Office Shipment

IOS Number **37372**

Date/Time: 04/18/19 17:12
Created by: Martha Castro
Please send report to: Kalei Stout

Lab# From: **Carlsbad**
Delivery Priority:
Address: 1089 N Canal Street

Lab# To: **Midland**
Air Bill No.:
E-Mail: kalei.stout@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
621564-001	S	SW01	04/17/19 09:20	SW8015MOD_NM	TPH by SW8015 Mod	04/24/19	05/01/19	KLS	GRO-DRO PHCC10C28 PI	
621564-001	S	SW01	04/17/19 09:20	SW8021B	BTEX by EPA 8021B	04/24/19	05/01/19	KLS	BR4FBZ BZ BZME EBZ X	
621564-001	S	SW01	04/17/19 09:20	E300_CL	Chloride by EPA 300	04/24/19	05/15/19	KLS	CL	
621564-002	S	SW02	04/17/19 09:30	E300_CL	Chloride by EPA 300	04/24/19	05/15/19	KLS	CL	
621564-002	S	SW02	04/17/19 09:30	SW8015MOD_NM	TPH by SW8015 Mod	04/24/19	05/01/19	KLS	GRO-DRO PHCC10C28 PI	
621564-002	S	SW02	04/17/19 09:30	SW8021B	BTEX by EPA 8021B	04/24/19	05/01/19	KLS	BR4FBZ BZ BZME EBZ X	
621564-003	S	FS28	04/17/19 09:50	E300_CL	Chloride by EPA 300	04/24/19	05/15/19	KLS	CL	
621564-003	S	FS28	04/17/19 09:50	SW8015MOD_NM	TPH by SW8015 Mod	04/24/19	05/01/19	KLS	GRO-DRO PHCC10C28 PI	
621564-003	S	FS28	04/17/19 09:50	SW8021B	BTEX by EPA 8021B	04/24/19	05/01/19	KLS	BR4FBZ BZ BZME EBZ X	
621564-004	S	FS29	04/17/19 10:00	E300_CL	Chloride by EPA 300	04/24/19	05/15/19	KLS	CL	
621564-004	S	FS29	04/17/19 10:00	SW8021B	BTEX by EPA 8021B	04/24/19	05/01/19	KLS	BR4FBZ BZ BZME EBZ X	
621564-004	S	FS29	04/17/19 10:00	SW8015MOD_NM	TPH by SW8015 Mod	04/24/19	05/01/19	KLS	GRO-DRO PHCC10C28 PI	
621564-005	S	SW03	04/17/19 10:30	SW8015MOD_NM	TPH by SW8015 Mod	04/24/19	05/01/19	KLS	GRO-DRO PHCC10C28 PI	
621564-005	S	SW03	04/17/19 10:30	E300_CL	Chloride by EPA 300	04/24/19	05/15/19	KLS	CL	
621564-005	S	SW03	04/17/19 10:30	SW8021B	BTEX by EPA 8021B	04/24/19	05/01/19	KLS	BR4FBZ BZ BZME EBZ X	
621564-006	S	SW07	04/17/19 11:15	SW8021B	BTEX by EPA 8021B	04/24/19	05/01/19	KLS	BR4FBZ BZ BZME EBZ X	
621564-006	S	SW07	04/17/19 11:15	E300_CL	Chloride by EPA 300	04/24/19	05/15/19	KLS	CL	
621564-006	S	SW07	04/17/19 11:15	SW8015MOD_NM	TPH by SW8015 Mod	04/24/19	05/01/19	KLS	GRO-DRO PHCC10C28 PI	
621564-007	S	SW10	04/17/19 11:50	SW8021B	BTEX by EPA 8021B	04/24/19	05/01/19	KLS	BR4FBZ BZ BZME EBZ X	
621564-007	S	SW10	04/17/19 11:50	E300_CL	Chloride by EPA 300	04/24/19	05/15/19	KLS	CL	
621564-007	S	SW10	04/17/19 11:50	SW8015MOD_NM	TPH by SW8015 Mod	04/24/19	05/01/19	KLS	GRO-DRO PHCC10C28 PI	
621564-008	S	SW11	04/17/19 12:00	E300_CL	Chloride by EPA 300	04/24/19	05/15/19	KLS	CL	
621564-008	S	SW11	04/17/19 12:00	SW8015MOD_NM	TPH by SW8015 Mod	04/24/19	05/01/19	KLS	GRO-DRO PHCC10C28 PI	
621564-008	S	SW11	04/17/19 12:00	SW8021B	BTEX by EPA 8021B	04/24/19	05/01/19	KLS	BR4FBZ BZ BZME EBZ X	
621564-009	S	FS30	04/17/19 13:00	SW8015MOD_NM	TPH by SW8015 Mod	04/24/19	05/01/19	KLS	GRO-DRO PHCC10C28 PI	

Inter-Office Shipment

IOS Number **37372**

Date/Time: 04/18/19 17:12
Created by: Martha Castro
Please send report to: Kalei Stout

Lab# From: **Carlsbad**
Delivery Priority:
Address: 1089 N Canal Street

Lab# To: **Midland**
Air Bill No.:
E-Mail: kalei.stout@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
621564-009	S	FS30	04/17/19 13:00	E300_CL	Chloride by EPA 300	04/24/19	05/15/19	KLS	CL	
621564-009	S	FS30	04/17/19 13:00	SW8021B	BTEX by EPA 8021B	04/24/19	05/01/19	KLS	BR4FBZ BZ BZME EBZ X	
621564-010	S	FS31	04/17/19 13:10	E300_CL	Chloride by EPA 300	04/24/19	05/15/19	KLS	CL	
621564-010	S	FS31	04/17/19 13:10	SW8015MOD_NM	TPH by SW8015 Mod	04/24/19	05/01/19	KLS	GRO-DRO PHCC10C28 PI	
621564-010	S	FS31	04/17/19 13:10	SW8021B	BTEX by EPA 8021B	04/24/19	05/01/19	KLS	BR4FBZ BZ BZME EBZ X	
621564-011	S	FS32	04/17/19 13:15	SW8021B	BTEX by EPA 8021B	04/24/19	05/01/19	KLS	BR4FBZ BZ BZME EBZ X	
621564-011	S	FS32	04/17/19 13:15	SW8015MOD_NM	TPH by SW8015 Mod	04/24/19	05/01/19	KLS	GRO-DRO PHCC10C28 PI	
621564-011	S	FS32	04/17/19 13:15	E300_CL	Chloride by EPA 300	04/24/19	05/15/19	KLS	CL	
621564-012	S	FS33	04/17/19 13:25	SW8021B	BTEX by EPA 8021B	04/24/19	05/01/19	KLS	BR4FBZ BZ BZME EBZ X	
621564-012	S	FS33	04/17/19 13:25	SW8015MOD_NM	TPH by SW8015 Mod	04/24/19	05/01/19	KLS	GRO-DRO PHCC10C28 PI	
621564-012	S	FS33	04/17/19 13:25	E300_CL	Chloride by EPA 300	04/24/19	05/15/19	KLS	CL	
621564-013	S	FS34	04/17/19 13:35	SW8015MOD_NM	TPH by SW8015 Mod	04/24/19	05/01/19	KLS	GRO-DRO PHCC10C28 PI	
621564-013	S	FS34	04/17/19 13:35	SW8021B	BTEX by EPA 8021B	04/24/19	05/01/19	KLS	BR4FBZ BZ BZME EBZ X	
621564-013	S	FS34	04/17/19 13:35	E300_CL	Chloride by EPA 300	04/24/19	05/15/19	KLS	CL	
621564-014	S	FS35	04/17/19 13:40	SW8015MOD_NM	TPH by SW8015 Mod	04/24/19	05/01/19	KLS	GRO-DRO PHCC10C28 PI	
621564-014	S	FS35	04/17/19 13:40	E300_CL	Chloride by EPA 300	04/24/19	05/15/19	KLS	CL	
621564-014	S	FS35	04/17/19 13:40	SW8021B	BTEX by EPA 8021B	04/24/19	05/01/19	KLS	BR4FBZ BZ BZME EBZ X	
621564-015	S	FS36	04/17/19 13:45	E300_CL	Chloride by EPA 300	04/24/19	05/15/19	KLS	CL	
621564-015	S	FS36	04/17/19 13:45	SW8021B	BTEX by EPA 8021B	04/24/19	05/01/19	KLS	BR4FBZ BZ BZME EBZ X	
621564-015	S	FS36	04/17/19 13:45	SW8015MOD_NM	TPH by SW8015 Mod	04/24/19	05/01/19	KLS	GRO-DRO PHCC10C28 PI	
621564-016	S	FS37	04/17/19 13:50	SW8021B	BTEX by EPA 8021B	04/24/19	05/01/19	KLS	BR4FBZ BZ BZME EBZ X	
621564-016	S	FS37	04/17/19 13:50	SW8015MOD_NM	TPH by SW8015 Mod	04/24/19	05/01/19	KLS	GRO-DRO PHCC10C28 PI	
621564-016	S	FS37	04/17/19 13:50	E300_CL	Chloride by EPA 300	04/24/19	05/15/19	KLS	CL	
621564-017	S	FS38	04/17/19 13:55	SW8015MOD_NM	TPH by SW8015 Mod	04/24/19	05/01/19	KLS	GRO-DRO PHCC10C28 PI	
621564-017	S	FS38	04/17/19 13:55	E300_CL	Chloride by EPA 300	04/24/19	05/15/19	KLS	CL	

Inter Office Shipment or Sample Comments:

Inter-Office Shipment

IOS Number **37372**

Date/Time: 04/18/19 17:12
Lab# From: **Carlsbad**
Lab# To: **Midland**

Created by: Martha Castro
Delivery Priority:
Air Bill No.:

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

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
621564-017	S	FS38	04/17/19 13:55	SW8021B	BTEX by EPA 8021B	04/24/19	05/01/19	KLS	BR4FBZ BZ BZME EBZ X	
621564-018	S	FS39	04/17/19 14:00	SW8015MOD_NM	TPH by SW8015 Mod	04/24/19	05/01/19	KLS	GRO-DRO PHCC10C28 PI	
621564-018	S	FS39	04/17/19 14:00	E300_CL	Chloride by EPA 300	04/24/19	05/15/19	KLS	CL	
621564-018	S	FS39	04/17/19 14:00	SW8021B	BTEX by EPA 8021B	04/24/19	05/01/19	KLS	BR4FBZ BZ BZME EBZ X	
621564-019	S	FS40	04/17/19 14:10	E300_CL	Chloride by EPA 300	04/24/19	05/15/19	KLS	CL	
621564-019	S	FS40	04/17/19 14:10	SW8015MOD_NM	TPH by SW8015 Mod	04/24/19	05/01/19	KLS	GRO-DRO PHCC10C28 PI	
621564-019	S	FS40	04/17/19 14:10	SW8021B	BTEX by EPA 8021B	04/24/19	05/01/19	KLS	BR4FBZ BZ BZME EBZ X	

Inter Office Shipment or Sample Comments:

Relinquished By: Martha Castro
Date Relinquished: 04/18/2019

Received By: Katie Lowe
Date Received: 04/19/2019 00:00
Cooler Temperature: 4.0

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 37372

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

Sent By: Martha Castro **Date Sent:** 04/18/2019 05:12 PM

Received By: Katie Lowe **Date Received:** 04/19/2019 12:00 AM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	4	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received with appropriate temperature?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**	
#5 *Custody Seals Signed and dated for Containers/coolers	**N/A**	
#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: 04/19/2019

Katie Lowe

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 04/18/2019 09:39:00 AM

Work Order #: 621564

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

Temperature Measuring device used : TNM007

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)?	**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: Martha Castro Date: 04/18/2019

Checklist reviewed by: Kalei Stout Date: 04/19/2019

Analytical Report 622065

for

LT Environmental, Inc.

