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LT Environmental, Inc.
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Midland, Texas 79705
432.704.5178

May 12, 2020

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

RE: Deferral Request
XTO Energy, Inc.
Remuda Basin Battery Unit #1
Remediation Permit Number 2RP-2296
Eddy County, New Mexico

Dear Mr. Billings:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following Deferral Request detailing site assessment, soil sampling, and excavation activities at the Remuda Basin Battery Unit # 1 (Site) in Unit J, Section 24, Township 23 South, Range 29 East, in Eddy County, New Mexico (Figure 1). The purpose of these activities was to address impacts to soil resulting from a produced water release at the Site. Based on the results of the soil sampling events, XTO is submitting this Deferral Request, describing remediation that has occurred and requesting deferral of final remediation until the Site is reconstructed, and/or the well pad is abandoned.

The release is included in the Compliance Agreement for Remediation for Historical Releases (Compliance Agreement) between XTO and the New Mexico Oil Conservation Division (NMOCD) effective November 13, 2018. The purpose of the Compliance Agreement is to ensure reportable releases that occurred prior to August 14, 2018, where XTO is responsible for the corrective action, comply with Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC) as amended on August 14, 2018. The release is categorized as a Tier IV site in the Compliance Agreement, meaning the release occurred prior to August 14, 2018, the effective date of 19.15.29 NMAC; however, remediation was ongoing.

RELEASE BACKGROUND

On April 27, 2014, a produced water transfer pump failed to start due to blown fuses, causing approximately 15 barrels (bbls) of produced water to release within and around the tank battery containment and pasture area south of the tank battery. The former operator reported the release to the NMOCD on a Release Notification and Corrective Action Form C-141 on May 8, 2014 and was assigned Remediation Permit (RP) Number 2RP-2296 (Attachment 1).

SITE CHARACTERIZATION

LTE characterized the Site according to Table 1, *Closure Criteria for Soils Impacted by a Release*, of NMAC 19.15.29.12. Depth to groundwater at the Site is estimated to be between 50 and 100 feet below ground surface (bgs) based on the nearest water well data. The nearest permitted water well with depth to water data is United States Geological Survey (USGS) well 321717103561001, located approximately 98 feet northwest of the Site. The water well has a depth to groundwater of approximately 50.26 feet bgs. Ground surface elevation at the water well location is 3,033 feet above mean sea level (AMSL), which is approximately 3 feet lower in elevation than the Site. The closest continuously flowing water or significant watercourse to the Site is an intermittent stream approximately 280 feet southwest 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 less than 1,000 feet to a freshwater well. The Site is not within a 100-year floodplain or overlying a subsurface mine. The Site is located within a high-potential karst area.

CLOSURE CRITERIA

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

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

SITE ASSESSMENT, EXCAVATION, AND DELINEATION SOIL SAMPLING ACTIVITIES

Between November 2019 and April 2020, LTE personnel were at the Site to oversee site assessment and excavation activities.

Potholes were advanced via backhoe at 12 locations around the tank battery on the well pad and pasture area south of the well pad to assess the lateral and vertical extent impacted soil. The pothole locations were selected based on information provided on the initial Form C-141 and field observations. Potholes PH01 through PH12 were advanced to depths ranging from 1.5 feet to 9 feet bgs. Delineation soil samples were collected from the pothole from depths ranging from 1 foot to 9 feet bgs. A liner from historical remediation activities was encountered at 4 feet bgs north of the tank battery in potholes PH03, PH04, and PH11. Additional vertical delineation was not completed north of the tank battery in order to preserve the integrity of the historical liner. Soil from the potholes was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photoionization detector (PID) and Hach® chloride QuanTab® test strips,

respectively. Field screening results and observations for the potholes were logged on lithologic/soil sampling logs, which are included in Attachment 2. The potholes, delineation soil samples, and historical liner location are depicted on Figure 2.

Impacted soil was excavated from the release area as indicated by visual observations, field screening activities, and laboratory analytical results for the delineation soil samples. To direct excavation activities, LTE screened soil for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach® chloride QuanTab® test strips, respectively. Impacted soil was excavated from four separate areas, to depths ranging from approximately 2.5 feet to 9 feet bgs. Following removal of impacted soil to the extent possible, LTE collected five-point composite soil samples every 200 square feet from the sidewalls and floors of the excavations. The five-point composite samples were collected by depositing five aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples SW01 through SW18 were collected from the sidewalls of the excavations at depths ranging from the ground surface to approximately 9 feet bgs. Composite soil samples FS01 through FS07 were collected from the floors of the excavations at depths ranging from approximately 2.5 feet to 9 feet bgs. No floor sample was collected from the excavation north of the tank battery due to the historical liner present at 4 feet bgs. Instead, the excavation in this area exposed the liner, removing all impacted soil above it. Discrete delineation samples (SW04A/SW04B/SW04C and SW05A/SW05B/SW05C/SW05D) were collected below the depth of the excavation in the area just south of the tank battery containment for additional delineation purposes. The excavation extents and excavation soil sample locations are depicted on Figure 3. Photographic documentation was conducted during the Site visits. Photographs are included in Attachment 3.

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

The combined excavations measured approximately 1,400 square feet in area with depths ranging from approximately 2.5 feet to 9 feet bgs. A total of approximately 650 cubic yards of impacted soil were removed from the excavations. The impacted soil was transported and properly disposed of at the R360 Landfill located in Hobbs, New Mexico.

ANALYTICAL RESULTS

Laboratory analytical results for the delineation soil samples collected from potholes PH03, PH05, and PH08 through PH12, indicated that BTEX, TPH, and chloride concentrations were compliant with the Closure Criteria. Laboratory analytical results indicated that chloride concentrations

exceeded the Closure Criteria in delineation soil samples collected from potholes PH01, PH02, PH04, PH06, and PH07. Based on laboratory analytical results for the delineation soil samples, impacted soil was excavated at those sample locations.

Laboratory analytical results for excavation sidewall samples SW02, SW03, SW06 through SW14 and SW16 through SW18, and excavation floor samples FS01 through FS07 indicated that BTEX, TPH, and chloride concentrations were compliant with the Closure Criteria and no further excavation was required in these areas.

Laboratory analytical results indicated that chloride concentrations initially exceeded the Closure Criteria in sidewall samples SW01 and SW15. Additional soil was excavated to the south of samples SW01 and SW15, and subsequent southern sidewall sample SW16 was compliant.

Laboratory analytical results indicated that chloride concentrations exceeded the Closure Criteria in sidewall samples SW04 and SW05. Further excavation of impacted soil north of sidewall samples SW04 and SW05 was limited by the presence of the active tank battery. XTO safety policy restricts soil disturbing activities to a 2-foot radius of active production equipment. This XTO safety policy is established to protect workers and reduce the likelihood of compromising the foundation of the production equipment. This policy was enforced where impacted soil was identified within 2 feet of the tank battery in sidewall samples SW04 and SW05. Discrete vertical delineation soil samples SW04A/SW04B/SW04C and SW05A/SW05B/SW05C/SW05D were collected from depths ranging from 4 feet bgs to 16 feet bgs under the northern sidewall of the excavation south of the tank battery containment to determine the maximum depth of impacted soil. Soil samples SW04C and SW05D, collected at depths of 16 feet and 14 feet, respectively, were compliant with the Closure Criteria and confirmed that impacted soil did not extent beyond 16 feet bgs.

Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Attachment 4.

DEFERRAL REQUEST

A total of approximately 650 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. Impacted soil was excavated to the extent possible, and laboratory analytical results for excavation sidewall samples SW04/SW04A/SW04B and SW05/SW05A/SW05B/SW05C collected from depths ranging from the ground surface to 12 feet bgs, indicated that soil with chloride concentrations exceeding the Closure Criteria was left in place within 2 feet of an active tank battery.

The impacted soil remaining in place is delineated vertically by subsequent discrete sidewall samples SW04C and SW05D and floor samples FS01 through FS04. The impacted soil remaining

in place is delineated laterally by excavation soil samples SW02, SW03, SW06, SW16, and delineation samples from potholes PH05, PH08 through PH10, and PH12. Impacted soil is delineated to the north by the presence of a historical liner from prior remediation activities. An estimated 2,500 cubic yards of impacted soil remains in place around and beneath the tank battery, assuming a maximum 14-foot depth based on the excavation and delineation soil samples listed above that were compliant with the Closure Criteria.

XTO requests to backfill the excavations and complete final 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. The impacted soil remaining in place is limited to the area immediately around and beneath the tank battery, and no saturated soil remains in-place. XTO requests deferral of final remediation for RP Number 2RP-2296. An updated NMOCD Form C-141 is included as Attachment 1.

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

Sincerely,

LT ENVIRONMENTAL, INC.

Korey Kennedy
Project Environmental Scientist

Ashley L. Ager, P.G.
Senior Geologist

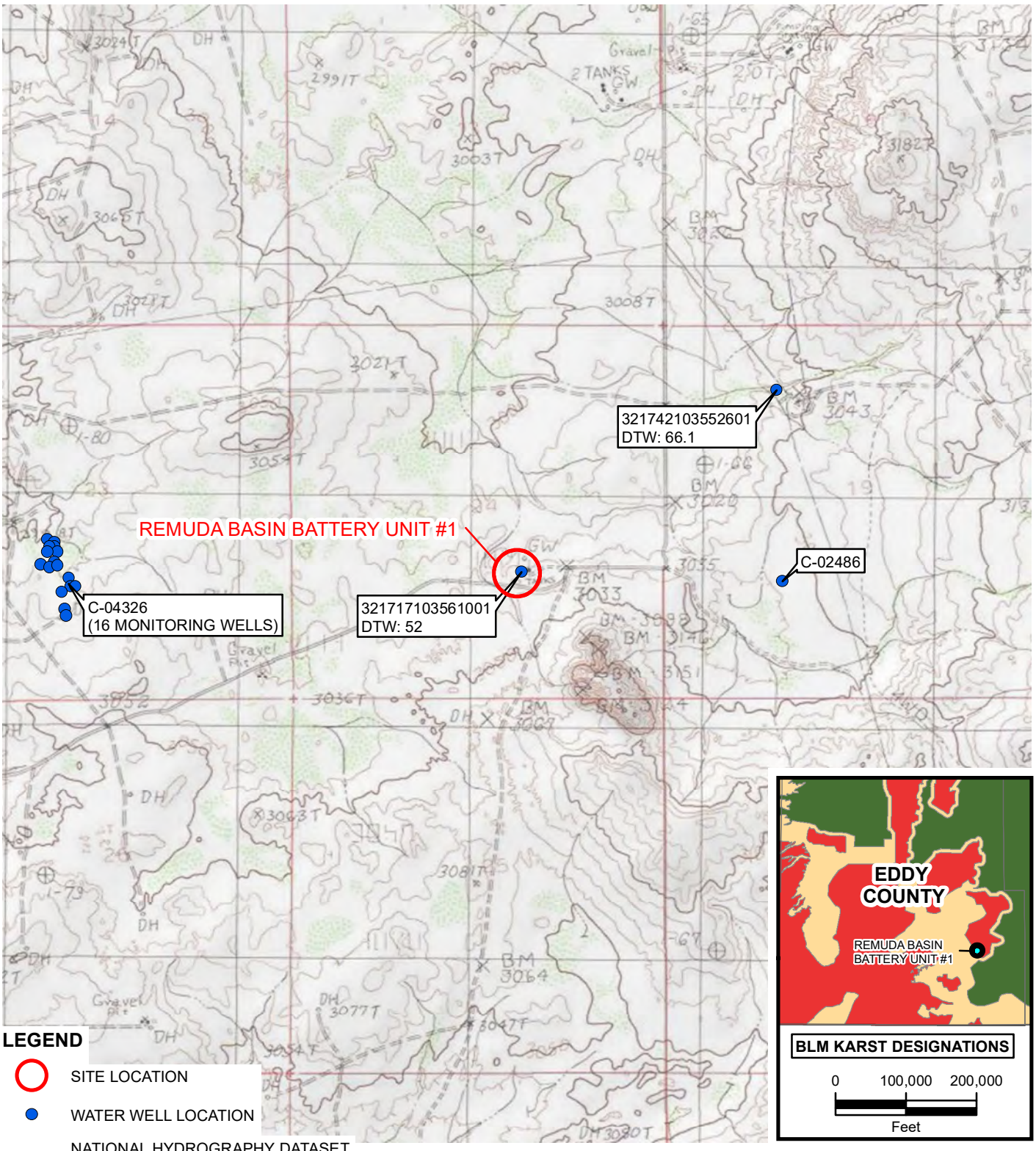
cc: Kyle Littrell, XTO
Mike Bratcher, NMOCD
Ryan Mann, State Land Office

Attachments:

Figure 1	Site Location Map
Figure 2	Delineation Soil Sample Locations
Figure 3	Excavation Soil Sample Locations
Table 1	Soil Analytical Results
Attachment 1	Initial/Final NMOCD Form C-141 (2RP-2296)
Attachment 2	Lithologic / Soil Sample Logs
Attachment 3	Photographic Log

Attachment 4 Laboratory Analytical Reports

FIGURES



NOTE: REMEDIATION PERMIT NUMBER 2RP-2296
DTW: DEPTH TO WATER IN FEET
BLM: BUREAU OF LAND MANAGEMENT

FIGURE 1
SITE LOCATION MAP
REMUDA BASIN BATTERY UNIT #1
UNIT J SEC 24 T23S R29E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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LEGEND