Project Manager: Ashley Ager

Remuda 100 Batt.

2RP-5326

29-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)

29-APR-19

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

Reference: XENCO Report No(s): **622065**
Remuda 100 Batt.
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) 622065. 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. 622065 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Sample Cross Reference 622065

LT Environmental, Inc., Arvada, CO

Remuda 100 Batt.

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS03A	S	04-22-19 11:30	1 ft	622065-001
SS04A	S	04-22-19 11:45	1 ft	622065-002
SS06	S	04-22-19 12:00	0.5 ft	622065-003
SS06A	S	04-22-19 12:15	1 ft	622065-004
SS07	S	04-22-19 12:20	0.5 ft	622065-005
SS07A	S	04-22-19 12:30	1 ft	622065-006
SS08	S	04-22-19 12:35	0.5 ft	622065-007
SS08A	S	04-22-19 12:40	1 ft	622065-008
SS09	S	04-22-19 12:45	0.5 ft	622065-009
SS09A	S	04-22-19 12:50	1 ft	622065-010
SS10	S	04-22-19 13:00	0.5 ft	622065-011
SS10A	S	04-22-19 13:10	1 ft	622065-012
SS11	S	04-22-19 13:20	0.5 ft	622065-013
SS11A	S	04-22-19 13:25	1 ft	622065-014

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3086882 BTEX by EPA 8021B
Lab Sample ID 622065-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Benzene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Toluene recovered below QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 622065-001.
The Laboratory Control Sample for Toluene, Benzene is within laboratory Control Limits, therefore the data was accepted.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.
Samples affected are: 622065-001 S,622065-001 SD.

Batch: LBA-3086980 Chloride by EPA 300
Lab Sample ID 622065-014 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 622065-004, -005, -006, -007, -008, -009, -010, -011, -012, -013, -014.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3087047 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.
Samples affected are: 622065-005,622065-007,622065-006.

Certificate of Analysis Summary 622065

LT Environmental, Inc., Arvada, CO

Project Name: Remuda 100 Batt.

Project Id: 2RP-5326
Contact: Ashley Ager
Project Location: Delaware Basin

Date Received in Lab: Wed Apr-24-19 11:20 am
Report Date: 29-APR-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	622065-001		622065-002		622065-003		622065-004		622065-005		622065-006	
	Field Id:	SS03A		SS04A		SS06		SS06A		SS07		SS07A	
	Depth:	1- ft		1- ft		0.5- ft		1- ft		0.5- ft		1- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Apr-22-19 11:30		Apr-22-19 11:45		Apr-22-19 12:00		Apr-22-19 12:15		Apr-22-19 12:20		Apr-22-19 12:30	
BTEX by EPA 8021B	***Extracted:***	Apr-24-19 15:00		Apr-25-19 17:00		Apr-25-19 17:00		Apr-25-19 17:00		Apr-25-19 17:00		Apr-25-19 17:00	
	Analyzed:	Apr-25-19 03:34		Apr-26-19 03:36		Apr-26-19 03:55		Apr-26-19 04:14		Apr-26-19 04:33		Apr-26-19 04:52	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00198	0.00198	<0.00201	0.00201
Toluene		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00198	0.00198	<0.00201	0.00201
Ethylbenzene		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00198	0.00198	<0.00201	0.00201
m,p-Xylenes		<0.00398	0.00398	<0.00401	0.00401	<0.00399	0.00399	<0.00404	0.00404	<0.00397	0.00397	<0.00402	0.00402
o-Xylene		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00198	0.00198	<0.00201	0.00201
Total Xylenes		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00198	0.00198	<0.00201	0.00201
Total BTEX		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00198	0.00198	<0.00201	0.00201
Chloride by EPA 300	***Extracted:***	Apr-25-19 17:00		Apr-25-19 17:00		Apr-25-19 17:00		Apr-25-19 16:45		Apr-25-19 16:45		Apr-25-19 16:45	
	Analyzed:	Apr-26-19 10:02		Apr-26-19 10:08		Apr-26-19 10:13		Apr-26-19 02:42		Apr-26-19 03:04		Apr-26-19 03:11	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		75.8	50.1	386	5.00	117	25.0	20.5	5.00	44.4	5.02	16.2	4.98
TPH by SW8015 Mod	***Extracted:***	Apr-27-19 11:00		Apr-27-19 11:00		Apr-27-19 11:00		Apr-27-19 11:00		Apr-27-19 11:00		Apr-27-19 11:00	
	Analyzed:	Apr-27-19 12:25		Apr-27-19 13:25		Apr-27-19 13:46		Apr-27-19 14:06		Apr-27-19 14:26		Apr-27-19 14:46	
	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	<14.9	14.9	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<14.9	14.9	<15.0	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<14.9	14.9	<15.0	15.0	<15.0	15.0
Total TPH		<15.0	15.0	<15.0	15.0	<14.9	14.9	<14.9	14.9	<15.0	15.0	<15.0	15.0
Total GRO-DRO		<15.0	15.0	<15.0	15.0	<14.9	14.9	<14.9	14.9	<15.0	15.0	<15.0	15.0

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 622065

LT Environmental, Inc., Arvada, CO

Project Name: Remuda 100 Batt.

Project Id: 2RP-5326
Contact: Ashley Ager
Project Location: Delaware Basin

Date Received in Lab: Wed Apr-24-19 11:20 am
Report Date: 29-APR-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	622065-007		622065-008		622065-009		622065-010		622065-011		622065-012	
	Field Id:	SS08		SS08A		SS09		SS09A		SS10		SS10A	
	Depth:	0.5- ft		1- ft		0.5- ft		1- ft		0.5- ft		1- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Apr-22-19 12:35		Apr-22-19 12:40		Apr-22-19 12:45		Apr-22-19 12:50		Apr-22-19 13:00		Apr-22-19 13:10	
BTEX by EPA 8021B	***Extracted:***	Apr-25-19 17:00		Apr-25-19 17:00		Apr-25-19 17:00		Apr-25-19 17:00		Apr-25-19 17:00		Apr-25-19 17:00	
	Analyzed:	Apr-26-19 05:11		Apr-26-19 05:30		Apr-26-19 05:49		Apr-26-19 06:08		Apr-26-19 07:22		Apr-26-19 07:41	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00199	0.00199	<0.00202	0.00202	<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202
Toluene		<0.00199	0.00199	<0.00202	0.00202	<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202
Ethylbenzene		<0.00199	0.00199	<0.00202	0.00202	<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202
m,p-Xylenes		<0.00398	0.00398	<0.00403	0.00403	<0.00398	0.00398	<0.00402	0.00402	<0.00399	0.00399	<0.00403	0.00403
o-Xylene		<0.00199	0.00199	<0.00202	0.00202	<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202
Total Xylenes		<0.00199	0.00199	<0.00202	0.00202	<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202
Total BTEX		<0.00199	0.00199	<0.00202	0.00202	<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202
Chloride by EPA 300	***Extracted:***	Apr-25-19 16:45		Apr-25-19 16:45		Apr-25-19 16:45		Apr-25-19 16:45		Apr-25-19 16:45		Apr-25-19 16:45	
	Analyzed:	Apr-26-19 03:18		Apr-26-19 03:25		Apr-26-19 03:48		Apr-26-19 03:56		Apr-26-19 04:03		Apr-26-19 04:10	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		96.5	4.98	69.7	4.95	329	5.05	431	50.2	39.9	4.99	88.0	49.9
TPH by SW8015 Mod	***Extracted:***	Apr-27-19 11:00		Apr-27-19 11:00		Apr-27-19 11:00		Apr-27-19 11:00		Apr-27-19 11:00		Apr-27-19 11:00	
	Analyzed:	Apr-27-19 15:07		Apr-27-19 15:27		Apr-27-19 15:48		Apr-27-19 16:08		Apr-27-19 17:09		Apr-27-19 17:30	
	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

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 622065

LT Environmental, Inc., Arvada, CO

Project Name: Remuda 100 Batt.

Project Id: 2RP-5326
Contact: Ashley Ager
Project Location: Delaware Basin

Date Received in Lab: Wed Apr-24-19 11:20 am
Report Date: 29-APR-19
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	622065-013		622065-014					
	Field Id:	SS11		SS11A					
	Depth:	0.5- ft		1- ft					
	Matrix:	SOIL		SOIL					
	Sampled:	Apr-22-19 13:20		Apr-22-19 13:25					
BTEX by EPA 8021B	***Extracted:***	Apr-25-19 17:00		Apr-25-19 17:00					
	Analyzed:	Apr-26-19 08:00		Apr-26-19 08:19					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00199	0.00199	<0.00198	0.00198				
Toluene		<0.00199	0.00199	<0.00198	0.00198				
Ethylbenzene		<0.00199	0.00199	<0.00198	0.00198				
m,p-Xylenes		<0.00398	0.00398	<0.00397	0.00397				
o-Xylene		<0.00199	0.00199	<0.00198	0.00198				
Total Xylenes		<0.00199	0.00199	<0.00198	0.00198				
Total BTEX		<0.00199	0.00199	<0.00198	0.00198				
Chloride by EPA 300	***Extracted:***	Apr-25-19 16:45		Apr-25-19 16:45					
	Analyzed:	Apr-26-19 04:17		Apr-26-19 04:25					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		67.7	4.99	81.1	4.95				
TPH by SW8015 Mod	***Extracted:***	Apr-27-19 11:00		Apr-27-19 11:00					
	Analyzed:	Apr-27-19 17:50		Apr-27-19 18:11					
	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				

Jessica Kramer
Project Assistant

Certificate of Analytical Results 622065

LT Environmental, Inc., Arvada, CO

Remuda 100 Batt.

Sample Id:	**SS03A**	Matrix:	Soil	Date Received:	04.24.19 11.20
Lab Sample Id:	622065-001	Date Collected:	04.22.19 11.30	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.25.19 17.00	Basis:	Wet Weight
Seq Number:	3086982				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**75.8**	50.1	mg/kg	04.26.19 10.02		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 11.00	Basis:	Wet Weight
Seq Number:	3087229				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.27.19 12.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.27.19 12.25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.27.19 12.25	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.27.19 12.25	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.27.19 12.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	04.27.19 12.25	
o-Terphenyl	84-15-1	96	%	70-135	04.27.19 12.25	

Certificate of Analytical Results 622065

LT Environmental, Inc., Arvada, CO

Remuda 100 Batt.

Sample Id:	**SS03A**	Matrix:	Soil	Date Received:	04.24.19 11.20
Lab Sample Id:	622065-001	Date Collected:	04.22.19 11.30	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.24.19 15.00	Basis:	Wet Weight
Seq Number:	3086882				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.25.19 03.34	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.25.19 03.34	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.25.19 03.34	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.25.19 03.34	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.25.19 03.34	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.25.19 03.34	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.25.19 03.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	127	%	70-130	04.25.19 03.34	
1,4-Difluorobenzene	540-36-3	95	%	70-130	04.25.19 03.34	

Certificate of Analytical Results 622065

LT Environmental, Inc., Arvada, CO

Remuda 100 Batt.

Sample Id:	**SS04A**	Matrix:	Soil	Date Received:	04.24.19 11.20
Lab Sample Id:	622065-002	Date Collected:	04.22.19 11.45	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.25.19 17.00	Basis:	Wet Weight
Seq Number:	3086982				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**386**	5.00	mg/kg	04.26.19 10.08		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 11.00	Basis:	Wet Weight
Seq Number:	3087229				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.27.19 13.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.27.19 13.25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.27.19 13.25	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.27.19 13.25	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.27.19 13.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	04.27.19 13.25	
o-Terphenyl	84-15-1	88	%	70-135	04.27.19 13.25	

Certificate of Analytical Results 622065

LT Environmental, Inc., Arvada, CO

Remuda 100 Batt.

Sample Id:	**SS04A**	Matrix:	Soil	Date Received:	04.24.19 11.20
Lab Sample Id:	622065-002	Date Collected:	04.22.19 11.45	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.25.19 17.00	Basis:	Wet Weight
Seq Number:	3087047				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.26.19 03.36	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.26.19 03.36	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.26.19 03.36	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	04.26.19 03.36	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.26.19 03.36	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.26.19 03.36	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.26.19 03.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	04.26.19 03.36	
4-Bromofluorobenzene	460-00-4	112	%	70-130	04.26.19 03.36	

Certificate of Analytical Results 622065

LT Environmental, Inc., Arvada, CO

Remuda 100 Batt.

Sample Id:	**SS06**	Matrix:	Soil	Date Received:	04.24.19 11.20
Lab Sample Id:	622065-003	Date Collected:	04.22.19 12.00	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.25.19 17.00	Basis:	Wet Weight
Seq Number:	3086982				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**117**	25.0	mg/kg	04.26.19 10.13		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 11.00	Basis:	Wet Weight
Seq Number:	3087229				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	04.27.19 13.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	04.27.19 13.46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	04.27.19 13.46	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	04.27.19 13.46	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	04.27.19 13.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	04.27.19 13.46	
o-Terphenyl	84-15-1	86	%	70-135	04.27.19 13.46	

Certificate of Analytical Results 622065

LT Environmental, Inc., Arvada, CO

Remuda 100 Batt.

Sample Id:	**SS06**	Matrix:	Soil	Date Received:	04.24.19 11.20
Lab Sample Id:	622065-003	Date Collected:	04.22.19 12.00	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.25.19 17.00	Basis:	Wet Weight
Seq Number:	3087047				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.26.19 03.55	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.26.19 03.55	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.26.19 03.55	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	04.26.19 03.55	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.26.19 03.55	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.26.19 03.55	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.26.19 03.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	04.26.19 03.55	
4-Bromofluorobenzene	460-00-4	119	%	70-130	04.26.19 03.55	

Certificate of Analytical Results 622065

LT Environmental, Inc., Arvada, CO

Remuda 100 Batt.

Sample Id:	**SS06A**	Matrix:	Soil	Date Received:	04.24.19 11.20
Lab Sample Id:	622065-004	Date Collected:	04.22.19 12.15	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.25.19 16.45	Basis:	Wet Weight
Seq Number:	3086980				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**20.5**	5.00	mg/kg	04.26.19 02.42		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 11.00	Basis:	Wet Weight
Seq Number:	3087229				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	04.27.19 14.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	04.27.19 14.06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	04.27.19 14.06	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	04.27.19 14.06	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	04.27.19 14.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	04.27.19 14.06	
o-Terphenyl	84-15-1	83	%	70-135	04.27.19 14.06	

Certificate of Analytical Results 622065

LT Environmental, Inc., Arvada, CO

Remuda 100 Batt.

Sample Id:	**SS06A**	Matrix:	Soil	Date Received:	04.24.19 11.20
Lab Sample Id:	622065-004	Date Collected:	04.22.19 12.15	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.25.19 17.00	Basis:	Wet Weight
Seq Number:	3087047				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	04.26.19 04.14	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	04.26.19 04.14	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	04.26.19 04.14	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	04.26.19 04.14	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	04.26.19 04.14	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	04.26.19 04.14	U	1
Total BTEX		<0.00202	0.00202	mg/kg	04.26.19 04.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	114	%	70-130	04.26.19 04.14	
1,4-Difluorobenzene	540-36-3	103	%	70-130	04.26.19 04.14	

Certificate of Analytical Results 622065

LT Environmental, Inc., Arvada, CO

Remuda 100 Batt.

Sample Id:	**SS07**	Matrix:	Soil	Date Received:	04.24.19 11.20
Lab Sample Id:	622065-005	Date Collected:	04.22.19 12.20	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.25.19 16.45	Basis:	Wet Weight
Seq Number:	3086980				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**44.4**	5.02	mg/kg	04.26.19 03.04		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 11.00	Basis:	Wet Weight
Seq Number:	3087229				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.27.19 14.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.27.19 14.26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.27.19 14.26	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.27.19 14.26	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.27.19 14.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	04.27.19 14.26	
o-Terphenyl	84-15-1	90	%	70-135	04.27.19 14.26	

Certificate of Analytical Results 622065

LT Environmental, Inc., Arvada, CO

Remuda 100 Batt.

Sample Id:	**SS07**	Matrix:	Soil	Date Received:	04.24.19 11.20
Lab Sample Id:	622065-005	Date Collected:	04.22.19 12.20	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.25.19 17.00	Basis:	Wet Weight
Seq Number:	3087047				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	04.26.19 04.33	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	04.26.19 04.33	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	04.26.19 04.33	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	04.26.19 04.33	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	04.26.19 04.33	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	04.26.19 04.33	U	1
Total BTEX		<0.00198	0.00198	mg/kg	04.26.19 04.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	159	%	70-130	04.26.19 04.33	**
1,4-Difluorobenzene	540-36-3	91	%	70-130	04.26.19 04.33	

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LT Environmental, Inc., Arvada, CO

Remuda 100 Batt.

Sample Id:	**SS07A**	Matrix:	Soil	Date Received:	04.24.19 11.20
Lab Sample Id:	622065-006	Date Collected:	04.22.19 12.30	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.25.19 16.45	Basis:	Wet Weight
Seq Number:	3086980				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**16.2**	4.98	mg/kg	04.26.19 03.11		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 11.00	Basis:	Wet Weight
Seq Number:	3087229				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.27.19 14.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.27.19 14.46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.27.19 14.46	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.27.19 14.46	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.27.19 14.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	04.27.19 14.46	
o-Terphenyl	84-15-1	85	%	70-135	04.27.19 14.46	

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LT Environmental, Inc., Arvada, CO

Remuda 100 Batt.

Sample Id:	**SS07A**	Matrix:	Soil	Date Received:	04.24.19 11.20
Lab Sample Id:	622065-006	Date Collected:	04.22.19 12.30	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.25.19 17.00	Basis:	Wet Weight
Seq Number:	3087047				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.26.19 04.52	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.26.19 04.52	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.26.19 04.52	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.26.19 04.52	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.26.19 04.52	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.26.19 04.52	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.26.19 04.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	95	%	70-130	04.26.19 04.52	
4-Bromofluorobenzene	460-00-4	145	%	70-130	04.26.19 04.52	**

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LT Environmental, Inc., Arvada, CO

Remuda 100 Batt.

Sample Id:	**SS08**	Matrix:	Soil	Date Received:	04.24.19 11.20
Lab Sample Id:	622065-007	Date Collected:	04.22.19 12.35	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.25.19 16.45	Basis:	Wet Weight
Seq Number:	3086980				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**96.5**	4.98	mg/kg	04.26.19 03.18		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 11.00	Basis:	Wet Weight
Seq Number:	3087229				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.27.19 15.07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.27.19 15.07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.27.19 15.07	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.27.19 15.07	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.27.19 15.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	04.27.19 15.07	
o-Terphenyl	84-15-1	85	%	70-135	04.27.19 15.07	

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LT Environmental, Inc., Arvada, CO

Remuda 100 Batt.

Sample Id:	**SS08**	Matrix:	Soil	Date Received:	04.24.19 11.20
Lab Sample Id:	622065-007	Date Collected:	04.22.19 12.35	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.25.19 17.00	Basis:	Wet Weight
Seq Number:	3087047				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.26.19 05.11	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.26.19 05.11	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.26.19 05.11	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.26.19 05.11	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.26.19 05.11	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.26.19 05.11	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.26.19 05.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	160	%	70-130	04.26.19 05.11	**
1,4-Difluorobenzene	540-36-3	96	%	70-130	04.26.19 05.11	

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Remuda 100 Batt.

Sample Id:	**SS08A**	Matrix:	Soil	Date Received:	04.24.19 11.20
Lab Sample Id:	622065-008	Date Collected:	04.22.19 12.40	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.25.19 16.45	Basis:	Wet Weight
Seq Number:	3086980				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**69.7**	4.95	mg/kg	04.26.19 03.25		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 11.00	Basis:	Wet Weight
Seq Number:	3087229				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.27.19 15.27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.27.19 15.27	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.27.19 15.27	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.27.19 15.27	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.27.19 15.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	118	%	70-135	04.27.19 15.27	
o-Terphenyl	84-15-1	94	%	70-135	04.27.19 15.27	

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LT Environmental, Inc., Arvada, CO

Remuda 100 Batt.

Sample Id:	**SS08A**	Matrix:	Soil	Date Received:	04.24.19 11.20
Lab Sample Id:	622065-008	Date Collected:	04.22.19 12.40	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.25.19 17.00	Basis:	Wet Weight
Seq Number:	3087047				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	04.26.19 05.30	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	04.26.19 05.30	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	04.26.19 05.30	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	04.26.19 05.30	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	04.26.19 05.30	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	04.26.19 05.30	U	1
Total BTEX		<0.00202	0.00202	mg/kg	04.26.19 05.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	04.26.19 05.30	
4-Bromofluorobenzene	460-00-4	112	%	70-130	04.26.19 05.30	

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Remuda 100 Batt.