- DELINEATION SOIL SAMPLE WITH CONENTRATIONS EXCEEDING APPLICABLE CLOSURE CRITERIA
- DELINEATION SOIL SAMPLE WITH CONCENTRATIONS PREVIOUSLY EXCEEDING APPLICABLE CLOSURE CRITERIA
- DELINEATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- GAS LINE
- APPROXIMATE HISTORICAL LINER EXTENT
- TANK BATTERY CONTAINMENT BERM

SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)
TEXT: INDICATES SOIL SAMPLE THAT WAS EXCAVATED
NOTE: REMEDIATION PERMIT NUMBER 2RP-2296

IMAGE COURTESY OF ESRI

0 100 200
Feet

N

FIGURE 2
DELINEATION SOIL SAMPLE LOCATIONS
REMUDA BASIN BATTERY UNIT #1
UNIT J SEC 24 T23S R29E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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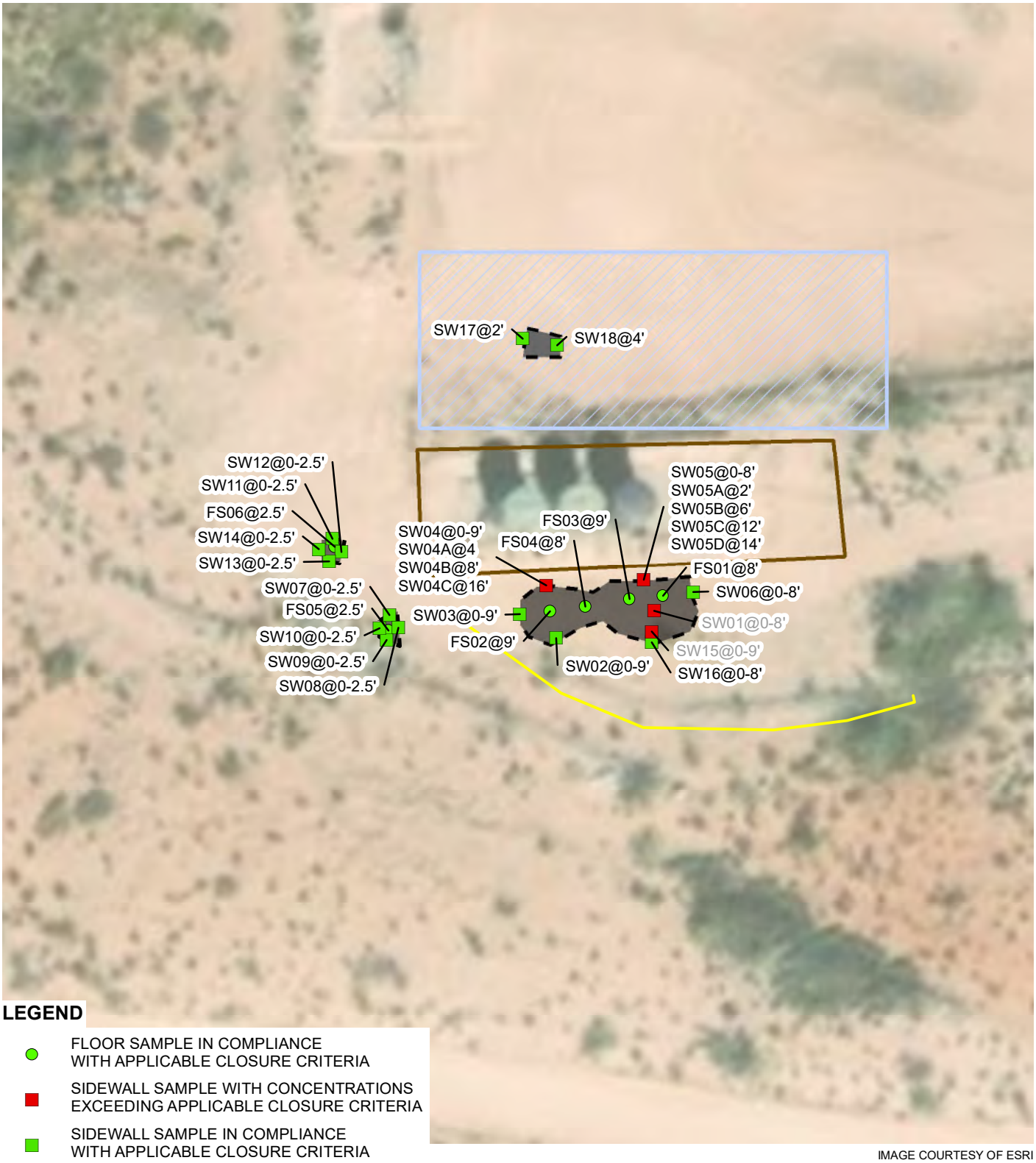

LEGEND

- FLOOR SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- SIDEWALL SAMPLE WITH CONCENTRATIONS EXCEEDING APPLICABLE CLOSURE CRITERIA
- SIDEWALL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- GAS LINE
- EXCAVATION EXTENT
- APPROXIMATE HISTORICAL LINER EXTENT
- TANK BATTERY CONTAINMENT BERM

SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)
TEXT: INDICATES SOIL SAMPLE THAT WAS EXCAVATED
NOTE: REMEDIATION PERMIT NUMBER 2RP-2296

IMAGE COURTESY OF ESRI

0 50 100
Feet

N

FIGURE 3
EXCAVATION SOIL SAMPLE LOCATIONS
REMUDA BASIN BATTERY UNIT #1
UNIT J SEC 24 T23S R29E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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TABLES

TABLE 1
SOIL ANALYTICAL RESULTS
REMUDA BASIN BATTERY UNIT #1
REMEDIATION PERMIT NUMBER 2RP-2296
EDDYCOUNTY, 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)
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	NE	**100**	**600**
PH01	1	11/07/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<50.2	<50.2	<50.2	<50.2	<50.2	**6,850**
PH01A	2	11/07/2019	<0.000996	<0.000996	<0.000996	<0.000996	<0.000996	<50.2	<50.2	<50.2	<50.2	<50.2	**2,740**
PH01B	3	11/07/2019	<0.000998	<0.000998	<0.000998	<0.000998	<0.000998	<50.2	<50.2	<50.2	<50.2	<50.2	**4,250**
PH02	1	11/07/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<50.2	<50.2	<50.2	<50.2	<50.2	**2,770**
PH02A	2	11/07/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<49.9	<49.9	<49.9	<49.9	<49.9	**1,740**
PH02B	3	11/07/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<50.1	<50.1	<50.1	<50.1	<50.1	**2,250**
PH03	1	11/07/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<50.3	<50.3	<50.3	<50.3	<50.3	193
PH03A	2	11/07/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<50.1	<50.1	<50.1	<50.1	<50.1	127
PH03B	3	11/07/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<49.9	<49.9	<49.9	<49.9	<49.9	261
PH03C	4	11/07/2019	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102	<50.2	<50.2	<50.2	<50.2	<50.2	184
PH04	1	11/07/2019	<0.000998	<0.000998	<0.000998	<0.000998	<0.000998	<49.8	<49.8	<49.8	<49.8	<49.8	**659**
PH04A	2	11/07/2019	<0.000990	<0.000990	<0.000990	<0.000990	<0.000990	<50.2	<50.2	<50.2	<50.2	<50.2	**719**
PH04B	3	11/07/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<50.3	<50.3	<50.3	<50.3	<50.3	314
PH04C	4	11/07/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<49.8	<49.8	<49.8	<49.8	<49.8	318
PH05	1	11/07/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<50.2	<50.2	<50.2	<50.2	<50.2	361
PH05A	2	11/07/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<50.1	<50.1	<50.1	<50.1	<50.1	574
PH06	1	11/07/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<49.9	<49.9	<49.9	<49.9	<49.9	292
PH06A	2	11/07/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<50.2	<50.2	<50.2	<50.2	<50.2	**1,610**
PH07	1	11/07/2019	<0.000996	<0.000996	<0.000996	<0.000996	<0.000996	<50.0	<50.0	<50.0	<50.0	<50.0	**943**
PH07A	2	11/07/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<50.0	<50.0	<50.0	<50.0	<50.0	585
PH07B	3	11/07/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<50.2	<50.2	<50.2	<50.2	<50.2	511
PH07C	4	11/07/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<50.1	<50.1	<50.1	<50.1	<50.1	334
PH08	1	11/07/2019	<0.000998	<0.000998	<0.000998	<0.000998	<0.000998	<50.1	<50.1	<50.1	<50.1	<50.1	377
PH08A	2	11/07/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<49.7	<49.7	<49.7	<49.7	<49.7	335
PH08B	3	11/07/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<50.3	<50.3	<50.3	<50.3	<50.3	373
PH08C	4	11/07/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<50.1	<50.1	<50.1	<50.1	<50.1	246
PH09	1	11/07/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<50.3	<50.3	<50.3	<50.3	<50.3	<1.00
PH09A	1.5	11/07/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<49.8	<49.8	<49.8	<49.8	<49.8	1.04

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TABLE 1
SOIL ANALYTICAL RESULTS
REMUDA BASIN BATTERY UNIT #1
REMEDIATION PERMIT NUMBER 2RP-2296
EDDYCOUNTY, 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)
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	NE	**100**	**600**
PH10	1	11/07/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<49.8	<49.8	<49.8	<49.8	<49.8	<1.00
PH10A	1.5	11/07/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<50.3	<50.3	<50.3	<50.3	<50.3	4.44
PH11	2	03/09/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.2	<50.2	<50.2	<50.2	<50.2	65.0
PH11A	3	03/09/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	93.9
PH11B	3.5	03/09/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.2	<50.2	<50.2	<50.2	<50.2	95.5
PH12	4	04/29/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.1	<50.1	<50.1	<50.1	<50.1	261
PH12A	9	04/29/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	219
FS01	8	01/17/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.0	<50.0	<50.0	<50.0	<50.0	325
FS02	9	01/17/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.1	<50.1	<50.1	<50.1	<50.1	264
FS03	9	01/17/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.3	<50.3	<50.3	<50.3	<50.3	451
FS04	8	01/17/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.3	<50.3	<50.3	<50.3	<50.3	285
FS05	2.5	01/20/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.3	<50.3	<50.3	<50.3	<50.3	242
FS06	2.5	01/20/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.8	<49.8	<49.8	<49.8	<49.8	29.2
FS07	8	04/01/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	261
SW01	0 - 8	01/17/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.1	<50.1	<50.1	<50.1	<50.1	**650**
SW02	0 - 9	01/17/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.2	<50.2	<50.2	<50.2	<50.2	386
SW03	0 - 9	01/17/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.1	<50.1	<50.1	<50.1	<50.1	342
SW04	0 - 9	01/17/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.3	<50.3	<50.3	<50.3	<50.3	**1,600**
SW04A	4	04/01/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.8	<49.8	<49.8	<49.8	<49.8	**2,620**
SW04B	8	04/01/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.2	<50.2	<50.2	<50.2	<50.2	**2,100**
SW04C	16	04/28/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<49.8	<49.8	<49.8	<49.8	<49.8	191
SW05	0 - 8	01/17/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.0	<50.0	<50.0	<50.0	<50.0	**2,010**
SW05A	2	04/01/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.3	<50.3	<50.3	<50.3	<50.3	**2,280**
SW05B	6	04/01/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	**5,470**
SW05C	12	04/28/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	**651**
SW05D	14	04/28/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	362
SW06	0 - 8	01/17/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.2	<50.2	<50.2	<50.2	<50.2	457
SW07	0 - 2.5	01/20/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.3	<50.3	<50.3	<50.3	<50.3	30.4

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TABLE 1
SOIL ANALYTICAL RESULTS
REMUDA BASIN BATTERY UNIT #1
REMEDIATION PERMIT NUMBER 2RP-2296
EDDYCOUNTY, 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)
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	NE	**100**	**600**
SW08	0 - 2.5	01/20/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.3	<50.3	<50.3	<50.3	<50.3	301
SW09	0 - 2.5	01/20/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.2	<50.2	<50.2	<50.2	<50.2	352
SW10	0 - 2.5	01/20/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.8	<49.8	<49.8	<49.8	<49.8	175
SW11	0 - 2.5	01/20/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.8	<49.8	<49.8	<49.8	<49.8	186
SW12	0 - 2.5	01/20/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.3	<50.3	<50.3	<50.3	<50.3	320
SW13	0 - 2.5	01/20/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.0	<50.0	<50.0	<50.0	<50.0	234
SW14	0 - 2.5	01/20/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.3	<50.3	<50.3	<50.3	<50.3	341
SW15	0 - 9	03/10/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.9	<49.9	<49.9	<49.9	<49.9	**852**
SW16	0 - 8	04/01/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	182
SW17	2	04/28/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	111
SW18	4	04/28/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.1	<50.1	<50.1	<50.1	<50.1	230

Notes:

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

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ATTACHMENT 1: INITIAL/FINAL NMOCD FORM C-141 (2RP-2296)

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

nHMP1413240586 — 260737

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: BOPCO, L.P.	Contact: Tony Savoie
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 575-887-7329
Facility Name: Remuda Basin Battery Unit #1	Facility Type: Exploration and Production

Surface Owner: State of N.M.	Mineral Owner: State of N.M.	API No. 30-015-03691

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
J	24	23S	29E	1980	South	198	East	Eddy

Latitude: N 32.288041 **Longitude:** W 103.936333

NATURE OF RELEASE

Type of Release: Produced water	Volume of Release: 15 bbls	Volume Recovered: None
Source of Release: Produced water storage tank	Date and Hour of Occurrence: 4/27/14 at 10 a.m.	Date and Hour of Discovery: 4/27/14 at 10 a.m.
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom?	
By Whom? Tony Savoie	Date and Hour 11/26/12 at 10:22 a.m.	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

RECEIVED
MAY 09 2014
NMOCD ARTESIA

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.
The produced water transfer pump failed to start due to blown fuses. The facility normally makes less than 100 bls of water per day. The water production for the day was three times the normal production; it is suspected that produced water was unloaded into the water storage tanks from an unknown source.