Sample Id:	**SS09**	Matrix:	Soil	Date Received:	04.24.19 11.20
Lab Sample Id:	622065-009	Date Collected:	04.22.19 12.45	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.25.19 16.45	Basis:	Wet Weight
Seq Number:	3086980				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**329**	5.05	mg/kg	04.26.19 03.48		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 11.00	Basis:	Wet Weight
Seq Number:	3087229				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	04.27.19 15.48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	04.27.19 15.48	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	04.27.19 15.48	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	04.27.19 15.48	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	04.27.19 15.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	04.27.19 15.48	
o-Terphenyl	84-15-1	93	%	70-135	04.27.19 15.48	

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LT Environmental, Inc., Arvada, CO

Remuda 100 Batt.

Sample Id:	**SS09**	Matrix:	Soil	Date Received:	04.24.19 11.20
Lab Sample Id:	622065-009	Date Collected:	04.22.19 12.45	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.25.19 17.00	Basis:	Wet Weight
Seq Number:	3087047				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.26.19 05.49	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.26.19 05.49	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.26.19 05.49	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.26.19 05.49	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.26.19 05.49	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.26.19 05.49	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.26.19 05.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	04.26.19 05.49	
4-Bromofluorobenzene	460-00-4	116	%	70-130	04.26.19 05.49	

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Remuda 100 Batt.

Sample Id:	**SS09A**	Matrix:	Soil	Date Received:	04.24.19 11.20
Lab Sample Id:	622065-010	Date Collected:	04.22.19 12.50	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.25.19 16.45	Basis:	Wet Weight
Seq Number:	3086980				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**431**	50.2	mg/kg	04.26.19 03.56		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 11.00	Basis:	Wet Weight
Seq Number:	3087229				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.27.19 16.08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.27.19 16.08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.27.19 16.08	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.27.19 16.08	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.27.19 16.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	04.27.19 16.08	
o-Terphenyl	84-15-1	81	%	70-135	04.27.19 16.08	

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Remuda 100 Batt.

Sample Id:	**SS09A**	Matrix:	Soil	Date Received:	04.24.19 11.20
Lab Sample Id:	622065-010	Date Collected:	04.22.19 12.50	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.25.19 17.00	Basis:	Wet Weight
Seq Number:	3087047				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.26.19 06.08	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.26.19 06.08	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.26.19 06.08	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.26.19 06.08	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.26.19 06.08	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.26.19 06.08	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.26.19 06.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	04.26.19 06.08	
4-Bromofluorobenzene	460-00-4	119	%	70-130	04.26.19 06.08	

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Remuda 100 Batt.

Sample Id:	**SS10**	Matrix:	Soil	Date Received:	04.24.19 11.20
Lab Sample Id:	622065-011	Date Collected:	04.22.19 13.00	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.25.19 16.45	Basis:	Wet Weight
Seq Number:	3086980				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**39.9**	4.99	mg/kg	04.26.19 04.03		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 11.00	Basis:	Wet Weight
Seq Number:	3087229				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.27.19 17.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.27.19 17.09	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.27.19 17.09	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.27.19 17.09	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.27.19 17.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	04.27.19 17.09	
o-Terphenyl	84-15-1	77	%	70-135	04.27.19 17.09	

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Remuda 100 Batt.

Sample Id:	**SS10**	Matrix:	Soil	Date Received:	04.24.19 11.20
Lab Sample Id:	622065-011	Date Collected:	04.22.19 13.00	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.25.19 17.00	Basis:	Wet Weight
Seq Number:	3087047				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.26.19 07.22	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.26.19 07.22	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.26.19 07.22	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	04.26.19 07.22	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.26.19 07.22	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.26.19 07.22	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.26.19 07.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	04.26.19 07.22	
4-Bromofluorobenzene	460-00-4	113	%	70-130	04.26.19 07.22	

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Remuda 100 Batt.

Sample Id:	**SS10A**	Matrix:	Soil	Date Received:	04.24.19 11.20
Lab Sample Id:	622065-012	Date Collected:	04.22.19 13.10	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.25.19 16.45	Basis:	Wet Weight
Seq Number:	3086980				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**88.0**	49.9	mg/kg	04.26.19 04.10		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 11.00	Basis:	Wet Weight
Seq Number:	3087229				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.27.19 17.30	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.27.19 17.30	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.27.19 17.30	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.27.19 17.30	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.27.19 17.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	04.27.19 17.30	
o-Terphenyl	84-15-1	86	%	70-135	04.27.19 17.30	

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Remuda 100 Batt.

Sample Id:	**SS10A**	Matrix:	Soil	Date Received:	04.24.19 11.20
Lab Sample Id:	622065-012	Date Collected:	04.22.19 13.10	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.25.19 17.00	Basis:	Wet Weight
Seq Number:	3087047				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	04.26.19 07.41	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	04.26.19 07.41	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	04.26.19 07.41	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	04.26.19 07.41	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	04.26.19 07.41	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	04.26.19 07.41	U	1
Total BTEX		<0.00202	0.00202	mg/kg	04.26.19 07.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	116	%	70-130	04.26.19 07.41	
1,4-Difluorobenzene	540-36-3	102	%	70-130	04.26.19 07.41	

Certificate of Analytical Results 622065

LT Environmental, Inc., Arvada, CO

Remuda 100 Batt.

Sample Id:	**SS11**	Matrix:	Soil	Date Received:	04.24.19 11.20
Lab Sample Id:	622065-013	Date Collected:	04.22.19 13.20	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.25.19 16.45	Basis:	Wet Weight
Seq Number:	3086980				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**67.7**	4.99	mg/kg	04.26.19 04.17		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 11.00	Basis:	Wet Weight
Seq Number:	3087229				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.27.19 17.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.27.19 17.50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.27.19 17.50	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.27.19 17.50	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.27.19 17.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	04.27.19 17.50	
o-Terphenyl	84-15-1	84	%	70-135	04.27.19 17.50	

Certificate of Analytical Results 622065

LT Environmental, Inc., Arvada, CO

Remuda 100 Batt.

Sample Id:	**SS11**	Matrix:	Soil	Date Received:	04.24.19 11.20
Lab Sample Id:	622065-013	Date Collected:	04.22.19 13.20	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.25.19 17.00	Basis:	Wet Weight
Seq Number:	3087047				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.26.19 08.00	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.26.19 08.00	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.26.19 08.00	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.26.19 08.00	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.26.19 08.00	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.26.19 08.00	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.26.19 08.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	04.26.19 08.00	
4-Bromofluorobenzene	460-00-4	115	%	70-130	04.26.19 08.00	

Certificate of Analytical Results 622065

LT Environmental, Inc., Arvada, CO

Remuda 100 Batt.

Sample Id:	**SS11A**	Matrix:	Soil	Date Received:	04.24.19 11.20
Lab Sample Id:	622065-014	Date Collected:	04.22.19 13.25	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.25.19 16.45	Basis:	Wet Weight
Seq Number:	3086980				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**81.1**	4.95	mg/kg	04.26.19 04.25		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 11.00	Basis:	Wet Weight
Seq Number:	3087229				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.27.19 18.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.27.19 18.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.27.19 18.11	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.27.19 18.11	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.27.19 18.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	04.27.19 18.11	
o-Terphenyl	84-15-1	93	%	70-135	04.27.19 18.11	

Certificate of Analytical Results 622065

LT Environmental, Inc., Arvada, CO

Remuda 100 Batt.

Sample Id:	**SS11A**	Matrix:	Soil	Date Received:	04.24.19 11.20
Lab Sample Id:	622065-014	Date Collected:	04.22.19 13.25	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.25.19 17.00	Basis:	Wet Weight
Seq Number:	3087047				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	04.26.19 08.19	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	04.26.19 08.19	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	04.26.19 08.19	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	04.26.19 08.19	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	04.26.19 08.19	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	04.26.19 08.19	U	1
Total BTEX		<0.00198	0.00198	mg/kg	04.26.19 08.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	116	%	70-130	04.26.19 08.19	
1,4-Difluorobenzene	540-36-3	101	%	70-130	04.26.19 08.19	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 622065

LT Environmental, Inc.

Remuda 100 Batt.

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3086980 Matrix: Solid Date Prep: 04.25.19
MB Sample Id: 7676565-1-BLK LCS Sample Id: 7676565-1-BKS LCSD Sample Id: 7676565-1-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	256	102	251	100	90-110	2	20	mg/kg	04.26.19 02:27	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3086982 Matrix: Solid Date Prep: 04.25.19
MB Sample Id: 7676568-1-BLK LCS Sample Id: 7676568-1-BKS LCSD Sample Id: 7676568-1-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	251	100	90-110	1	20	mg/kg	04.25.19 19:16	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3086980 Matrix: Soil Date Prep: 04.25.19
Parent Sample Id: 622065-004 MS Sample Id: 622065-004 S MSD Sample Id: 622065-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	20.5	250	304	113	306	114	90-110	1	20	mg/kg	04.26.19 02:49	X

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3086980 Matrix: Soil Date Prep: 04.25.19
Parent Sample Id: 622065-014 MS Sample Id: 622065-014 S MSD Sample Id: 622065-014 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	81.1	248	341	105	351	109	90-110	3	20	mg/kg	04.26.19 04:32	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3086982 Matrix: Soil Date Prep: 04.25.19
Parent Sample Id: 621825-016 MS Sample Id: 621825-016 S MSD Sample Id: 621825-016 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	13.2	252	282	107	283	107	90-110	0	20	mg/kg	04.25.19 19:32	

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

QC Summary 622065

LT Environmental, Inc.

Remuda 100 Batt.

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3086982 Matrix: Soil Date Prep: 04.25.19
Parent Sample Id: 621828-003 MS Sample Id: 621828-003 S MSD Sample Id: 621828-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	607	263	847	91	853	94	90-110	1	20	mg/kg	04.26.19 09:09	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3087229 Matrix: Solid Date Prep: 04.27.19
MB Sample Id: 7676732-1-BLK LCS Sample Id: 7676732-1-BKS LCSD Sample Id: 7676732-1-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	879	88	910	91	70-135	3	20	mg/kg	04.27.19 11:45	
Diesel Range Organics (DRO)	<8.13	1000	885	89	912	91	70-135	3	20	mg/kg	04.27.19 11:45	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	91		105		106		70-135	%	04.27.19 11:45
o-Terphenyl	86		82		85		70-135	%	04.27.19 11:45

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3087229 Matrix: Soil Date Prep: 04.27.19
Parent Sample Id: 622065-001 MS Sample Id: 622065-001 S MSD Sample Id: 622065-001 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)	9.88	999	823	81	795	79	70-135	3	20	mg/kg	04.27.19 12:45	
Diesel Range Organics (DRO)	13.0	999	824	81	793	78	70-135	4	20	mg/kg	04.27.19 12:45	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	100		95		70-135	%	04.27.19 12:45
o-Terphenyl	80		76		70-135	%	04.27.19 12:45

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

QC Summary 622065

LT Environmental, Inc.