Describe Area Affected and Cleanup Action Taken.*
The spill impacted an area of approximately 900 sq.ft. inside the tank batteries earthen containment. There is a remediation underway at the facility dealing with an unauthorized release on the well pad and reserve pit.
The affected area in the pasture will be remediated in accordance to the NMOCD guidelines.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: T Gay Savoie

Printed Name: Tony Savoie

Title: Waste Management and Remediation Specialist

E-mail Address: tasavoie@basspet.com

Date: 5/8/14 Phone: 432-556-8730

* Attach Additional Sheets If Necessary

OIL CONSERVATION DIVISION

Approved by Environmental Specialist:

Approval Date: 5/12/14 Expiration Date: NA

Conditions of Approval:
Remediation per OCD Rule & Guidelines. SUBMIT REMEDIATION PROPOSAL NO LATER THAN: 6/12/14

Attached ☐

2RP-2296

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

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	
District RP	2RP-2296
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: XTO Energy, Inc	OGRID: 5380
Contact Name: Kyle Littrell	Contact Telephone: (432)-221-7331
Contact email: Kyle_Littrell@xtoenergy.com	Incident #: 2RP-2296
Contact mailing address: 522 W. Mermod, Suite 704 Carlsbad, NM 88220	

Location of Release Source

Latitude 32.288041 Longitude -103.936333
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Remuda Basin Battery Unit #1	Site Type Exploration and Production
Date Release Discovered 4/27/2014	API# *(if applicable)* 30-015-03691

Unit Letter	Section	Township	Range	County
J	24	23S	29E	Eddy

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 15 bbls	Volume Recovered (bbls) 0 bbls
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

The produced water transfer pump failed to start due to blown fuses. The spill impacted an area approximately 900 sq.ft. inside the tank batteries earthen containment.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-2296
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD?	

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:

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: 5-12-2020

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

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	NHMP1413240586
District RP	2RP-2296
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	NHMP1413240586
District RP	2RP-2296
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: 5/12/2020

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

OCD Only

Received by: Jocelyn Harimon Date: 09/27/2022

Form C-141
Page 5

State of New Mexico
Oil Conservation Division

Incident ID	NHMP1413240586
District RP	2RP-2296
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: 5-12-2020

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

OCD Only

Received by: Jocelyn Harimon Date: 09/27/2022

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

Signature: Jocelyn Harimon Date: 09/27/2022

ATTACHMENT 2: LITHOLOGIC / SOIL SAMPLE LOGS

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

Identifier:	Date:
PHa	11.7.19
Project Name:	RP Number:
Remuda Basin #1	2RP-2296
Logged By: CL	Method: Trackhoe
Hole Diameter:	Total Depth: 3'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening: PID Chloride

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			1-3
930 D	~~3864~~	0.0	N	PH01	1	1	CCHE	Caliche, tan, off white, no stain, no odor
945 D	1170	0.2	N	PH01A	2	2		
1000 D	3864	0.0	N	PH01B	3	3		
					4			TD @ 3' - Refusal
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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

Identifier: PH02	Date: 11.7.19
Project Name: Remuda Basin #1	RP Number: 2RP-2296
Logged By: SL	Method: Trackhoe
Hole Diameter:	Total Depth: 3
Lat/Long:	Field Screening: PID, Chloride

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			1-3
1020 D	71.4 3248	1.2	N	PH02	1	1	CL	Clayey sand, Brown, no stain, no odor, low plasticity, low cohesiveness,
1030 D	5.0 1372	1.0	N	PH02A	2	2		C-F sands, well graded, some caliche
1040 D	5.0 1845	0.7	N	PH02B	3	3		
					4			TD @ 3, Refusal
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

LT Environmental, Inc.
Advancing Opportunity
25 YEARS

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

Identifier:	Date:
PH03	11.7.19
Project Name:	**RP Number:**
Remuda Basin #1	2RP-2296
Logged By: JL	**Method:** Trackhoe
Hole Diameter:	**Total Depth:** 4

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening: PID Chloride

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
D	<179	0.2	N	PH03	1	1	SP-SM	1-1 sand with gravel, brown, vm-f, poorly graded, no odor, no stain above silt
D	<179	0.0	N	PH03A	2	2	SP-SM	2-4 sand, brown, vm-f, no stain, no odor, poorly graded,
D	<179	0.0	N	PH03B	3	3		
D	<179	0.0	N	PH03C	4	4		TDE 4'
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

1135
1150
1160
1220

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

Identifier:	Date:
PH04	11.7.19
Project Name:	**RP Number:**
Remuda Basin #1	2RP-2296
Logged By: SL	**Method:** Trackhoe
Hole Diameter:	**Total Depth:** 4'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening: PID ~~Chloride~~

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
1345 P	554	0.0	N	PH04	1	1	SP-SM	1 Sand, Brown, m-f, no odor, no stain, poorly graded trace silt
D	554	0.0	N	PH04A	2	2	CCHE	2 Caliche, off white, tan, no stain no odor
1300								
1310 D	252	0.0	N	PH04B	3	3	SP-SM	Sand, Brown, m-f, no odor, no stain, poorly graded trace silt
1320 D	252	0.0	N	PH04C	4	4		
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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

Identifier: PH05	Date: 11.7.19
Project Name: Remuda Basin #1	RP Number: 2RP-2296
Logged By: SL	Method: Trackhoe
Hole Diameter:	Total Depth: 2'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening: PID Chloride

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
1340 D	2.4 386	0.0	N	PH05	1	1	SP-SM	0-1 Sand, Brown, m-grained, poorly graded, no odor, no stain, trace silt
1400 D	3.0 554	0.0	N	PH05A	2	2	CLHE	1-2 Caliche, tan, off white, no odor, no stain
					3			TD @ 2' - Refusal
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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

Identifier: PH06	Date: 11.7.19
Project Name: Remuda Basin #1	RP Number: 2RP-2296
Logged By: SL	Method: Trackhoe
Hole Diameter:	Total Depth: 1.5'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening: (PID) Chloride

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1420 D	4 (907)	0.2	N	PH06	0	1	CCHE	1-1.5 Caliche, off white, tan, no odor, no staining
1440 D	3 (554)	0.2		PH06A	1	1.5		TD @ 1.5'
					2			
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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

Identifier:	Date:
PH07	11.7.19
Project Name:	**RP Number:**
Remuda Basin #1	2RP-2296
Logged By: SL	**Method:** Trackhoe
Lat/Long:	**Field Screening:** PID Chloride
Hole Diameter:	**Total Depth:** 41

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

	Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1500	D	437	0.0	N	PH07	0			1-4
						1	1		
1510	D	437	0.0	N	PH07A	2	2	SP-SM	Sand, Brown, no stain → no odor, m-f, poorly graded, trace caliche & trace silt
1520	D	437	0.0	N	PH07B	3	3		
1530	D	437	0.0	N	PH07C	4	4		
						5			TD @ 41
						6			
						7			
						8			
						9			
						10			
						11			
						12			

LT Environmental, Inc.
Advancing Opportunity
25 YEARS

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

Identifier:	Date:
PH08	11.7.19
Project Name:	**RP Number:**
Remuda Basin #1	2RP-2296
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: SL / Method: Trackhoe
Lat/Long:	Field Screening: (PID) (Chloride) / Hole Diameter: — / Total Depth: 4'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1550 D	<179	0.0	N	PH08	0–1	1	CLHE	1-1 caliché, off white, tan, gray, no odor, no stain
1600 D	<179	0.1	N	PH08A	2	2	SP-SM	2-4 sand, brown, light brown, no stain, no odor, m-f, poorly graded, trace caliché, trace silt
1610 D	<199	0.0	N	PH08B	3	3		
1620 D	1.8 252	0.0	N	PH08C	4	4		TD @ 4
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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

Identifier:	Date:
PH09	11.7.19
Project Name:	**RP Number:**
Remuda Basin #1	2RP-2296
Logged By: SL	**Method:** Trackhoe
Hole Diameter:	**Total Depth:** 1.5'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening: (PID) (Chloride)

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			1 - 1.5
1640 D	<179	0.0	N	PH09		1	CLAY	Caliche, no odor no stain, off white, tan,
1650 D	~179	0.0	N	PH09A	1	1.5		
					2			1.5' - TD - Refusal
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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508 West Stevens Street
Carlsbad, New Mexico 88220

Identifier: PH10	Date: 11.7.19
Project Name: Remuda Basin #1	RP Number: 2RP-2296
Logged By: SZ	Method: Track hoe
Hole Diameter: —	Total Depth: 1.5

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening: PID Chloride

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1700 D	<179		N	PH10	0	1	CLHE	Caliche, tan, off white, no odor, no stain
1710 D	<179	0.0	N	PH10A	1			
		0.0				1.5		
					2			TD @ 1.5' - refusal
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

LT Environmental, Inc.
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Carlsbad, New Mexico 88220
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Compliance · Engineering · Remediation

BH or PH Name: PH 11	Date: 03-09-2020
Site Name: REMUDA BASIN BATTERY #1	
RP or Incident Number: 2RP-2296	
LTE Job Number: 012918058	
Logged By: C. AGBOR	Method: POTHOLE
Lat/Long: 32.288041, -103.936333	Field Screening: Chloride, PID
Hole Diameter:	Total Depth: 3.5

LITHOLOGIC / SOIL SAMPLING LOG

Comments: EXPOSED LINER AT 3.5'

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		
dry	BDL	0.0	NO	PH 10	2		SM	Dark gray, poorly sorted, organics, no oder, no stain
		0.2		PH 10A	3		SM	
		0.0		PH 10B	3.5		SM	
								LINER WAS EXPOSED @ 3.5'

ATTACHMENT 3: PHOTOGRAPHIC LOG

PHOTOGRAPHIC LOG

c
Photograph 1: View of loading area – looking east.

Photograph 2: View of pad and excavation – looking west

Photograph 3: View of tank battery and excavation - looking north west.

Photograph 4: View of open excavation – looking east.

ATTACHMENT 4: LABORATORY ANALYTICAL REPORTS

Analytical Report 642596

for

LT Environmental, Inc.

Project Manager: Dan Moir

Remuda Basin #1

12-NOV-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

12-NOV-19

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

Reference: XENCO Report No(s): **642596**
Remuda Basin #1
Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 642596. 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. 642596 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 642596

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH01	S	11-07-19 09:30	1 ft	642596-001
PH01A	S	11-07-19 09:45	2 ft	642596-002
PH01B	S	11-07-19 10:00	3 ft	642596-003
PH02	S	11-07-19 10:20	1 ft	642596-004
PH02A	S	11-07-19 10:30	2 ft	642596-005
PH02B	S	11-07-19 10:40	3 ft	642596-006
PH03	S	11-07-19 11:35	1 ft	642596-007
PH03A	S	11-07-19 11:50	2 ft	642596-008
PH03B	S	11-07-19 12:00	3 ft	642596-009
PH03C	S	11-07-19 12:20	4 ft	642596-010
PH04	S	11-07-19 12:45	1 ft	642596-011
PH04A	S	11-07-19 13:00	2 ft	642596-012
PH04B	S	11-07-19 13:10	3 ft	642596-013
PH04C	S	11-07-19 13:20	4 ft	642596-014
PH05	S	11-07-19 13:40	1 ft	642596-015
PH05A	S	11-07-19 14:00	2 ft	642596-016
PH06	S	11-07-19 14:20	1 ft	642596-017
PH06A	S	11-07-19 14:40	2 ft	642596-018
PH07	S	11-07-19 15:00	1 ft	642596-019
PH07A	S	11-07-19 15:10	2 ft	642596-020
PH07B	S	11-07-19 15:20	3 ft	642596-021
PH07C	S	11-07-19 15:30	4 ft	642596-022
PH08	S	11-07-19 15:50	1 ft	642596-023
PH08A	S	11-07-19 16:00	2 ft	642596-024
PH08B	S	11-07-19 16:10	3 ft	642596-025
PH08C	S	11-07-19 16:20	4 ft	642596-026
PH09	S	11-07-19 16:40	1 ft	642596-027
PH09A	S	11-07-19 16:50	1.5 ft	642596-028
PH10	S	11-07-19 17:00	1 ft	642596-029
PH10A	S	11-07-19 17:10	1.5 ft	642596-030

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Remuda Basin #1

Project ID:
Work Order Number(s): *642596*

Report Date: *12-NOV-19*
Date Received: *11/08/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3106914 TPH by SW8015 Mod
Surrogate 1-Chlorooctane, Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 642594-001 S,642596-001.