Remuda 100 Batt.

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3086882 — Matrix: Solid — Date Prep: 04.24.19
MB Sample Id: 7676527-1-BLK — LCS Sample Id: 7676527-1-BKS — LCSD Sample Id: 7676527-1-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	0.0994	0.0964	97	0.105	105	70-130	9	35	mg/kg	04.25.19 01:42	
Toluene	<0.00199	0.0994	0.0988	99	0.106	106	70-130	7	35	mg/kg	04.25.19 01:42	
Ethylbenzene	<0.00199	0.0994	0.104	105	0.111	111	70-130	7	35	mg/kg	04.25.19 01:42	
m,p-Xylenes	<0.00398	0.199	0.210	106	0.225	112	70-130	7	35	mg/kg	04.25.19 01:42	
o-Xylene	<0.00199	0.0994	0.108	109	0.116	116	70-130	7	35	mg/kg	04.25.19 01:42	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		95		96		70-130	%	04.25.19 01:42
4-Bromofluorobenzene	105		111		114		70-130	%	04.25.19 01:42

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3087047 — Matrix: Solid — Date Prep: 04.25.19
MB Sample Id: 7676618-1-BLK — LCS Sample Id: 7676618-1-BKS — LCSD Sample Id: 7676618-1-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	0.0998	0.108	108	0.111	111	70-130	3	35	mg/kg	04.26.19 01:24	
Toluene	<0.00200	0.0998	0.0979	98	0.0996	100	70-130	2	35	mg/kg	04.26.19 01:24	
Ethylbenzene	<0.00200	0.0998	0.104	104	0.106	106	70-130	2	35	mg/kg	04.26.19 01:24	
m,p-Xylenes	<0.00399	0.200	0.213	107	0.217	109	70-130	2	35	mg/kg	04.26.19 01:24	
o-Xylene	<0.00200	0.0998	0.105	105	0.107	107	70-130	2	35	mg/kg	04.26.19 01:24	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		97		99		70-130	%	04.26.19 01:24
4-Bromofluorobenzene	95		97		99		70-130	%	04.26.19 01:24

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3086882 — Matrix: Soil — Date Prep: 04.24.19
Parent Sample Id: 622065-001 — MS Sample Id: 622065-001 S — MSD Sample Id: 622065-001 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	0.0534	53	0.0439	44	70-130	20	35	mg/kg	04.25.19 02:20	X
Toluene	<0.00202	0.101	0.0734	73	0.0619	62	70-130	17	35	mg/kg	04.25.19 02:20	X
Ethylbenzene	<0.00202	0.101	0.0825	82	0.0697	70	70-130	17	35	mg/kg	04.25.19 02:20	
m,p-Xylenes	<0.00403	0.202	0.174	86	0.145	73	70-130	18	35	mg/kg	04.25.19 02:20	
o-Xylene	<0.00202	0.101	0.0911	90	0.0766	77	70-130	17	35	mg/kg	04.25.19 02:20	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	89		89		70-130	%	04.25.19 02:20
4-Bromofluorobenzene	133	**	132	**	70-130	%	04.25.19 02:20

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

QC Summary 622065

LT Environmental, Inc.

Remuda 100 Batt.

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

Seq Number: 3087047 Matrix: Soil Date Prep: 04.25.19

Parent Sample Id: 622230-001 MS Sample Id: 622230-001 S MSD Sample Id: 622230-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00198	0.0992	0.103	104	0.102	101	70-130	1	35	mg/kg	04.26.19 02:02	
Toluene	<0.00198	0.0992	0.0920	93	0.0921	91	70-130	0	35	mg/kg	04.26.19 02:02	
Ethylbenzene	<0.00198	0.0992	0.0965	97	0.0981	97	70-130	2	35	mg/kg	04.26.19 02:02	
m,p-Xylenes	<0.00397	0.198	0.197	99	0.198	98	70-130	1	35	mg/kg	04.26.19 02:02	
o-Xylene	<0.00198	0.0992	0.0975	98	0.0984	97	70-130	1	35	mg/kg	04.26.19 02:02	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		99		70-130	%	04.26.19 02:02
4-Bromofluorobenzene	103		103		70-130	%	04.26.19 02:02

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

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

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

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

Chain of Custody

Work Order No: 622065

XENCO LABORATORIES

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

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Project Manager:	Ashley Ager	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	970.385.1096 Email:	bbelill@ltenv.com	

Work Order Comments

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

Project Name:	Remuda 100 Batt.	Turn Around	
Project Number:	2RP-5336	Routine	☑
P.O. Number:		Rush:	
Sampler's Name:	Benjamin Belill	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	0.5/0.4	Thermometer ID	IR
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes No N/A	Correction Factor:	0.1
Sample Custody Seals:	Yes No N/A	Total Containers:	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
SS03A	S	4-22-19	1130	1'	1	X	X	X
SS04A			1145	1'		X	X	X
SS06			1200	0.5'		X	X	X
SS06A			1215	1'		X	X	X
SS07			1220	0.5'		X	X	X
SS07A			1230	1'		X	X	X
SS08			1235	0.5'		X	X	X
SS08A			1240	1'		X	X	X
SS09			1245	0.5'		X	X	X
SS09A			1250	1'		X	X	X

Work Order Notes

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

Sample Comments

Discrete

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		4/22/19 17:24	2		04-22-19 17:24
3	to FedEx	4/23/19 1400	4		4/24/19 11:20
5			6		

Revised Date 051418 Rev. 2018.1

Final 1.000

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Chain of Custody

XENCO LABORATORIES

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

Work Order No: 1022045

www.xenco.com Page 2 of 2

Project Manager:	Ashley Ager	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	970.385.1096	Email:	bbelill@ltenv.com

Work Order Comments

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

Project Name:	Remuda 100 Batt.	Turn Around	
Project Number:	ZRP-5336	Routine	☑
P.O. Number:		Rush:	
Sampler's Name:	Benjamin Belill	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	0510.9	Thermometer ID:	VE	
Received Intact:	(Yes) No			
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.1	
Sample Custody Seals:	Yes (No) N/A	Total Containers:		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
SS10	S	4/22/19	1300	0.5'	1	X	X	X
SS10A			1310	1'		X	X	X
SS11			1320	0.5'		X	X	X
SS11A			1325	1'		X	X	X

BTEX 4/22/19

Work Order Notes

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

Sample Comments

Discrete

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		4/22/19 @ 17:24	2		04-22-19 17:24
3 Courtney	to FedEx	4/23/19 14:00	4		4/24/19 1120
5			6		

Revised Date 051418 Rev. 2018.1

Final 1.000

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XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 04/24/2019 11:20:00 AM

Work Order #: 622065

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: 04/24/2019
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 04/29/2019
Jessica Kramer

Analytical Report 625610

for

LT Environmental, Inc.

Project Manager: Dan Moir

Remuda 100 Batt

2RP-5336

29-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)

29-MAY-19

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

Reference: XENCO Report No(s): **625610**
Remuda 100 Batt
Project Address: Delaware Basin

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 625610. 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. 625610 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

Sample Cross Reference 625610

LT Environmental, Inc., Arvada, CO

Remuda 100 Batt

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS12	S	05-23-19 15:10	0.5 ft	625610-001
SS12A	S	05-23-19 15:30	1 ft	625610-002
SS13	S	05-23-19 15:35	0.5 ft	625610-003
SS13A	S	05-23-19 15:45	1 ft	625610-004

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3090437 BTEX by EPA 8021B
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.
Samples affected are: 625610-002.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 625610

LT Environmental, Inc., Arvada, CO

Project Name: Remuda 100 Batt

Project Id: 2RP-5336
Contact: Dan Moir
Project Location: Delaware Basin

Date Received in Lab: Tue May-28-19 07:36 am
Report Date: 29-MAY-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	625610-001		625610-002		625610-003		625610-004					
	Field Id:	SS12		SS12A		SS13		SS13A					
	Depth:	0.5- ft		1- ft		0.5- ft		1- ft					
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	May-23-19 15:10		May-23-19 15:30		May-23-19 15:35		May-23-19 15:45					
BTEX by EPA 8021B	***Extracted:***	May-28-19 16:30		May-28-19 16:30		May-28-19 16:30		May-28-19 16:30					
	Analyzed:	May-29-19 02:53		May-29-19 03:12		May-29-19 03:31		May-29-19 03:50					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00201	0.00201	<0.00200	0.00200	<0.00201	0.00201	<0.00198	0.00198				
Toluene		<0.00201	0.00201	<0.00200	0.00200	0.00839	0.00201	<0.00198	0.00198				
Ethylbenzene		<0.00201	0.00201	<0.00200	0.00200	0.00720	0.00201	<0.00198	0.00198				
m,p-Xylenes		<0.00402	0.00402	0.00854	0.00400	0.122	0.00402	0.00962	0.00397				
o-Xylene		<0.00201	0.00201	0.00319	0.00200	0.0337	0.00201	0.00441	0.00198				
Total Xylenes		<0.00201	0.00201	0.0117	0.00200	0.156	0.00201	0.0140	0.00198				
Total BTEX		<0.00201	0.00201	0.0117	0.00200	0.171	0.00201	0.0140	0.00198				
Chloride by EPA 300	***Extracted:***	May-28-19 12:40		May-28-19 12:40		May-28-19 12:40		May-28-19 12:40					
	Analyzed:	May-28-19 14:40		May-28-19 14:48		May-28-19 14:55		May-28-19 15:02					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		314	4.96	203	25.0	135	5.00	63.4	5.00				
TPH by SW8015 Mod	***Extracted:***	May-28-19 15:00		May-28-19 15:00		May-28-19 15:00		May-28-19 15:00					
	Analyzed:	May-28-19 19:35		May-28-19 20:50		May-28-19 21:14		May-28-19 21:39					
	Units/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				
Diesel Range Organics (DRO)		<14.9	14.9	<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				
Total TPH		<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0				
Total GRO-DRO		<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0				

Jessica Kramer
Project Assistant

Certificate of Analytical Results 625610

LT Environmental, Inc., Arvada, CO

Remuda 100 Batt

Sample Id:	**SS12**	Matrix:	Soil	Date Received:	05.28.19 07.36
Lab Sample Id:	625610-001	Date Collected:	05.23.19 15.10	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.28.19 12.40	Basis:	Wet Weight
Seq Number:	3090378				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**314**	4.96	mg/kg	05.28.19 14.40		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.28.19 15.00	Basis:	Wet Weight
Seq Number:	3090497				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	05.28.19 19.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	05.28.19 19.35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	05.28.19 19.35	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	05.28.19 19.35	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	05.28.19 19.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	05.28.19 19.35	
o-Terphenyl	84-15-1	92	%	70-135	05.28.19 19.35	