Batch: LBA-3106935 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3106973 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3106983 Chloride by EPA 300
Lab Sample ID 642596-022 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 642596-012, -013, -014, -015, -016, -017, -018, -019, -020, -021, -022, -023, -024, -025, -026, -027, -028, -029, -030.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3106997 TPH by SW8015 Mod
Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 642596-017,642596-023.
Surrogate 1-Chlorooctane recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 642596-023.

Certificate of Analysis Summary 642596

LT Environmental, Inc., Arvada, CO

Project Name: Remuda Basin #1

Project Id:

Contact: Dan Moir

Project Location:

Date Received in Lab: Fri Nov-08-19 08:51 am

Report Date: 12-NOV-19

Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	642596-001		642596-002		642596-003		642596-004		642596-005		642596-006	
	Field Id:	PH01		PH01A		PH01B		PH02		PH02A		PH02B	
	Depth:	1- ft		2- ft		3- ft		1- ft		2- ft		3- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Nov-07-19 09:30		Nov-07-19 09:45		Nov-07-19 10:00		Nov-07-19 10:20		Nov-07-19 10:30		Nov-07-19 10:40	
BTEX by EPA 8021B	***Extracted:***	Nov-08-19 09:50		Nov-08-19 09:50		Nov-08-19 09:50		Nov-08-19 09:50		Nov-08-19 09:50		Nov-08-19 09:50	
	Analyzed:	Nov-08-19 12:42		Nov-08-19 13:01		Nov-08-19 13:21		Nov-08-19 13:40		Nov-08-19 13:59		Nov-08-19 14:18	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00100	0.00100	<0.000996	0.000996	<0.000998	0.000998	<0.00101	0.00101	<0.00100	0.00100	<0.00100	0.00100
Toluene		<0.00100	0.00100	<0.000996	0.000996	<0.000998	0.000998	<0.00101	0.00101	<0.00100	0.00100	<0.00100	0.00100
Ethylbenzene		<0.00100	0.00100	<0.000996	0.000996	<0.000998	0.000998	<0.00101	0.00101	<0.00100	0.00100	<0.00100	0.00100
m,p-Xylenes		<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00202	0.00202	<0.00201	0.00201	<0.00200	0.00200
o-Xylene		<0.00100	0.00100	<0.000996	0.000996	<0.000998	0.000998	<0.00101	0.00101	<0.00100	0.00100	<0.00100	0.00100
Total Xylenes		<0.00100	0.00100	<0.000996	0.000996	<0.000998	0.000998	<0.00101	0.00101	<0.00100	0.00100	<0.00100	0.00100
Total BTEX		<0.00100	0.00100	<0.000996	0.000996	<0.000998	0.000998	<0.00101	0.00101	<0.00100	0.00100	<0.00100	0.00100
Chloride by EPA 300	***Extracted:***	Nov-08-19 10:11		Nov-08-19 10:11		Nov-08-19 10:11		Nov-08-19 10:11		Nov-08-19 10:11		Nov-08-19 10:11	
	Analyzed:	Nov-08-19 13:42		Nov-08-19 13:48		Nov-08-19 14:06		Nov-08-19 14:12		Nov-08-19 14:18		Nov-08-19 14:24	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		6850	500	2740	500	4250	500	2770	500	1740	200	2250	500
TPH by SW8015 Mod	***Extracted:***	Nov-08-19 12:00		Nov-08-19 12:00		Nov-08-19 12:00		Nov-08-19 12:00		Nov-08-19 12:00		Nov-08-19 12:00	
	Analyzed:	Nov-08-19 16:55		Nov-08-19 17:34		Nov-08-19 17:54		Nov-08-19 18:14		Nov-08-19 18:33		Nov-08-19 18:53	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.2	50.2	<50.2	50.2	<50.2	50.2	<50.2	50.2	<49.9	49.9	<50.1	50.1
Diesel Range Organics (DRO)		<50.2	50.2	<50.2	50.2	<50.2	50.2	<50.2	50.2	<49.9	49.9	<50.1	50.1
Motor Oil Range Hydrocarbons (MRO)		<50.2	50.2	<50.2	50.2	<50.2	50.2	<50.2	50.2	<49.9	49.9	<50.1	50.1
Total GRO-DRO		<50.2	50.2	<50.2	50.2	<50.2	50.2	<50.2	50.2	<49.9	49.9	<50.1	50.1
Total TPH		<50.2	50.2	<50.2	50.2	<50.2	50.2	<50.2	50.2	<49.9	49.9	<50.1	50.1

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

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analysis Summary 642596

LT Environmental, Inc., Arvada, CO

Project Name: Remuda Basin #1

Project Id:

Contact: Dan Moir

Project Location:

Date Received in Lab: Fri Nov-08-19 08:51 am

Report Date: 12-NOV-19

Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	642596-007		642596-008		642596-009		642596-010		642596-011		642596-012	
	Field Id:	PH03		PH03A		PH03B		PH03C		PH04		PH04A	
	Depth:	1- ft		2- ft		3- ft		4- ft		1- ft		2- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Nov-07-19 11:35		Nov-07-19 11:50		Nov-07-19 12:00		Nov-07-19 12:20		Nov-07-19 12:45		Nov-07-19 13:00	
BTEX by EPA 8021B	***Extracted:***	Nov-08-19 09:50		Nov-08-19 09:50		Nov-08-19 09:50		Nov-08-19 09:50		Nov-08-19 09:50		Nov-08-19 09:50	
	Analyzed:	Nov-08-19 14:37		Nov-08-19 14:56		Nov-08-19 16:00		Nov-08-19 16:19		Nov-08-19 16:38		Nov-08-19 16:57	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00100	0.00100	<0.00101	0.00101	<0.00101	0.00101	<0.00102	0.00102	<0.000998	0.000998	<0.000990	0.000990
Toluene		<0.00100	0.00100	<0.00101	0.00101	<0.00101	0.00101	<0.00102	0.00102	<0.000998	0.000998	<0.000990	0.000990
Ethylbenzene		<0.00100	0.00100	<0.00101	0.00101	<0.00101	0.00101	<0.00102	0.00102	<0.000998	0.000998	<0.000990	0.000990
m,p-Xylenes		<0.00201	0.00201	<0.00202	0.00202	<0.00202	0.00202	<0.00203	0.00203	<0.00200	0.00200	<0.00198	0.00198
o-Xylene		<0.00100	0.00100	<0.00101	0.00101	<0.00101	0.00101	<0.00102	0.00102	<0.000998	0.000998	<0.000990	0.000990
Total Xylenes		<0.00100	0.00100	<0.00101	0.00101	<0.00101	0.00101	<0.00102	0.00102	<0.000998	0.000998	<0.000990	0.000990
Total BTEX		<0.00100	0.00100	<0.00101	0.00101	<0.00101	0.00101	<0.00102	0.00102	<0.000998	0.000998	<0.000990	0.000990
Chloride by EPA 300	***Extracted:***	Nov-08-19 10:11		Nov-08-19 10:11		Nov-08-19 10:11		Nov-08-19 10:11		Nov-08-19 10:11		Nov-08-19 11:11	
	Analyzed:	Nov-08-19 14:30		Nov-08-19 14:48		Nov-08-19 14:54		Nov-08-19 15:00		Nov-08-19 15:06		Nov-08-19 15:47	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		193	100	127	50.0	261	10.0	184	10.0	659	50.0	719	50.0
TPH by SW8015 Mod	***Extracted:***	Nov-08-19 12:00		Nov-08-19 12:00		Nov-08-19 12:00		Nov-08-19 12:00		Nov-08-19 12:00		Nov-08-19 13:00	
	Analyzed:	Nov-08-19 19:13		Nov-08-19 19:32		Nov-08-19 19:52		Nov-08-19 20:12		Nov-08-19 20:31		Nov-08-19 13:00	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.3	50.3	<50.1	50.1	<49.9	49.9	<50.2	50.2	<49.8	49.8	<50.2	50.2
Diesel Range Organics (DRO)		<50.3	50.3	<50.1	50.1	<49.9	49.9	<50.2	50.2	<49.8	49.8	<50.2	50.2
Motor Oil Range Hydrocarbons (MRO)		<50.3	50.3	<50.1	50.1	<49.9	49.9	<50.2	50.2	<49.8	49.8	<50.2	50.2
Total GRO-DRO		<50.3	50.3	<50.1	50.1	<49.9	49.9	<50.2	50.2	<49.8	49.8	<50.2	50.2
Total TPH		<50.3	50.3	<50.1	50.1	<49.9	49.9	<50.2	50.2	<49.8	49.8	<50.2	50.2

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

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analysis Summary 642596

LT Environmental, Inc., Arvada, CO

Project Name: Remuda Basin #1

Project Id:

Contact: Dan Moir

Project Location:

Date Received in Lab: Fri Nov-08-19 08:51 am

Report Date: 12-NOV-19

Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	642596-013		642596-014		642596-015		642596-016		642596-017		642596-018	
	Field Id:	PH04B		PH04C		PH05		PH05A		PH06		PH06A	
	Depth:	3- ft		4- ft		1- ft		2- ft		1- ft		2- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Nov-07-19 13:10		Nov-07-19 13:20		Nov-07-19 13:40		Nov-07-19 14:00		Nov-07-19 14:20		Nov-07-19 14:40	
BTEX by EPA 8021B	***Extracted:***	Nov-08-19 09:50		Nov-08-19 09:50		Nov-08-19 09:50		Nov-08-19 09:50		Nov-08-19 09:50		Nov-08-19 09:50	
	Analyzed:	Nov-08-19 17:16		Nov-08-19 17:36		Nov-08-19 17:55		Nov-08-19 18:14		Nov-08-19 18:33		Nov-08-19 18:52	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00101	0.00101	<0.00100	0.00100	<0.00101	0.00101	<0.00100	0.00100	<0.00101	0.00101	<0.00101	0.00101
Toluene		<0.00101	0.00101	<0.00100	0.00100	<0.00101	0.00101	<0.00100	0.00100	<0.00101	0.00101	<0.00101	0.00101
Ethylbenzene		<0.00101	0.00101	<0.00100	0.00100	<0.00101	0.00101	<0.00100	0.00100	<0.00101	0.00101	<0.00101	0.00101
m,p-Xylenes		<0.00202	0.00202	<0.00201	0.00201	<0.00202	0.00202	<0.00201	0.00201	<0.00202	0.00202	<0.00201	0.00201
o-Xylene		<0.00101	0.00101	<0.00100	0.00100	<0.00101	0.00101	<0.00100	0.00100	<0.00101	0.00101	<0.00101	0.00101
Total Xylenes		<0.00101	0.00101	<0.00100	0.00100	<0.00101	0.00101	<0.00100	0.00100	<0.00101	0.00101	<0.00101	0.00101
Total BTEX		<0.00101	0.00101	<0.00100	0.00100	<0.00101	0.00101	<0.00100	0.00100	<0.00101	0.00101	<0.00101	0.00101
Chloride by EPA 300	***Extracted:***	Nov-08-19 11:11		Nov-08-19 11:11		Nov-08-19 11:11		Nov-08-19 11:11		Nov-08-19 11:11		Nov-08-19 11:11	
	Analyzed:	Nov-08-19 16:15		Nov-08-19 16:22		Nov-08-19 16:28		Nov-08-19 16:35		Nov-08-19 16:42		Nov-08-19 17:02	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		314	10.0	318	50.0	361	200	574	200	292 D	100	1610	500
TPH by SW8015 Mod	***Extracted:***	Nov-08-19 13:00		Nov-08-19 13:00		Nov-08-19 13:00		Nov-08-19 13:00		Nov-08-19 13:00		Nov-08-19 13:00	
	Analyzed:	Nov-08-19 13:59		Nov-08-19 14:19		Nov-08-19 14:39		Nov-08-19 15:03		Nov-08-19 21:10		Nov-08-19 21:30	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.3	50.3	<49.8	49.8	<50.2	50.2	<50.1	50.1	<49.9	49.9	<50.2	50.2
Diesel Range Organics (DRO)		<50.3	50.3	<49.8	49.8	<50.2	50.2	<50.1	50.1	<49.9	49.9	<50.2	50.2
Motor Oil Range Hydrocarbons (MRO)		<50.3	50.3	<49.8	49.8	<50.2	50.2	<50.1	50.1	<49.9	49.9	<50.2	50.2
Total GRO-DRO		<50.3	50.3	<49.8	49.8	<50.2	50.2	<50.1	50.1	<49.9	49.9	<50.2	50.2
Total TPH		<50.3	50.3	<49.8	49.8	<50.2	50.2	<50.1	50.1	<49.9	49.9	<50.2	50.2

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Jessica Kramer
Project Assistant

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Certificate of Analysis Summary 642596

LT Environmental, Inc., Arvada, CO

Project Name: Remuda Basin #1

Project Id:

Contact: Dan Moir

Project Location:

Date Received in Lab: Fri Nov-08-19 08:51 am

Report Date: 12-NOV-19

Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	642596-019		642596-020		642596-021		642596-022		642596-023		642596-024	
	Field Id:	PH07		PH07A		PH07B		PH07C		PH08		PH08A	
	Depth:	1- ft		2- ft		3- ft		4- ft		1- ft		2- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Nov-07-19 15:00		Nov-07-19 15:10		Nov-07-19 15:20		Nov-07-19 15:30		Nov-07-19 15:50		Nov-07-19 16:00	
BTEX by EPA 8021B	***Extracted:***	Nov-08-19 09:11		Nov-08-19 09:11		Nov-08-19 09:11		Nov-08-19 09:11		Nov-08-19 09:11		Nov-08-19 09:11	
	Analyzed:	Nov-08-19 15:35		Nov-08-19 15:55		Nov-08-19 16:16		Nov-08-19 17:31		Nov-08-19 17:52		Nov-08-19 18:12	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.000996	0.000996	<0.00100	0.00100	<0.00100	0.00100	<0.00100	0.00100	<0.000998	0.000998	<0.00101	0.00101
Toluene		<0.000996	0.000996	<0.00100	0.00100	<0.00100	0.00100	<0.00100	0.00100	<0.000998	0.000998	<0.00101	0.00101
Ethylbenzene		<0.000996	0.000996	<0.00100	0.00100	<0.00100	0.00100	<0.00100	0.00100	<0.000998	0.000998	<0.00101	0.00101
m,p-Xylenes		<0.00199	0.00199	<0.00201	0.00201	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202
o-Xylene		<0.000996	0.000996	<0.00100	0.00100	<0.00100	0.00100	<0.00100	0.00100	<0.000998	0.000998	<0.00101	0.00101
Total Xylenes		<0.000996	0.000996	<0.00100	0.00100	<0.00100	0.00100	<0.00100	0.00100	<0.000998	0.000998	<0.00101	0.00101
Total BTEX		<0.000996	0.000996	<0.00100	0.00100	<0.00100	0.00100	<0.00100	0.00100	<0.000998	0.000998	<0.00101	0.00101
Chloride by EPA 300	***Extracted:***	Nov-08-19 11:11		Nov-08-19 11:11		Nov-08-19 11:11		Nov-08-19 11:11		Nov-08-19 11:11		Nov-08-19 11:11	
	Analyzed:	Nov-08-19 17:09		Nov-08-19 17:16		Nov-08-19 17:23		Nov-08-19 17:29		Nov-08-19 17:50		Nov-08-19 17:56	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		943	500	585	500	511	500	334 D	100	377 D	100	335 D	100
TPH by SW8015 Mod	***Extracted:***	Nov-08-19 13:00		Nov-08-19 13:00		Nov-08-19 13:00		Nov-08-19 13:00		Nov-08-19 13:00		Nov-08-19 13:00	
	Analyzed:	Nov-08-19 21:50		Nov-08-19 16:23		Nov-08-19 16:55		Nov-08-19 17:34		Nov-08-19 17:54		Nov-08-19 18:14	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<50.0	50.0	<50.2	50.2	<50.1	50.1	<50.1	50.1	<49.7	49.7
Diesel Range Organics (DRO)		<50.0	50.0	<50.0	50.0	<50.2	50.2	<50.1	50.1	<50.1	50.1	<49.7	49.7
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<50.0	50.0	<50.2	50.2	<50.1	50.1	<50.1	50.1	<49.7	49.7
Total GRO-DRO		<50.0	50.0	<50.0	50.0	<50.2	50.2	<50.1	50.1	<50.1	50.1	<49.7	49.7
Total TPH		<50.0	50.0	<50.0	50.0	<50.2	50.2	<50.1	50.1	<50.1	50.1	<49.7	49.7

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Jessica Kramer
Project Assistant

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Certificate of Analysis Summary 642596

LT Environmental, Inc., Arvada, CO

Project Name: Remuda Basin #1

Project Id:

Contact: Dan Moir

Project Location:

Date Received in Lab: Fri Nov-08-19 08:51 am

Report Date: 12-NOV-19

Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	642596-025		642596-026		642596-027		642596-028		642596-029		642596-030	
	Field Id:	PH08B		PH08C		PH09		PH09A		PH10		PH10A	
	Depth:	3- ft		4- ft		1- ft		1.5- ft		1- ft		1.5- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Nov-07-19 16:10		Nov-07-19 16:20		Nov-07-19 16:40		Nov-07-19 16:50		Nov-07-19 17:00		Nov-07-19 17:10	
BTEX by EPA 8021B	***Extracted:***	Nov-08-19 09:11		Nov-08-19 09:11		Nov-08-19 09:11		Nov-08-19 09:11		Nov-08-19 09:11		Nov-08-19 09:11	
	Analyzed:	Nov-08-19 18:32		Nov-08-19 18:53		Nov-08-19 19:13		Nov-08-19 19:33		Nov-08-19 19:54		Nov-08-19 20:14	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00100	0.00100	<0.00101	0.00101	<0.00101	0.00101	<0.00100	0.00100	<0.00100	0.00100	<0.00101	0.00101
Toluene		<0.00100	0.00100	<0.00101	0.00101	<0.00101	0.00101	<0.00100	0.00100	<0.00100	0.00100	<0.00101	0.00101
Ethylbenzene		<0.00100	0.00100	<0.00101	0.00101	<0.00101	0.00101	<0.00100	0.00100	<0.00100	0.00100	<0.00101	0.00101
m,p-Xylenes		<0.00200	0.00200	<0.00202	0.00202	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202
o-Xylene		<0.00100	0.00100	<0.00101	0.00101	<0.00101	0.00101	<0.00100	0.00100	<0.00100	0.00100	<0.00101	0.00101
Total Xylenes		<0.00100	0.00100	<0.00101	0.00101	<0.00101	0.00101	<0.00100	0.00100	<0.00100	0.00100	<0.00101	0.00101
Total BTEX		<0.00100	0.00100	<0.00101	0.00101	<0.00101	0.00101	<0.00100	0.00100	<0.00100	0.00100	<0.00101	0.00101
Chloride by EPA 300	***Extracted:***	Nov-08-19 11:11		Nov-08-19 11:11		Nov-08-19 11:11		Nov-08-19 11:11		Nov-08-19 11:11		Nov-08-19 11:11	
	Analyzed:	Nov-08-19 18:17		Nov-08-19 18:23		Nov-08-19 18:30		Nov-08-19 18:37		Nov-08-19 18:44		Nov-08-19 18:51	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		373 D	50.0	246 D	50.0	<1.00	1.00	1.04	1.00	<1.00	1.00	4.44	1.00
TPH by SW8015 Mod	***Extracted:***	Nov-08-19 13:00		Nov-08-19 13:00		Nov-08-19 13:00		Nov-08-19 13:00		Nov-08-19 13:00		Nov-08-19 13:00	
	Analyzed:	Nov-08-19 18:33		Nov-08-19 18:53		Nov-08-19 19:13		Nov-08-19 19:32		Nov-08-19 19:52		Nov-08-19 20:12	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.3	50.3	<50.1	50.1	<50.3	50.3	<49.8	49.8	<49.8	49.8	<50.3	50.3
Diesel Range Organics (DRO)		<50.3	50.3	<50.1	50.1	<50.3	50.3	<49.8	49.8	<49.8	49.8	<50.3	50.3
Motor Oil Range Hydrocarbons (MRO)		<50.3	50.3	<50.1	50.1	<50.3	50.3	<49.8	49.8	<49.8	49.8	<50.3	50.3
Total GRO-DRO		<50.3	50.3	<50.1	50.1	<50.3	50.3	<49.8	49.8	<49.8	49.8	<50.3	50.3
Total TPH		<50.3	50.3	<50.1	50.1	<50.3	50.3	<49.8	49.8	<49.8	49.8	<50.3	50.3

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Jessica Kramer
Project Assistant

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Certificate of Analytical Results 642596

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**PH01**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-001	Date Collected:	11.07.19 09.30	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 10.11	Basis:	Wet Weight
Seq Number:	3106922				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**6850**	500	mg/kg	11.08.19 13.42		50

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.08.19 12.00	Basis:	Wet Weight
Seq Number:	3106914				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	11.08.19 16.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	11.08.19 16.55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	11.08.19 16.55	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	11.08.19 16.55	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	11.08.19 16.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	143	%	70-135	11.08.19 16.55	**
o-Terphenyl	84-15-1	148	%	70-135	11.08.19 16.55	**

Certificate of Analytical Results 642596

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**PH01**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-001	Date Collected:	11.07.19 09.30	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 09.50	Basis:	Wet Weight
Seq Number:	3106935				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	11.08.19 12.42	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	11.08.19 12.42	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	11.08.19 12.42	U	1
m,p-Xylenes	179601-23-1	<0.00201	0.00201	mg/kg	11.08.19 12.42	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	11.08.19 12.42	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	11.08.19 12.42	U	1
Total BTEX		<0.00100	0.00100	mg/kg	11.08.19 12.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	11.08.19 12.42	
4-Bromofluorobenzene	460-00-4	118	%	70-130	11.08.19 12.42	

Certificate of Analytical Results 642596

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**PH01A**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-002	Date Collected:	11.07.19 09.45	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 10.11	Basis:	Wet Weight
Seq Number:	3106922				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2740**	500	mg/kg	11.08.19 13.48		50

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.08.19 12.00	Basis:	Wet Weight
Seq Number:	3106914				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	11.08.19 17.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	11.08.19 17.34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	11.08.19 17.34	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	11.08.19 17.34	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	11.08.19 17.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	11.08.19 17.34	
o-Terphenyl	84-15-1	111	%	70-135	11.08.19 17.34	

Certificate of Analytical Results 642596

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**PH01A**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-002	Date Collected:	11.07.19 09.45	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 09.50	Basis:	Wet Weight
Seq Number:	3106935				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000996	0.000996	mg/kg	11.08.19 13.01	U	1
Toluene	108-88-3	<0.000996	0.000996	mg/kg	11.08.19 13.01	U	1
Ethylbenzene	100-41-4	<0.000996	0.000996	mg/kg	11.08.19 13.01	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	11.08.19 13.01	U	1
o-Xylene	95-47-6	<0.000996	0.000996	mg/kg	11.08.19 13.01	U	1
Total Xylenes	1330-20-7	<0.000996	0.000996	mg/kg	11.08.19 13.01	U	1
Total BTEX		<0.000996	0.000996	mg/kg	11.08.19 13.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	123	%	70-130	11.08.19 13.01	
1,4-Difluorobenzene	540-36-3	103	%	70-130	11.08.19 13.01	

Certificate of Analytical Results 642596

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**PH01B**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-003	Date Collected:	11.07.19 10.00	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 10.11	Basis:	Wet Weight
Seq Number:	3106922				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**4250**	500	mg/kg	11.08.19 14.06		50

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.08.19 12.00	Basis:	Wet Weight
Seq Number:	3106914				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	11.08.19 17.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	11.08.19 17.54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	11.08.19 17.54	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	11.08.19 17.54	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	11.08.19 17.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	11.08.19 17.54	
o-Terphenyl	84-15-1	117	%	70-135	11.08.19 17.54	

Certificate of Analytical Results 642596

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**PH01B**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-003	Date Collected:	11.07.19 10.00	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 09.50	Basis:	Wet Weight
Seq Number:	3106935				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000998	0.000998	mg/kg	11.08.19 13.21	U	1
Toluene	108-88-3	<0.000998	0.000998	mg/kg	11.08.19 13.21	U	1
Ethylbenzene	100-41-4	<0.000998	0.000998	mg/kg	11.08.19 13.21	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	11.08.19 13.21	U	1
o-Xylene	95-47-6	<0.000998	0.000998	mg/kg	11.08.19 13.21	U	1
Total Xylenes	1330-20-7	<0.000998	0.000998	mg/kg	11.08.19 13.21	U	1
Total BTEX		<0.000998	0.000998	mg/kg	11.08.19 13.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	119	%	70-130	11.08.19 13.21	
1,4-Difluorobenzene	540-36-3	106	%	70-130	11.08.19 13.21	

Certificate of Analytical Results 642596

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**PH02**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-004	Date Collected:	11.07.19 10.20	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 10.11	Basis:	Wet Weight
Seq Number:	3106922				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2770**	500	mg/kg	11.08.19 14.12		50

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.08.19 12.00	Basis:	Wet Weight
Seq Number:	3106914				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	11.08.19 18.14	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	11.08.19 18.14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	11.08.19 18.14	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	11.08.19 18.14	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	11.08.19 18.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	11.08.19 18.14	
o-Terphenyl	84-15-1	107	%	70-135	11.08.19 18.14	

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LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**PH02**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-004	Date Collected:	11.07.19 10.20	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 09.50	Basis:	Wet Weight
Seq Number:	3106935				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	11.08.19 13.40	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	11.08.19 13.40	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	11.08.19 13.40	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	11.08.19 13.40	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	11.08.19 13.40	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	11.08.19 13.40	U	1
Total BTEX		<0.00101	0.00101	mg/kg	11.08.19 13.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	11.08.19 13.40	
4-Bromofluorobenzene	460-00-4	121	%	70-130	11.08.19 13.40	

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LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**PH02A**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-005	Date Collected:	11.07.19 10.30	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 10.11	Basis:	Wet Weight
Seq Number:	3106922				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1740**	200	mg/kg	11.08.19 14.18		20

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.08.19 12.00	Basis:	Wet Weight
Seq Number:	3106914				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	11.08.19 18.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	11.08.19 18.33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	11.08.19 18.33	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	11.08.19 18.33	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	11.08.19 18.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	11.08.19 18.33	
o-Terphenyl	84-15-1	109	%	70-135	11.08.19 18.33	

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LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**PH02A**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-005	Date Collected:	11.07.19 10.30	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 09.50	Basis:	Wet Weight
Seq Number:	3106935				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	11.08.19 13.59	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	11.08.19 13.59	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	11.08.19 13.59	U	1
m,p-Xylenes	179601-23-1	<0.00201	0.00201	mg/kg	11.08.19 13.59	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	11.08.19 13.59	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	11.08.19 13.59	U	1
Total BTEX		<0.00100	0.00100	mg/kg	11.08.19 13.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	120	%	70-130	11.08.19 13.59	
1,4-Difluorobenzene	540-36-3	104	%	70-130	11.08.19 13.59	

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LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**PH02B**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-006	Date Collected:	11.07.19 10.40	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 10.11	Basis:	Wet Weight
Seq Number:	3106922				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2250**	500	mg/kg	11.08.19 14.24		50

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.08.19 12.00	Basis:	Wet Weight
Seq Number:	3106914				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	11.08.19 18.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	11.08.19 18.53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	11.08.19 18.53	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	11.08.19 18.53	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	11.08.19 18.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	11.08.19 18.53	
o-Terphenyl	84-15-1	108	%	70-135	11.08.19 18.53	

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LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**PH02B**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-006	Date Collected:	11.07.19 10.40	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 09.50	Basis:	Wet Weight
Seq Number:	3106935				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	11.08.19 14.18	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	11.08.19 14.18	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	11.08.19 14.18	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	11.08.19 14.18	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	11.08.19 14.18	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	11.08.19 14.18	U	1
Total BTEX		<0.00100	0.00100	mg/kg	11.08.19 14.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	11.08.19 14.18	
4-Bromofluorobenzene	460-00-4	121	%	70-130	11.08.19 14.18	

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Remuda Basin #1

Sample Id:	**PH03**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-007	Date Collected:	11.07.19 11.35	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 10.11	Basis:	Wet Weight
Seq Number:	3106922				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**193**	100	mg/kg	11.08.19 14.30		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.08.19 12.00	Basis:	Wet Weight
Seq Number:	3106914				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	11.08.19 19.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	11.08.19 19.13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	11.08.19 19.13	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	11.08.19 19.13	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	11.08.19 19.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	11.08.19 19.13	
o-Terphenyl	84-15-1	110	%	70-135	11.08.19 19.13	

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Remuda Basin #1

Sample Id:	**PH03**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-007	Date Collected:	11.07.19 11.35	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 09.50	Basis:	Wet Weight
Seq Number:	3106935				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	11.08.19 14.37	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	11.08.19 14.37	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	11.08.19 14.37	U	1
m,p-Xylenes	179601-23-1	<0.00201	0.00201	mg/kg	11.08.19 14.37	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	11.08.19 14.37	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	11.08.19 14.37	U	1
Total BTEX		<0.00100	0.00100	mg/kg	11.08.19 14.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	119	%	70-130	11.08.19 14.37	
1,4-Difluorobenzene	540-36-3	106	%	70-130	11.08.19 14.37	

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LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**PH03A**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-008	Date Collected:	11.07.19 11.50	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 10.11	Basis:	Wet Weight
Seq Number:	3106922				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**127**	50.0	mg/kg	11.08.19 14.48		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.08.19 12.00	Basis:	Wet Weight
Seq Number:	3106914				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	11.08.19 19.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	11.08.19 19.32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	11.08.19 19.32	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	11.08.19 19.32	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	11.08.19 19.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	11.08.19 19.32	
o-Terphenyl	84-15-1	110	%	70-135	11.08.19 19.32	

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Remuda Basin #1

Sample Id:	**PH03A**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-008	Date Collected:	11.07.19 11.50	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 09.50	Basis:	Wet Weight
Seq Number:	3106935				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	11.08.19 14.56	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	11.08.19 14.56	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	11.08.19 14.56	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	11.08.19 14.56	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	11.08.19 14.56	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	11.08.19 14.56	U	1
Total BTEX		<0.00101	0.00101	mg/kg	11.08.19 14.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	121	%	70-130	11.08.19 14.56	
1,4-Difluorobenzene	540-36-3	105	%	70-130	11.08.19 14.56	

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LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**PH03B**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-009	Date Collected:	11.07.19 12.00	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 10.11	Basis:	Wet Weight
Seq Number:	3106922				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**261**	10.0	mg/kg	11.08.19 14.54		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.08.19 12.00	Basis:	Wet Weight
Seq Number:	3106914				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	11.08.19 19.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	11.08.19 19.52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	11.08.19 19.52	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	11.08.19 19.52	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	11.08.19 19.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	11.08.19 19.52	
o-Terphenyl	84-15-1	118	%	70-135	11.08.19 19.52	

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LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**PH03B**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-009	Date Collected:	11.07.19 12.00	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 09.50	Basis:	Wet Weight
Seq Number:	3106935				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	11.08.19 16.00	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	11.08.19 16.00	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	11.08.19 16.00	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	11.08.19 16.00	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	11.08.19 16.00	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	11.08.19 16.00	U	1
Total BTEX		<0.00101	0.00101	mg/kg	11.08.19 16.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	110	%	70-130	11.08.19 16.00	
1,4-Difluorobenzene	540-36-3	103	%	70-130	11.08.19 16.00	

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LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**PH03C**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-010	Date Collected:	11.07.19 12.20	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 10.11	Basis:	Wet Weight
Seq Number:	3106922				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**184**	10.0	mg/kg	11.08.19 15.00		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.08.19 12.00	Basis:	Wet Weight
Seq Number:	3106914				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	11.08.19 20.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	11.08.19 20.12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	11.08.19 20.12	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	11.08.19 20.12	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	11.08.19 20.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	11.08.19 20.12	
o-Terphenyl	84-15-1	114	%	70-135	11.08.19 20.12	

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LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**PH03C**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-010	Date Collected:	11.07.19 12.20	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 09.50	Basis:	Wet Weight
Seq Number:	3106935				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00102	0.00102	mg/kg	11.08.19 16.19	U	1
Toluene	108-88-3	<0.00102	0.00102	mg/kg	11.08.19 16.19	U	1
Ethylbenzene	100-41-4	<0.00102	0.00102	mg/kg	11.08.19 16.19	U	1
m,p-Xylenes	179601-23-1	<0.00203	0.00203	mg/kg	11.08.19 16.19	U	1
o-Xylene	95-47-6	<0.00102	0.00102	mg/kg	11.08.19 16.19	U	1
Total Xylenes	1330-20-7	<0.00102	0.00102	mg/kg	11.08.19 16.19	U	1
Total BTEX		<0.00102	0.00102	mg/kg	11.08.19 16.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	117	%	70-130	11.08.19 16.19	
1,4-Difluorobenzene	540-36-3	104	%	70-130	11.08.19 16.19	

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LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**PH04**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-011	Date Collected:	11.07.19 12.45	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 10.11	Basis:	Wet Weight
Seq Number:	3106922				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**659**	50.0	mg/kg	11.08.19 15.06		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.08.19 12.00	Basis:	Wet Weight
Seq Number:	3106914				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	11.08.19 20.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	11.08.19 20.31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	11.08.19 20.31	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	11.08.19 20.31	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	11.08.19 20.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	11.08.19 20.31	
o-Terphenyl	84-15-1	113	%	70-135	11.08.19 20.31	

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LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**PH04**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-011	Date Collected:	11.07.19 12.45	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 09.50	Basis:	Wet Weight
Seq Number:	3106935				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000998	0.000998	mg/kg	11.08.19 16.38	U	1
Toluene	108-88-3	<0.000998	0.000998	mg/kg	11.08.19 16.38	U	1
Ethylbenzene	100-41-4	<0.000998	0.000998	mg/kg	11.08.19 16.38	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	11.08.19 16.38	U	1
o-Xylene	95-47-6	<0.000998	0.000998	mg/kg	11.08.19 16.38	U	1
Total Xylenes	1330-20-7	<0.000998	0.000998	mg/kg	11.08.19 16.38	U	1
Total BTEX		<0.000998	0.000998	mg/kg	11.08.19 16.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	114	%	70-130	11.08.19 16.38	
1,4-Difluorobenzene	540-36-3	106	%	70-130	11.08.19 16.38	

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LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**PH04A**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-012	Date Collected:	11.07.19 13.00	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 11.11	Basis:	Wet Weight
Seq Number:	3106983				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**719**	50.0	mg/kg	11.08.19 15.47		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.08.19 13.00	Basis:	Wet Weight
Seq Number:	3106997				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	11.08.19 13.00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	11.08.19 13.00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	11.08.19 13.00	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	11.08.19 13.00	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	11.08.19 13.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	11.08.19 13.00	
o-Terphenyl	84-15-1	105	%	70-135	11.08.19 13.00	

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Remuda Basin #1

Sample Id:	**PH04A**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-012	Date Collected:	11.07.19 13.00	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 09.50	Basis:	Wet Weight
Seq Number:	3106935				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000990	0.000990	mg/kg	11.08.19 16.57	U	1
Toluene	108-88-3	<0.000990	0.000990	mg/kg	11.08.19 16.57	U	1
Ethylbenzene	100-41-4	<0.000990	0.000990	mg/kg	11.08.19 16.57	U	1
m,p-Xylenes	179601-23-1	<0.00198	0.00198	mg/kg	11.08.19 16.57	U	1
o-Xylene	95-47-6	<0.000990	0.000990	mg/kg	11.08.19 16.57	U	1
Total Xylenes	1330-20-7	<0.000990	0.000990	mg/kg	11.08.19 16.57	U	1
Total BTEX		<0.000990	0.000990	mg/kg	11.08.19 16.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	115	%	70-130	11.08.19 16.57	
1,4-Difluorobenzene	540-36-3	104	%	70-130	11.08.19 16.57	

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Remuda Basin #1

Sample Id:	**PH04B**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-013	Date Collected:	11.07.19 13.10	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 11.11	Basis:	Wet Weight
Seq Number:	3106983				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**314**	10.0	mg/kg	11.08.19 16.15		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.08.19 13.00	Basis:	Wet Weight
Seq Number:	3106997				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	11.08.19 13.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	11.08.19 13.59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	11.08.19 13.59	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	11.08.19 13.59	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	11.08.19 13.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	76	%	70-135	11.08.19 13.59	
o-Terphenyl	84-15-1	85	%	70-135	11.08.19 13.59	

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Remuda Basin #1

Sample Id:	**PH04B**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-013	Date Collected:	11.07.19 13.10	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 09.50	Basis:	Wet Weight
Seq Number:	3106935				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	11.08.19 17.16	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	11.08.19 17.16	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	11.08.19 17.16	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	11.08.19 17.16	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	11.08.19 17.16	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	11.08.19 17.16	U	1
Total BTEX		<0.00101	0.00101	mg/kg	11.08.19 17.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	112	%	70-130	11.08.19 17.16	
1,4-Difluorobenzene	540-36-3	102	%	70-130	11.08.19 17.16	

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Remuda Basin #1

Sample Id:	**PH04C**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-014	Date Collected:	11.07.19 13.20	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 11.11	Basis:	Wet Weight
Seq Number:	3106983				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**318**	50.0	mg/kg	11.08.19 16.22		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.08.19 13.00	Basis:	Wet Weight
Seq Number:	3106997				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	11.08.19 14.19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	11.08.19 14.19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	11.08.19 14.19	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	11.08.19 14.19	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	11.08.19 14.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	78	%	70-135	11.08.19 14.19	
o-Terphenyl	84-15-1	85	%	70-135	11.08.19 14.19	

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Remuda Basin #1

Sample Id:	**PH04C**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-014	Date Collected:	11.07.19 13.20	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 09.50	Basis:	Wet Weight
Seq Number:	3106935				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	11.08.19 17.36	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	11.08.19 17.36	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	11.08.19 17.36	U	1
m,p-Xylenes	179601-23-1	<0.00201	0.00201	mg/kg	11.08.19 17.36	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	11.08.19 17.36	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	11.08.19 17.36	U	1
Total BTEX		<0.00100	0.00100	mg/kg	11.08.19 17.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	11.08.19 17.36	
4-Bromofluorobenzene	460-00-4	117	%	70-130	11.08.19 17.36	

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Remuda Basin #1

Sample Id:	**PH05**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-015	Date Collected:	11.07.19 13.40	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 11.11	Basis:	Wet Weight
Seq Number:	3106983				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**361**	200	mg/kg	11.08.19 16.28		20

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.08.19 13.00	Basis:	Wet Weight
Seq Number:	3106997				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	11.08.19 14.39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	11.08.19 14.39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	11.08.19 14.39	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	11.08.19 14.39	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	11.08.19 14.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	11.08.19 14.39	
o-Terphenyl	84-15-1	97	%	70-135	11.08.19 14.39	

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LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**PH05**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-015	Date Collected:	11.07.19 13.40	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 09.50	Basis:	Wet Weight
Seq Number:	3106935				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	11.08.19 17.55	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	11.08.19 17.55	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	11.08.19 17.55	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	11.08.19 17.55	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	11.08.19 17.55	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	11.08.19 17.55	U	1
Total BTEX		<0.00101	0.00101	mg/kg	11.08.19 17.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	11.08.19 17.55	
4-Bromofluorobenzene	460-00-4	123	%	70-130	11.08.19 17.55	

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Remuda Basin #1

Sample Id:	**PH05A**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-016	Date Collected:	11.07.19 14.00	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 11.11	Basis:	Wet Weight
Seq Number:	3106983				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**574**	200	mg/kg	11.08.19 16.35		20