Certificate of Analytical Results 625610

LT Environmental, Inc., Arvada, CO

Remuda 100 Batt

Sample Id:	**SS12**	Matrix:	Soil	Date Received:	05.28.19 07.36
Lab Sample Id:	625610-001	Date Collected:	05.23.19 15.10	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.28.19 16.30	Basis:	Wet Weight
Seq Number:	3090437				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	05.29.19 02.53	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	05.29.19 02.53	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	05.29.19 02.53	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	05.29.19 02.53	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	05.29.19 02.53	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	05.29.19 02.53	U	1
Total BTEX		<0.00201	0.00201	mg/kg	05.29.19 02.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	115	%	70-130	05.29.19 02.53	
1,4-Difluorobenzene	540-36-3	94	%	70-130	05.29.19 02.53	

Certificate of Analytical Results 625610

LT Environmental, Inc., Arvada, CO

Remuda 100 Batt

Sample Id:	**SS12A**	Matrix:	Soil	Date Received:	05.28.19 07.36
Lab Sample Id:	625610-002	Date Collected:	05.23.19 15.30	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.28.19 12.40	Basis:	Wet Weight
Seq Number:	3090378				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**203**	25.0	mg/kg	05.28.19 14.48		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.28.19 15.00	Basis:	Wet Weight
Seq Number:	3090497				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.28.19 20.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.28.19 20.50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.28.19 20.50	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.28.19 20.50	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.28.19 20.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	05.28.19 20.50	
o-Terphenyl	84-15-1	76	%	70-135	05.28.19 20.50	

Certificate of Analytical Results 625610

LT Environmental, Inc., Arvada, CO

Remuda 100 Batt

Sample Id:	**SS12A**	Matrix:	Soil	Date Received:	05.28.19 07.36
Lab Sample Id:	625610-002	Date Collected:	05.23.19 15.30	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.28.19 16.30	Basis:	Wet Weight
Seq Number:	3090437				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.29.19 03.12	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.29.19 03.12	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.29.19 03.12	U	1
m,p-Xylenes	179601-23-1	**0.00854**	0.00400	mg/kg	05.29.19 03.12		1
o-Xylene	95-47-6	**0.00319**	0.00200	mg/kg	05.29.19 03.12		1
Total Xylenes	1330-20-7	**0.0117**	0.00200	mg/kg	05.29.19 03.12		1
Total BTEX		**0.0117**	0.00200	mg/kg	05.29.19 03.12		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	89	%	70-130	05.29.19 03.12	
4-Bromofluorobenzene	460-00-4	136	%	70-130	05.29.19 03.12	**

Certificate of Analytical Results 625610

LT Environmental, Inc., Arvada, CO

Remuda 100 Batt

Sample Id:	**SS13**	Matrix:	Soil	Date Received:	05.28.19 07.36
Lab Sample Id:	625610-003	Date Collected:	05.23.19 15.35	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.28.19 12.40	Basis:	Wet Weight
Seq Number:	3090378				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**135**	5.00	mg/kg	05.28.19 14.55		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.28.19 15.00	Basis:	Wet Weight
Seq Number:	3090497				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.28.19 21.14	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.28.19 21.14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.28.19 21.14	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.28.19 21.14	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.28.19 21.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	05.28.19 21.14	
o-Terphenyl	84-15-1	73	%	70-135	05.28.19 21.14	

Certificate of Analytical Results 625610

LT Environmental, Inc., Arvada, CO

Remuda 100 Batt

Sample Id:	**SS13**	Matrix:	Soil	Date Received:	05.28.19 07.36
Lab Sample Id:	625610-003	Date Collected:	05.23.19 15.35	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.28.19 16.30	Basis:	Wet Weight
Seq Number:	3090437				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	05.29.19 03.31	U	1
Toluene	108-88-3	**0.00839**	0.00201	mg/kg	05.29.19 03.31		1
Ethylbenzene	100-41-4	**0.00720**	0.00201	mg/kg	05.29.19 03.31		1
m,p-Xylenes	179601-23-1	**0.122**	0.00402	mg/kg	05.29.19 03.31		1
o-Xylene	95-47-6	**0.0337**	0.00201	mg/kg	05.29.19 03.31		1
Total Xylenes	1330-20-7	**0.156**	0.00201	mg/kg	05.29.19 03.31		1
Total BTEX		**0.171**	0.00201	mg/kg	05.29.19 03.31		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	119	%	70-130	05.29.19 03.31	
1,4-Difluorobenzene	540-36-3	89	%	70-130	05.29.19 03.31	

Certificate of Analytical Results 625610

LT Environmental, Inc., Arvada, CO

Remuda 100 Batt

Sample Id:	**SS13A**	Matrix:	Soil	Date Received:	05.28.19 07.36
Lab Sample Id:	625610-004	Date Collected:	05.23.19 15.45	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.28.19 12.40	Basis:	Wet Weight
Seq Number:	3090378				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**63.4**	5.00	mg/kg	05.28.19 15.02		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.28.19 15.00	Basis:	Wet Weight
Seq Number:	3090497				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.28.19 21.39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.28.19 21.39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.28.19 21.39	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.28.19 21.39	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.28.19 21.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	05.28.19 21.39	
o-Terphenyl	84-15-1	81	%	70-135	05.28.19 21.39	

Certificate of Analytical Results 625610

LT Environmental, Inc., Arvada, CO

Remuda 100 Batt

Sample Id:	**SS13A**	Matrix:	Soil	Date Received:	05.28.19 07.36
Lab Sample Id:	625610-004	Date Collected:	05.23.19 15.45	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.28.19 16.30	Basis:	Wet Weight
Seq Number:	3090437				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	05.29.19 03.50	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	05.29.19 03.50	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	05.29.19 03.50	U	1
m,p-Xylenes	179601-23-1	**0.00962**	0.00397	mg/kg	05.29.19 03.50		1
o-Xylene	95-47-6	**0.00441**	0.00198	mg/kg	05.29.19 03.50		1
Total Xylenes	1330-20-7	**0.0140**	0.00198	mg/kg	05.29.19 03.50		1
Total BTEX		**0.0140**	0.00198	mg/kg	05.29.19 03.50		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	120	%	70-130	05.29.19 03.50	
1,4-Difluorobenzene	540-36-3	94	%	70-130	05.29.19 03.50	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 625610

LT Environmental, Inc.

Remuda 100 Batt

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3090378 Matrix: Solid Date Prep: 05.28.19
MB Sample Id: 7678646-1-BLK LCS Sample Id: 7678646-1-BKS LCSD Sample Id: 7678646-1-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	234	94	233	93	90-110	0	20	mg/kg	05.28.19 13:08	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3090378 Matrix: Soil Date Prep: 05.28.19
Parent Sample Id: 625608-001 MS Sample Id: 625608-001 S MSD Sample Id: 625608-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	749	250	952	81	952	81	90-110	0	20	mg/kg	05.28.19 13:30	X

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3090378 Matrix: Soil Date Prep: 05.28.19
Parent Sample Id: 625614-001 MS Sample Id: 625614-001 S MSD Sample Id: 625614-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	393	249	615	89	613	88	90-110	0	20	mg/kg	05.28.19 15:17	X

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3090497 Matrix: Solid Date Prep: 05.28.19
MB Sample Id: 7678780-1-BLK LCS Sample Id: 7678780-1-BKS LCSD Sample Id: 7678780-1-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	945	95	961	96	70-135	2	20	mg/kg	05.28.19 18:45	
Diesel Range Organics (DRO)	<8.13	1000	902	90	924	92	70-135	2	20	mg/kg	05.28.19 18:45	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	109		93		99		70-135	%	05.28.19 18:45
o-Terphenyl	104		97		104		70-135	%	05.28.19 18:45

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

QC Summary 625610

LT Environmental, Inc.

Remuda 100 Batt

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3090497 Matrix: Soil Date Prep: 05.28.19
Parent Sample Id: 625610-001 MS Sample Id: 625610-001 S MSD Sample Id: 625610-001 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	998	910	91	874	88	70-135	4	20	mg/kg	05.28.19 19:59	
Diesel Range Organics (DRO)	<8.11	998	843	84	855	86	70-135	1	20	mg/kg	05.28.19 19:59	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	83		82		70-135	%	05.28.19 19:59
o-Terphenyl	76		84		70-135	%	05.28.19 19:59

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3090437 Matrix: Solid Date Prep: 05.28.19
MB Sample Id: 7678752-1-BLK LCS Sample Id: 7678752-1-BKS LCSD Sample Id: 7678752-1-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	0.0986	99	0.0919	93	70-130	7	35	mg/kg	05.29.19 01:00	
Toluene	<0.00199	0.0996	0.103	103	0.0989	100	70-130	4	35	mg/kg	05.29.19 01:00	
Ethylbenzene	<0.00199	0.0996	0.114	114	0.112	113	70-130	2	35	mg/kg	05.29.19 01:00	
m,p-Xylenes	<0.00398	0.199	0.242	122	0.237	120	70-130	2	35	mg/kg	05.29.19 01:00	
o-Xylene	<0.00199	0.0996	0.117	117	0.115	116	70-130	2	35	mg/kg	05.29.19 01:00	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		88		87		70-130	%	05.29.19 01:00
4-Bromofluorobenzene	109		107		108		70-130	%	05.29.19 01:00

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3090437 Matrix: Soil Date Prep: 05.28.19
Parent Sample Id: 625610-001 MS Sample Id: 625610-001 S MSD Sample Id: 625610-001 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	0.0850	86	0.0887	89	70-130	4	35	mg/kg	05.29.19 01:38	
Toluene	<0.000453	0.0994	0.0885	89	0.0925	93	70-130	4	35	mg/kg	05.29.19 01:38	
Ethylbenzene	<0.000561	0.0994	0.0973	98	0.102	102	70-130	5	35	mg/kg	05.29.19 01:38	
m,p-Xylenes	0.00222	0.199	0.206	102	0.217	107	70-130	5	35	mg/kg	05.29.19 01:38	
o-Xylene	0.00100	0.0994	0.100	100	0.106	105	70-130	6	35	mg/kg	05.29.19 01:38	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	89		90		70-130	%	05.29.19 01:38
4-Bromofluorobenzene	110		110		70-130	%	05.29.19 01:38

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

XENCO LABORATORIES

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

Work Order No: 1275610

www.xenco.com Page 1 of 1

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

Work Order Comments

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

Project Name:	Remuda 100 Batt.	Turn Around	
Project Number:	ZRP-5336	Routine ☐	
P.O. Number:		Rush: 24 HR	
Sampler's Name:	Benjamin Belill	Due Date: 5/29/19	

SAMPLE RECEIPT			
Temperature (°C):	0.5/0.3	Temp Blank: Yes (No)	Wet Ice: (Yes) No
Received Intact:	(Yes) No	Thermometer ID:	NE
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
SS12	S	5/23/19	1510	0.5'	1	X	X	X
SS12A			1530	1'		X	X	X
SS13			1535	0.5'		X	X	X
SS13A	↓	↓	1545	1'	↓	X	X	X

SVE 5/24/19

Work Order Notes

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

Sample Comments

discrete

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			5/24/19 11:00	2		5/28/19 0730
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

Final 1.000

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XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

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

Work Order #: 625610

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?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 05/28/2019
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 05/28/2019
Jessica Kramer

Analytical Report 628569

for

LT Environmental, Inc.

Project Manager: Dan Moir

Remuda 100TB

27-JUN-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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

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

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

27-JUN-19

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

Reference: XENCO Report No(s): **628569**
Remuda 100TB
Project Address: Delaware Basin

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 628569. 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. 628569 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Sample Cross Reference 628569

LT Environmental, Inc., Arvada, CO

Remuda 100TB

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS26A	S	06-20-19 10:20	1.5 ft	628569-001
FS76A	S	06-20-19 12:00	1.5 ft	628569-002

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3093649 BTEX by EPA 8021B

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

Certificate of Analysis Summary 628569

LT Environmental, Inc., Arvada, CO

Project Name: Remuda 100TB

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

Date Received in Lab: Thu Jun-20-19 03:15 pm
Report Date: 27-JUN-19
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	628569-001		628569-002					
	Field Id:	FS26A		FS76A					
	Depth:	1.5- ft		1.5- ft					
	Matrix:	SOIL		SOIL					
	Sampled:	Jun-20-19 10:20		Jun-20-19 12:00					
BTEX by EPA 8021B	***Extracted:***	Jun-25-19 17:00		Jun-25-19 17:00					
SUB: T104704400-18-16	***Analyzed:***	Jun-27-19 02:18		Jun-27-19 02:40					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00200	0.00200	<0.00199	0.00199				
Toluene		<0.00200	0.00200	<0.00199	0.00199				
Ethylbenzene		<0.00200	0.00200	<0.00199	0.00199				
m,p-Xylenes		<0.00399	0.00399	<0.00398	0.00398				
o-Xylene		<0.00200	0.00200	<0.00199	0.00199				
Total Xylenes		<0.00200	0.00200	<0.00199	0.00199				
Total BTEX		<0.00200	0.00200	<0.00199	0.00199				
Chloride by EPA 300	***Extracted:***	Jun-22-19 16:00		Jun-22-19 16:00					
SUB: T104704400-18-16	***Analyzed:***	Jun-22-19 20:48		Jun-22-19 19:42					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		<5.04	5.04	136	5.00				
TPH by SW8015 Mod	***Extracted:***	Jun-22-19 15:00		Jun-22-19 15:00					
SUB: T104704400-18-16	***Analyzed:***	Jun-23-19 08:21		Jun-23-19 08:46					
	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				

Jessica Kramer
Project Assistant

Certificate of Analytical Results 628569

LT Environmental, Inc., Arvada, CO

Remuda 100TB

Sample Id:	**FS26A**	Matrix:	Soil	Date Received:	06.20.19 15.15
Lab Sample Id:	628569-001	Date Collected:	06.20.19 10.20	Sample Depth:	1.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	SPC	Date Prep:	06.22.19 16.00	Basis:	Wet Weight
Seq Number:	3093287			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.04	5.04	mg/kg	06.22.19 20.48	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.22.19 15.00	Basis:	Wet Weight
Seq Number:	3093277			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.23.19 08.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.23.19 08.21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.23.19 08.21	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.23.19 08.21	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.23.19 08.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	06.23.19 08.21	
o-Terphenyl	84-15-1	79	%	70-135	06.23.19 08.21	

Certificate of Analytical Results 628569

LT Environmental, Inc., Arvada, CO

Remuda 100TB

Sample Id:	**FS26A**	Matrix:	Soil	Date Received:	06.20.19 15.15
Lab Sample Id:	628569-001	Date Collected:	06.20.19 10.20	Sample Depth:	1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.25.19 17.00	Basis:	Wet Weight
Seq Number:	3093649			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.27.19 02.18	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.27.19 02.18	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.27.19 02.18	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	06.27.19 02.18	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.27.19 02.18	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.27.19 02.18	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.27.19 02.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	107	%	70-130	06.27.19 02.18	
1,4-Difluorobenzene	540-36-3	95	%	70-130	06.27.19 02.18	

Certificate of Analytical Results 628569

LT Environmental, Inc., Arvada, CO

Remuda 100TB

Sample Id:	**FS76A**	Matrix:	Soil	Date Received:	06.20.19 15.15
Lab Sample Id:	628569-002	Date Collected:	06.20.19 12.00	Sample Depth:	1.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	SPC	Date Prep:	06.22.19 16.00	Basis:	Wet Weight
Seq Number:	3093287			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**136**	5.00	mg/kg	06.22.19 19.42		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.22.19 15.00	Basis:	Wet Weight
Seq Number:	3093277			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.23.19 08.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.23.19 08.46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.23.19 08.46	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.23.19 08.46	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.23.19 08.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	06.23.19 08.46	
o-Terphenyl	84-15-1	83	%	70-135	06.23.19 08.46	

Certificate of Analytical Results 628569

LT Environmental, Inc., Arvada, CO

Remuda 100TB

Sample Id:	**FS76A**	Matrix:	Soil	Date Received:	06.20.19 15.15
Lab Sample Id:	628569-002	Date Collected:	06.20.19 12.00	Sample Depth:	1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.25.19 17.00	Basis:	Wet Weight
Seq Number:	3093649			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	06.27.19 02.40	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	06.27.19 02.40	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	06.27.19 02.40	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	06.27.19 02.40	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	06.27.19 02.40	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	06.27.19 02.40	U	1
Total BTEX		<0.00199	0.00199	mg/kg	06.27.19 02.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	97	%	70-130	06.27.19 02.40	
4-Bromofluorobenzene	460-00-4	109	%	70-130	06.27.19 02.40	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 628569

LT Environmental, Inc.

Remuda 100TB

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3093287 Matrix: Solid Date Prep: 06.22.19
MB Sample Id: 7680531-1-BLK LCS Sample Id: 7680531-1-BKS LCSD Sample Id: 7680531-1-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	244	98	244	98	90-110	0	20	mg/kg	06.22.19 18:51	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3093287 Matrix: Soil Date Prep: 06.22.19
Parent Sample Id: 628549-002 MS Sample Id: 628549-002 S MSD Sample Id: 628549-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	269	108	269	108	90-110	0	20	mg/kg	06.22.19 19:13	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3093287 Matrix: Soil Date Prep: 06.22.19
Parent Sample Id: 628569-001 MS Sample Id: 628569-001 S MSD Sample Id: 628569-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.865	252	257	102	257	102	90-110	0	20	mg/kg	06.22.19 20:55	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3093277 Matrix: Solid Date Prep: 06.22.19
MB Sample Id: 7680559-1-BLK LCS Sample Id: 7680559-1-BKS LCSD Sample Id: 7680559-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	1090	109	1090	109	70-135	0	20	mg/kg	06.22.19 23:13	
Diesel Range Organics (DRO)	<8.13	1000	1100	110	1080	108	70-135	2	20	mg/kg	06.22.19 23:13	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	115		94		93		70-135	%	06.22.19 23:13
o-Terphenyl	97		87		87		70-135	%	06.22.19 23:13

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

QC Summary 628569

LT Environmental, Inc.

Remuda 100TB

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3093277 Matrix: Soil Date Prep: 06.22.19
Parent Sample Id: 628584-001 MS Sample Id: 628584-001 S MSD Sample Id: 628584-001 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)	20.8	999	1020	100	981	96	70-135	4	20	mg/kg	06.23.19 00:29	
Diesel Range Organics (DRO)	228	999	1150	92	1170	95	70-135	2	20	mg/kg	06.23.19 00:29	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	87		84		70-135	%	06.23.19 00:29
o-Terphenyl	79		81		70-135	%	06.23.19 00:29

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3093649 Matrix: Solid Date Prep: 06.25.19
MB Sample Id: 7680760-1-BLK LCS Sample Id: 7680760-1-BKS LCSD Sample Id: 7680760-1-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	0.0927	93	0.0942	95	70-130	2	35	mg/kg	06.26.19 16:56	
Toluene	<0.00200	0.100	0.0942	94	0.0943	95	70-130	0	35	mg/kg	06.26.19 16:56	
Ethylbenzene	<0.00200	0.100	0.0952	95	0.0951	96	70-130	0	35	mg/kg	06.26.19 16:56	
m,p-Xylenes	<0.00400	0.200	0.189	95	0.187	94	70-130	1	35	mg/kg	06.26.19 16:56	
o-Xylene	<0.00200	0.100	0.0909	91	0.0914	92	70-130	1	35	mg/kg	06.26.19 16:56	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	95		96		99		70-130	%	06.26.19 16:56
4-Bromofluorobenzene	103		103		111		70-130	%	06.26.19 16:56

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3093649 Matrix: Soil Date Prep: 06.25.19
Parent Sample Id: 628191-001 MS Sample Id: 628191-001 S MSD Sample Id: 628191-001 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	0.0998	0.0849	85	0.0910	91	70-130	7	35	mg/kg	06.26.19 17:40	
Toluene	<0.00200	0.0998	0.0820	82	0.0868	87	70-130	6	35	mg/kg	06.26.19 17:40	
Ethylbenzene	<0.00200	0.0998	0.0852	85	0.0907	91	70-130	6	35	mg/kg	06.26.19 17:40	
m,p-Xylenes	<0.00399	0.200	0.169	85	0.180	90	70-130	6	35	mg/kg	06.26.19 17:40	
o-Xylene	<0.00200	0.0998	0.0816	82	0.0867	87	70-130	6	35	mg/kg	06.26.19 17:40	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		97		70-130	%	06.26.19 17:40
4-Bromofluorobenzene	113		108		70-130	%	06.26.19 17:40

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

Chain of Custody

Work Order No: 628569

XENCO LABORATORIES

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

www.xenco.com Page 1 of 1

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Midland, Tx 79705
Phone:	432.704.5178	Email:	Ggreen@Ltenv.com

Work Order Comments

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

Project Name:	Bemuda 100 TB	Turn Around	
Project Number:		Routine ☐	
P.O. Number:	2RP-5336	Rush: Yes	
Sampler's Name:	Garrett Green	Due Date: 6/24/19	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	8°C	Thermometer ID		
Received Intact:	Yes No	T-NM-007		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes (No) N/A	Total Containers:	2	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
FS26A	S	6/20/19	1020	1.5'	1	X	X	X
FS27A	S	6/20/19	1200	1.5'	1	X	X	X

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			6/20/19 1515	2		
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