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.08.19 13.00	Basis:	Wet Weight
Seq Number:	3106997				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	11.08.19 15.03	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	11.08.19 15.03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	11.08.19 15.03	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	11.08.19 15.03	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	11.08.19 15.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-135	11.08.19 15.03	
o-Terphenyl	84-15-1	125	%	70-135	11.08.19 15.03	

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Remuda Basin #1

Sample Id:	**PH05A**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-016	Date Collected:	11.07.19 14.00	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 09.50	Basis:	Wet Weight
Seq Number:	3106935				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	11.08.19 18.14	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	11.08.19 18.14	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	11.08.19 18.14	U	1
m,p-Xylenes	179601-23-1	<0.00201	0.00201	mg/kg	11.08.19 18.14	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	11.08.19 18.14	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	11.08.19 18.14	U	1
Total BTEX		<0.00100	0.00100	mg/kg	11.08.19 18.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	115	%	70-130	11.08.19 18.14	
1,4-Difluorobenzene	540-36-3	105	%	70-130	11.08.19 18.14	

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Remuda Basin #1

Sample Id:	**PH06**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-017	Date Collected:	11.07.19 14.20	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 11.11	Basis:	Wet Weight
Seq Number:	3106983				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**292**	100	mg/kg	11.11.19 10.08	D	10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.08.19 13.00	Basis:	Wet Weight
Seq Number:	3106997				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	11.08.19 21.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	11.08.19 21.10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	11.08.19 21.10	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	11.08.19 21.10	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	11.08.19 21.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	118	%	70-135	11.08.19 21.10	
o-Terphenyl	84-15-1	137	%	70-135	11.08.19 21.10	**

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Remuda Basin #1

Sample Id:	**PH06**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-017	Date Collected:	11.07.19 14.20	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 09.50	Basis:	Wet Weight
Seq Number:	3106935				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	11.08.19 18.33	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	11.08.19 18.33	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	11.08.19 18.33	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	11.08.19 18.33	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	11.08.19 18.33	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	11.08.19 18.33	U	1
Total BTEX		<0.00101	0.00101	mg/kg	11.08.19 18.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	120	%	70-130	11.08.19 18.33	
1,4-Difluorobenzene	540-36-3	105	%	70-130	11.08.19 18.33	

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LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**PH06A**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-018	Date Collected:	11.07.19 14.40	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 11.11	Basis:	Wet Weight
Seq Number:	3106983				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1610**	500	mg/kg	11.08.19 17.02		50

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.08.19 13.00	Basis:	Wet Weight
Seq Number:	3106997				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	11.08.19 21.30	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	11.08.19 21.30	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	11.08.19 21.30	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	11.08.19 21.30	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	11.08.19 21.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	11.08.19 21.30	
o-Terphenyl	84-15-1	118	%	70-135	11.08.19 21.30	

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LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**PH06A**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-018	Date Collected:	11.07.19 14.40	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 09.50	Basis:	Wet Weight
Seq Number:	3106935				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	11.08.19 18.52	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	11.08.19 18.52	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	11.08.19 18.52	U	1
m,p-Xylenes	179601-23-1	<0.00201	0.00201	mg/kg	11.08.19 18.52	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	11.08.19 18.52	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	11.08.19 18.52	U	1
Total BTEX		<0.00101	0.00101	mg/kg	11.08.19 18.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	119	%	70-130	11.08.19 18.52	
1,4-Difluorobenzene	540-36-3	104	%	70-130	11.08.19 18.52	

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LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**PH07**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-019	Date Collected:	11.07.19 15.00	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 11.11	Basis:	Wet Weight
Seq Number:	3106983				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**943**	500	mg/kg	11.08.19 17.09		50

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.08.19 13.00	Basis:	Wet Weight
Seq Number:	3106997				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	11.08.19 21.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	11.08.19 21.50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.08.19 21.50	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	11.08.19 21.50	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	11.08.19 21.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	11.08.19 21.50	
o-Terphenyl	84-15-1	114	%	70-135	11.08.19 21.50	

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LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**PH07**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-019	Date Collected:	11.07.19 15.00	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 09.11	Basis:	Wet Weight
Seq Number:	3106973				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000996	0.000996	mg/kg	11.08.19 15.35	U	1
Toluene	108-88-3	<0.000996	0.000996	mg/kg	11.08.19 15.35	U	1
Ethylbenzene	100-41-4	<0.000996	0.000996	mg/kg	11.08.19 15.35	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	11.08.19 15.35	U	1
o-Xylene	95-47-6	<0.000996	0.000996	mg/kg	11.08.19 15.35	U	1
Total Xylenes	1330-20-7	<0.000996	0.000996	mg/kg	11.08.19 15.35	U	1
Total BTEX		<0.000996	0.000996	mg/kg	11.08.19 15.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	108	%	70-130	11.08.19 15.35	
1,4-Difluorobenzene	540-36-3	104	%	70-130	11.08.19 15.35	

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LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**PH07A**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-020	Date Collected:	11.07.19 15.10	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 11.11	Basis:	Wet Weight
Seq Number:	3106983				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**585**	500	mg/kg	11.08.19 17.16		50

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.08.19 13.00	Basis:	Wet Weight
Seq Number:	3106997				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	11.08.19 16.23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	11.08.19 16.23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.08.19 16.23	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	11.08.19 16.23	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	11.08.19 16.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	118	%	70-135	11.08.19 16.23	
o-Terphenyl	84-15-1	126	%	70-135	11.08.19 16.23	

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LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**PH07A**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-020	Date Collected:	11.07.19 15.10	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 09.11	Basis:	Wet Weight
Seq Number:	3106973				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	11.08.19 15.55	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	11.08.19 15.55	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	11.08.19 15.55	U	1
m,p-Xylenes	179601-23-1	<0.00201	0.00201	mg/kg	11.08.19 15.55	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	11.08.19 15.55	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	11.08.19 15.55	U	1
Total BTEX		<0.00100	0.00100	mg/kg	11.08.19 15.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	112	%	70-130	11.08.19 15.55	
1,4-Difluorobenzene	540-36-3	105	%	70-130	11.08.19 15.55	

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Remuda Basin #1

Sample Id:	**PH07B**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-021	Date Collected:	11.07.19 15.20	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 11.11	Basis:	Wet Weight
Seq Number:	3106983				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**511**	500	mg/kg	11.08.19 17.23		50

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.08.19 13.00	Basis:	Wet Weight
Seq Number:	3106997				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	11.08.19 16.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	11.08.19 16.55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	11.08.19 16.55	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	11.08.19 16.55	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	11.08.19 16.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	75	%	70-135	11.08.19 16.55	
o-Terphenyl	84-15-1	71	%	70-135	11.08.19 16.55	

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LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**PH07B**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-021	Date Collected:	11.07.19 15.20	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 09.11	Basis:	Wet Weight
Seq Number:	3106973				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	11.08.19 16.16	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	11.08.19 16.16	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	11.08.19 16.16	U	1
m,p-Xylenes	179601-23-1	<0.00201	0.00201	mg/kg	11.08.19 16.16	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	11.08.19 16.16	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	11.08.19 16.16	U	1
Total BTEX		<0.00100	0.00100	mg/kg	11.08.19 16.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	11.08.19 16.16	
4-Bromofluorobenzene	460-00-4	107	%	70-130	11.08.19 16.16	

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Remuda Basin #1

Sample Id:	**PH07C**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-022	Date Collected:	11.07.19 15.30	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 11.11	Basis:	Wet Weight
Seq Number:	3106983				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**334**	100	mg/kg	11.11.19 10.42	D	10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.08.19 13.00	Basis:	Wet Weight
Seq Number:	3106997				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	11.08.19 17.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	11.08.19 17.34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	11.08.19 17.34	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	11.08.19 17.34	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	11.08.19 17.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	76	%	70-135	11.08.19 17.34	
o-Terphenyl	84-15-1	84	%	70-135	11.08.19 17.34	

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LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**PH07C**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-022	Date Collected:	11.07.19 15.30	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 09.11	Basis:	Wet Weight
Seq Number:	3106973				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	11.08.19 17.31	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	11.08.19 17.31	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	11.08.19 17.31	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	11.08.19 17.31	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	11.08.19 17.31	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	11.08.19 17.31	U	1
Total BTEX		<0.00100	0.00100	mg/kg	11.08.19 17.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	11.08.19 17.31	
4-Bromofluorobenzene	460-00-4	107	%	70-130	11.08.19 17.31	

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LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**PH08**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-023	Date Collected:	11.07.19 15.50	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 11.11	Basis:	Wet Weight
Seq Number:	3106983				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**377**	100	mg/kg	11.11.19 10.49	D	10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.08.19 13.00	Basis:	Wet Weight
Seq Number:	3106997				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	11.08.19 17.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	11.08.19 17.54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	11.08.19 17.54	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	11.08.19 17.54	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	11.08.19 17.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	170	%	70-135	11.08.19 17.54	**
o-Terphenyl	84-15-1	187	%	70-135	11.08.19 17.54	**

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LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**PH08**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-023	Date Collected:	11.07.19 15.50	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 09.11	Basis:	Wet Weight
Seq Number:	3106973				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000998	0.000998	mg/kg	11.08.19 17.52	U	1
Toluene	108-88-3	<0.000998	0.000998	mg/kg	11.08.19 17.52	U	1
Ethylbenzene	100-41-4	<0.000998	0.000998	mg/kg	11.08.19 17.52	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	11.08.19 17.52	U	1
o-Xylene	95-47-6	<0.000998	0.000998	mg/kg	11.08.19 17.52	U	1
Total Xylenes	1330-20-7	<0.000998	0.000998	mg/kg	11.08.19 17.52	U	1
Total BTEX		<0.000998	0.000998	mg/kg	11.08.19 17.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	111	%	70-130	11.08.19 17.52	
1,4-Difluorobenzene	540-36-3	101	%	70-130	11.08.19 17.52	

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LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**PH08A**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-024	Date Collected:	11.07.19 16.00	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 11.11	Basis:	Wet Weight
Seq Number:	3106983				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**335**	100	mg/kg	11.11.19 10.55	D	10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.08.19 13.00	Basis:	Wet Weight
Seq Number:	3106997				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.7	49.7	mg/kg	11.08.19 18.14	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.7	49.7	mg/kg	11.08.19 18.14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.7	49.7	mg/kg	11.08.19 18.14	U	1
Total GRO-DRO	PHC628	<49.7	49.7	mg/kg	11.08.19 18.14	U	1
Total TPH	PHC635	<49.7	49.7	mg/kg	11.08.19 18.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	77	%	70-135	11.08.19 18.14	
o-Terphenyl	84-15-1	74	%	70-135	11.08.19 18.14	

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LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**PH08A**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-024	Date Collected:	11.07.19 16.00	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 09.11	Basis:	Wet Weight
Seq Number:	3106973				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	11.08.19 18.12	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	11.08.19 18.12	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	11.08.19 18.12	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	11.08.19 18.12	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	11.08.19 18.12	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	11.08.19 18.12	U	1
Total BTEX		<0.00101	0.00101	mg/kg	11.08.19 18.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	116	%	70-130	11.08.19 18.12	
1,4-Difluorobenzene	540-36-3	104	%	70-130	11.08.19 18.12	

Certificate of Analytical Results 642596

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**PH08B**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-025	Date Collected:	11.07.19 16.10	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 11.11	Basis:	Wet Weight
Seq Number:	3106983				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**373**	50.0	mg/kg	11.11.19 11.02	D	5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.08.19 13.00	Basis:	Wet Weight
Seq Number:	3106997				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	11.08.19 18.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	11.08.19 18.33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	11.08.19 18.33	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	11.08.19 18.33	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	11.08.19 18.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	81	%	70-135	11.08.19 18.33	
o-Terphenyl	84-15-1	84	%	70-135	11.08.19 18.33	

Certificate of Analytical Results 642596

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**PH08B**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-025	Date Collected:	11.07.19 16.10	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 09.11	Basis:	Wet Weight
Seq Number:	3106973				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	11.08.19 18.32	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	11.08.19 18.32	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	11.08.19 18.32	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	11.08.19 18.32	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	11.08.19 18.32	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	11.08.19 18.32	U	1
Total BTEX		<0.00100	0.00100	mg/kg	11.08.19 18.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	11.08.19 18.32	
4-Bromofluorobenzene	460-00-4	108	%	70-130	11.08.19 18.32	

Certificate of Analytical Results 642596

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**PH08C**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-026	Date Collected:	11.07.19 16.20	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 11.11	Basis:	Wet Weight
Seq Number:	3106983				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**246**	50.0	mg/kg	11.11.19 11.22	D	5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.08.19 13.00	Basis:	Wet Weight
Seq Number:	3106997				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	11.08.19 18.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	11.08.19 18.53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	11.08.19 18.53	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	11.08.19 18.53	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	11.08.19 18.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	11.08.19 18.53	
o-Terphenyl	84-15-1	77	%	70-135	11.08.19 18.53	

Certificate of Analytical Results 642596

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**PH08C**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-026	Date Collected:	11.07.19 16.20	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 09.11	Basis:	Wet Weight
Seq Number:	3106973				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	11.08.19 18.53	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	11.08.19 18.53	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	11.08.19 18.53	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	11.08.19 18.53	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	11.08.19 18.53	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	11.08.19 18.53	U	1
Total BTEX		<0.00101	0.00101	mg/kg	11.08.19 18.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	11.08.19 18.53	
4-Bromofluorobenzene	460-00-4	111	%	70-130	11.08.19 18.53	