Inter-Office Shipment

IOS Number **41950**

Date/Time: 06/20/19 16:44
Lab# From: **Carlsbad**
Lab# To: **Midland**

Created by: Carlos Castro
Delivery Priority:
Air Bill No.:

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

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
628569-001	S	FS26A	06/20/19 10:20	SW8015MOD_NM	TPH by SW8015 Mod	06/24/19	07/04/19	JKR	GRO-DRO PHCC10C28 PI	
628569-001	S	FS26A	06/20/19 10:20	SW8021B	BTEX by EPA 8021B	06/24/19	07/04/19	JKR	BR4FBZ BZ BZME EBZ X	
628569-001	S	FS26A	06/20/19 10:20	E300_CL	Chloride by EPA 300	06/24/19	12/17/19	JKR	CL	
628569-002	S	FS76A	06/20/19 12:00	SW8021B	BTEX by EPA 8021B	06/24/19	07/04/19	JKR	BR4FBZ BZ BZME EBZ X	
628569-002	S	FS76A	06/20/19 12:00	E300_CL	Chloride by EPA 300	06/24/19	12/17/19	JKR	CL	
628569-002	S	FS76A	06/20/19 12:00	SW8015MOD_NM	TPH by SW8015 Mod	06/24/19	07/04/19	JKR	GRO-DRO PHCC10C28 PI	

Inter Office Shipment or Sample Comments:

Relinquished By: Carlos Castro

Date Relinquished: 06/20/2019

Received By: Brianna Teel

Date Received: 06/21/2019 07:33

Cooler Temperature: 0.4

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 41950

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

Sent By: Carlos Castro **Date Sent:** 06/20/2019 04:44 PM

Received By: Brianna Teel **Date Received:** 06/21/2019 07:33 AM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	.4	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received with appropriate temperature?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**	
#5 *Custody Seals Signed and dated for Containers/coolers	**N/A**	
#6 *IOS present?	**Yes**	
#7 Any missing/extra samples?	**No**	
#8 IOS agrees with sample label(s)/matrix?	**Yes**	
#9 Sample matrix/ properties agree with IOS?	**Yes**	
#10 Samples in proper container/ bottle?	**Yes**	
#11 Samples properly preserved?	**Yes**	
#12 Sample container(s) intact?	**Yes**	
#13 Sufficient sample amount for indicated test(s)?	**Yes**	
#14 All samples received within hold time?	**Yes**	

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ **Contacted by :** _____ **Date:** _____

Checklist reviewed by: Brianna Teel Date: 06/21/2019

Brianna Teel

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 06/20/2019 03:15:00 PM

Work Order #: 628569

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

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	8	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	Chilling in progress
#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?	**Yes**	
#9 Chain of Custody signed when relinquished/ received?	**Yes**	
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**	
#11 Container label(s) legible and intact?	**Yes**	
#12 Samples in proper container/ bottle?	**Yes**	
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**Yes**	Subbed to Xenco midland
#18 Water VOC samples have zero headspace?	**N/A**	

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

Analyst: PH Device/Lot#:

Checklist completed by: Carlos Castro Date: 06/20/2019

Checklist reviewed by: Jessica Kramer Date: 06/21/2019

Jessica Kramer

ATTACHMENT 3: SOIL SAMPLE LOGS

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

Compliance · Engineering · Remediation

Identifier:	Date:
SS03	4/22/2019
Project Name:	RP Number:
Remuda 100 Battery	2RP-5336

LITHOLOGIC / SOIL SAMPLING LOG

Logged By:	Method:
BB	hand auger

Lat/Long:	Field Screening:	Hole Diameter:	Total Depth:
	PID/HACH	NA	1'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
moist	<112	0.4	no	SS03A	0	1'	ML	sandy SILT, moist, brown-light brown, trace caliche
					1			Total Depth 1 foot bgs
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

LT Environmental, Inc. *508 West Stevens Street* *Carlsbad, New Mexico 88220* *Compliance · Engineering · Remediation*		Identifier: SS04	Date: 4/22/2019
		Project Name: Remuda 100 Battery	RP Number: 2RP-5336
LITHOLOGIC / SOIL SAMPLING LOG		Logged By: BB	Method: hand auger
Lat/Long:	Field Screening: PID/HACH	Hole Diameter: NA	Total Depth: 1'
Comments:			

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
moist	492	0.5	no	SS04A	0 1 4 5 6 7 8 9 10 11 12	1'	ML	sandy SILT, moist, brown-red, trace roots Total Depth 1 foot bgs

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

Compliance · Engineering · Remediation

Identifier:	Date:
SS06	4/22/2019
Project Name:	RP Number:
Remuda 100 Battery	2RP-5336

LITHOLOGIC / SOIL SAMPLING LOG

Logged By:	Method:
BB	hand auger

Lat/Long:	Field Screening:	Hole Diameter:	Total Depth:
	PID/HACH	NA	1'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
dry	<112	0.1	no	SS06		0.5'	cche	CALICHE, dry, light brown, fill
dry	<112	0.2	no	SS06A	1	1'	ML	sandy SILT, dry, brown-light brown, fill
								Total Depth 1 foot bgs

0
4
5
6
7
8
9
10
11
12

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

Compliance · Engineering · Remediation

Identifier:	Date:
SS07	4/22/2019
Project Name:	RP Number:
Remuda 100 Battery	2RP-5336

LITHOLOGIC / SOIL SAMPLING LOG

Logged By:	Method:
BB	hand auger

Lat/Long:	Field Screening:	Hole Diameter:	Total Depth:
	PID/HACH	NA	1'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
dry	<112	2.3	no	SS07		0.5'	ML	sandly SILT, dry, brown-red, trace roots
dry	<112	2.2	no	SS07A		1'	ML	sandly SILT, dry, brown-red, trace roots
								Total Depth 1 foot bgs

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

Compliance · Engineering · Remediation

Identifier:	Date:
SS08	4/22/2019
Project Name:	RP Number:
Remuda 100 Battery	2RP-5336

LITHOLOGIC / SOIL SAMPLING LOG

Logged By:	Method:
BB	hand auger

Lat/Long:	Field Screening:	Hole Diameter:	Total Depth:
	PID/HACH	NA	1'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
dry	<112	1.0	no	SS08		0.5'	ML	sandly SILT, dry, brown-red, trace roots
dry	<112	1.0	no	SS08A	1	1'	ML	sandly SILT, dry, brown-red, trace roots
								Total Depth 1 foot bgs

0
4
5
6
7
8
9
10
11
12

LT Environmental, Inc. *508 West Stevens Street* *Carlsbad, New Mexico 88220* *Compliance · Engineering · Remediation*		Identifier: SS09	Date: 4/22/2019
		Project Name: Remuda 100 Battery	RP Number: 2RP-5336
LITHOLOGIC / SOIL SAMPLING LOG		Logged By: BB	Method: hand auger
Lat/Long:	Field Screening: PID/HACH	Hole Diameter: NA	Total Depth: 1'
Comments:			

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
dry	371	1.1	no	SS09	0	0.5'	cche	CALICHE, dry, light brown-tan, fill
dry	428	0.5	no	SS09A	1	1'	ML	sandy SILT, dry, brown-red, trace caliche
								Total Depth 1 foot bgs
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

LT Environmental, Inc. *508 West Stevens Street* *Carlsbad, New Mexico 88220* *Compliance · Engineering · Remediation*		Identifier: SS10	Date: 4/22/2019
		Project Name: Remuda 100 Battery	RP Number: 2RP-5336
LITHOLOGIC / SOIL SAMPLING LOG		Logged By: BB	Method: hand auger
Lat/Long:	Field Screening: PID/HACH	Hole Diameter: NA	Total Depth: 1'
Comments:			

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
dry	<112	0.4	no	SS10	0	0.5'	cche	CALICHE, dry, light brown-tan, fill
dry	<112	0.5	no	SS10A	1	1'	ML	sandy SILT, dry, brown-red, trace caliche
								Total Depth 1 foot bgs
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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

Compliance · Engineering · Remediation

Identifier:	Date:
SS11	4/22/2019
Project Name:	RP Number:
Remuda 100 Battery	2RP-5336

LITHOLOGIC / SOIL SAMPLING LOG

Logged By:	Method:
BB	hand auger

Lat/Long:	Field Screening:	Hole Diameter:	Total Depth:
	PID/HACH	NA	1'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
dry	<112	0.8	no	SS11		0.5'	cche	CALICHE, dry, light brown-tan, fill
dry	<112	0.7	no	SS11A	1	1'	ML	sandy SILT, dry, brown-light brown, some caliche
								Total Depth 1 foot bgs

0
4
5
6
7
8
9
10
11
12

LT Environmental, Inc. *508 West Stevens Street* *Carlsbad, New Mexico 88220* *Compliance · Engineering · Remediation*		Identifier: SS12	Date: 4/22/2019
		Project Name: Remuda 100 Battery	RP Number: 2RP-5336
LITHOLOGIC / SOIL SAMPLING LOG		Logged By: BB	Method: hand auger
Lat/Long:	Field Screening: PID/HACH	Hole Diameter: NA	Total Depth: 1'
Comments:			

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
dry	403	0.7	no	SS12	0	0.5'	cche	CALICHE, dry, tan, poorly consolidated, fill
dry	345	0.3	no	SS12A	1	1'	cche	CALICHE, dry, tan, poorly consolidated, fill
								Total Depth 1 foot bgs
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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

Compliance · Engineering · Remediation

Identifier:	Date:
SS13	4/22/2019
Project Name:	RP Number:
Remuda 100 Battery	2RP-5336

LITHOLOGIC / SOIL SAMPLING LOG

Logged By:	Method:
BB	hand auger

Lat/Long:	Field Screening:	Hole Diameter:	Total Depth:
	PID/HACH	NA	1'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
dry	<112	0.4	no	SS13	0	0.5'	cche	CALICHE, dry, tan, poorly consolidated, fill
dry	<112	0.5	no	SS13A	1	1'	cche	CALICHE, dry, tan, poorly consolidated, fill
								Total Depth 1 foot bgs
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

View from the well pad facing the pasture, with the active flare stack on the northern edge of the pad.

Project: 012919049	XTO Energy, Inc. Remuda 100 Battery	LTE Advancing Opportunity
March 20, 2019	Photographic Log	

Western view of release area prior to excavation and delineation activities.

Project: 012919049	XTO Energy, Inc. Remuda 100 Battery	LTE Advancing Opportunity
March 20, 2019	Photographic Log	

Eastern view of the excavation and active pipelines and processing equipment.

Project: 012919049	XTO Energy, Inc. Remuda 100 Battery	LTE Advancing Opportunity
April 17, 2019	Photographic Log	

Western view of the final excavation extent on the western edge of the well pad.

Project: 012919049	XTO Energy, Inc. Remuda 100 Battery	LTE Advancing Opportunity
June 20, 2019	Photographic Log	