Certificate of Analytical Results 642596

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**PH09**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-027	Date Collected:	11.07.19 16.40	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 11.11	Basis:	Wet Weight
Seq Number:	3106983				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<1.00	1.00	mg/kg	11.11.19 11.29	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.08.19 13.00	Basis:	Wet Weight
Seq Number:	3106997				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	11.08.19 19.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	11.08.19 19.13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	11.08.19 19.13	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	11.08.19 19.13	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	11.08.19 19.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	11.08.19 19.13	
o-Terphenyl	84-15-1	105	%	70-135	11.08.19 19.13	

Certificate of Analytical Results 642596

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**PH09**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-027	Date Collected:	11.07.19 16.40	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 09.11	Basis:	Wet Weight
Seq Number:	3106973				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	11.08.19 19.13	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	11.08.19 19.13	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	11.08.19 19.13	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	11.08.19 19.13	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	11.08.19 19.13	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	11.08.19 19.13	U	1
Total BTEX		<0.00101	0.00101	mg/kg	11.08.19 19.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	11.08.19 19.13	
4-Bromofluorobenzene	460-00-4	107	%	70-130	11.08.19 19.13	

Certificate of Analytical Results 642596

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**PH09A**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-028	Date Collected:	11.07.19 16.50	Sample Depth:	1.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 11.11	Basis:	Wet Weight
Seq Number:	3106983				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1.04**	1.00	mg/kg	11.11.19 11.36		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.08.19 13.00	Basis:	Wet Weight
Seq Number:	3106997				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	11.08.19 19.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	11.08.19 19.32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	11.08.19 19.32	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	11.08.19 19.32	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	11.08.19 19.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	11.08.19 19.32	
o-Terphenyl	84-15-1	124	%	70-135	11.08.19 19.32	

Certificate of Analytical Results 642596

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**PH09A**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-028	Date Collected:	11.07.19 16.50	Sample Depth:	1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 09.11	Basis:	Wet Weight
Seq Number:	3106973				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	11.08.19 19.33	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	11.08.19 19.33	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	11.08.19 19.33	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	11.08.19 19.33	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	11.08.19 19.33	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	11.08.19 19.33	U	1
Total BTEX		<0.00100	0.00100	mg/kg	11.08.19 19.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	117	%	70-130	11.08.19 19.33	
1,4-Difluorobenzene	540-36-3	105	%	70-130	11.08.19 19.33	

Certificate of Analytical Results 642596

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**PH10**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-029	Date Collected:	11.07.19 17.00	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 11.11	Basis:	Wet Weight
Seq Number:	3106983				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<1.00	1.00	mg/kg	11.11.19 11.43	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.08.19 13.00	Basis:	Wet Weight
Seq Number:	3106997				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	11.08.19 19.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	11.08.19 19.52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	11.08.19 19.52	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	11.08.19 19.52	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	11.08.19 19.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	11.08.19 19.52	
o-Terphenyl	84-15-1	108	%	70-135	11.08.19 19.52	

Certificate of Analytical Results 642596

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**PH10**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-029	Date Collected:	11.07.19 17.00	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 09.11	Basis:	Wet Weight
Seq Number:	3106973				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	11.08.19 19.54	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	11.08.19 19.54	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	11.08.19 19.54	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	11.08.19 19.54	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	11.08.19 19.54	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	11.08.19 19.54	U	1
Total BTEX		<0.00100	0.00100	mg/kg	11.08.19 19.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	11.08.19 19.54	
4-Bromofluorobenzene	460-00-4	112	%	70-130	11.08.19 19.54	

Certificate of Analytical Results 642596

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**PH10A**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-030	Date Collected:	11.07.19 17.10	Sample Depth:	1.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 11.11	Basis:	Wet Weight
Seq Number:	3106983				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**4.44**	1.00	mg/kg	11.11.19 11.50		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.08.19 13.00	Basis:	Wet Weight
Seq Number:	3106997				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	11.08.19 20.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	11.08.19 20.12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	11.08.19 20.12	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	11.08.19 20.12	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	11.08.19 20.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	11.08.19 20.12	
o-Terphenyl	84-15-1	100	%	70-135	11.08.19 20.12	

Certificate of Analytical Results 642596

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**PH10A**	Matrix:	Soil	Date Received:	11.08.19 08.51
Lab Sample Id:	642596-030	Date Collected:	11.07.19 17.10	Sample Depth:	1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.08.19 09.11	Basis:	Wet Weight
Seq Number:	3106973				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	11.08.19 20.14	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	11.08.19 20.14	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	11.08.19 20.14	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	11.08.19 20.14	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	11.08.19 20.14	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	11.08.19 20.14	U	1
Total BTEX		<0.00101	0.00101	mg/kg	11.08.19 20.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	119	%	70-130	11.08.19 20.14	
1,4-Difluorobenzene	540-36-3	104	%	70-130	11.08.19 20.14	

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 642596

LT Environmental, Inc.

Remuda Basin #1

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3106922 — Matrix: Solid — Date Prep: 11.08.19
MB Sample Id: 7689889-1-BLK — LCS Sample Id: 7689889-1-BKS — LCSD Sample Id: 7689889-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	249	100	250	100	90-110	0	20	mg/kg	11.08.19 12:07	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3106983 — Matrix: Solid — Date Prep: 11.08.19
MB Sample Id: 7689891-1-BLK — LCS Sample Id: 7689891-1-BKS — LCSD Sample Id: 7689891-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	252	101	256	102	90-110	2	20	mg/kg	11.08.19 15:32	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3106922 — Matrix: Soil — Date Prep: 11.08.19
Parent Sample Id: 642594-001 — MS Sample Id: 642594-001 S — MSD Sample Id: 642594-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	272	200	456	92	458	93	90-110	0	20	mg/kg	11.08.19 12:25	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3106922 — Matrix: Soil — Date Prep: 11.08.19
Parent Sample Id: 642596-002 — MS Sample Id: 642596-002 S — MSD Sample Id: 642596-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2740	200	2950	105	2940	100	90-110	0	20	mg/kg	11.08.19 13:54	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3106983 — Matrix: Soil — Date Prep: 11.08.19
Parent Sample Id: 642596-012 — MS Sample Id: 642596-012 S — MSD Sample Id: 642596-012 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	719	500	1350	126	1320	120	90-110	2	20	mg/kg	11.08.19 15:54	X

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 642596

LT Environmental, Inc.

Remuda Basin #1

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3106983 Matrix: Soil Date Prep: 11.08.19
Parent Sample Id: 642596-022 MS Sample Id: 642596-022 S MSD Sample Id: 642596-022 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	334	500	665	66	656	64	90-110	1	20	mg/kg	11.08.19 17:36	X

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3106914 Matrix: Solid Date Prep: 11.08.19
MB Sample Id: 7689947-1-BLK LCS Sample Id: 7689947-1-BKS LCSD Sample Id: 7689947-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	905	91	921	92	70-135	2	35	mg/kg	11.08.19 12:21	
Diesel Range Organics (DRO)	<50.0	1000	1010	101	1030	103	70-135	2	35	mg/kg	11.08.19 12:21	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	107		120		121		70-135	%	11.08.19 12:21
o-Terphenyl	113		121		121		70-135	%	11.08.19 12:21

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3106997 Matrix: Solid Date Prep: 11.08.19
MB Sample Id: 7689950-1-BLK LCS Sample Id: 7689950-1-BKS LCSD Sample Id: 7689950-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	804	80	792	79	70-135	2	35	mg/kg	11.08.19 12:21	
Diesel Range Organics (DRO)	<50.0	1000	877	88	854	85	70-135	3	35	mg/kg	11.08.19 12:21	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	99		103		102		70-135	%	11.08.19 12:21
o-Terphenyl	110		107		102		70-135	%	11.08.19 12:21

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3106914 Matrix: Solid Date Prep: 11.08.19
MB Sample Id: 7689947-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	11.08.19 12:01	

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 642596

LT Environmental, Inc.

Remuda Basin #1

Analytical Method: TPH by SW8015 Mod
Prep Method: SW8015P
Seq Number: 3106997
Matrix: Solid
Date Prep: 11.08.19
MB Sample Id: 7689950-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	11.08.19 12:01	

Analytical Method: TPH by SW8015 Mod
Prep Method: SW8015P
Seq Number: 3106914
Matrix: Soil
Date Prep: 11.08.19
Parent Sample Id: 642594-001
MS Sample Id: 642594-001 S
MSD Sample Id: 642594-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.1	1000	1100	110	892	89	70-135	21	35	mg/kg	11.08.19 13:20	
Diesel Range Organics (DRO)	<50.1	1000	1220	122	991	99	70-135	21	35	mg/kg	11.08.19 13:20	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	141	**	117		70-135	%	11.08.19 13:20
o-Terphenyl	139	**	118		70-135	%	11.08.19 13:20

Analytical Method: TPH by SW8015 Mod
Prep Method: SW8015P
Seq Number: 3106997
Matrix: Soil
Date Prep: 11.08.19
Parent Sample Id: 642596-012
MS Sample Id: 642596-012 S
MSD Sample Id: 642596-012 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.8	995	745	75	758	76	70-135	2	35	mg/kg	11.08.19 13:20	
Diesel Range Organics (DRO)	<49.8	995	801	81	827	83	70-135	3	35	mg/kg	11.08.19 13:20	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	99		101		70-135	%	11.08.19 13:20
o-Terphenyl	102		105		70-135	%	11.08.19 13:20

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

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

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

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

QC Summary 642596

LT Environmental, Inc.

Remuda Basin #1

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3106973 — Matrix: Solid — Date Prep: 11.08.19
MB Sample Id: 7689952-1-BLK — LCS Sample Id: 7689952-1-BKS — LCSD Sample Id: 7689952-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.100	0.101	101	0.114	114	70-130	12	35	mg/kg	11.08.19 10:35	
Toluene	<0.00100	0.100	0.114	114	0.126	126	70-130	10	35	mg/kg	11.08.19 10:35	
Ethylbenzene	<0.00100	0.100	0.103	103	0.115	115	71-129	11	35	mg/kg	11.08.19 10:35	
m,p-Xylenes	<0.00200	0.200	0.209	105	0.232	116	70-135	10	35	mg/kg	11.08.19 10:35	
o-Xylene	<0.00100	0.100	0.105	105	0.118	118	71-133	12	35	mg/kg	11.08.19 10:35	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		102		106		70-130	%	11.08.19 10:35
4-Bromofluorobenzene	105		104		110		70-130	%	11.08.19 10:35

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3106935 — Matrix: Solid — Date Prep: 11.08.19
MB Sample Id: 7689955-1-BLK — LCS Sample Id: 7689955-1-BKS — LCSD Sample Id: 7689955-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.100	0.0960	96	0.0934	93	70-130	3	35	mg/kg	11.08.19 10:22	
Toluene	<0.00100	0.100	0.102	102	0.0979	98	70-130	4	35	mg/kg	11.08.19 10:22	
Ethylbenzene	<0.00100	0.100	0.0938	94	0.0900	90	71-129	4	35	mg/kg	11.08.19 10:22	
m,p-Xylenes	<0.00200	0.200	0.198	99	0.190	95	70-135	4	35	mg/kg	11.08.19 10:22	
o-Xylene	<0.00100	0.100	0.101	101	0.0962	96	71-133	5	35	mg/kg	11.08.19 10:22	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		104		105		70-130	%	11.08.19 10:22
4-Bromofluorobenzene	112		113		111		70-130	%	11.08.19 10:22

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3106973 — Matrix: Soil — Date Prep: 11.08.19
Parent Sample Id: 642600-001 — MS Sample Id: 642600-001 S — MSD Sample Id: 642600-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000994	0.0994	0.0702	71	0.0689	69	70-130	2	35	mg/kg	11.08.19 11:57	X
Toluene	<0.000994	0.0994	0.0726	73	0.0695	70	70-130	4	35	mg/kg	11.08.19 11:57	
Ethylbenzene	0.00345	0.0994	0.0738	71	0.0714	68	71-129	3	35	mg/kg	11.08.19 11:57	X
m,p-Xylenes	0.00295	0.199	0.154	76	0.146	72	70-135	5	35	mg/kg	11.08.19 11:57	
o-Xylene	0.00132	0.0994	0.0760	75	0.0727	72	71-133	4	35	mg/kg	11.08.19 11:57	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		103		70-130	%	11.08.19 11:57
4-Bromofluorobenzene	114		111		70-130	%	11.08.19 11:57

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 642596

LT Environmental, Inc.

Remuda Basin #1

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

Seq Number: 3106935 Matrix: Soil Date Prep: 11.08.19

Parent Sample Id: 642594-001 MS Sample Id: 642594-001 S MSD Sample Id: 642594-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00101	0.101	0.0932	92	0.0870	87	70-130	7	35	mg/kg	11.08.19 11:00	
Toluene	<0.00101	0.101	0.0934	92	0.0858	86	70-130	8	35	mg/kg	11.08.19 11:00	
Ethylbenzene	<0.00101	0.101	0.0920	91	0.0839	84	71-129	9	35	mg/kg	11.08.19 11:00	
m,p-Xylenes	<0.00202	0.202	0.196	97	0.178	89	70-135	10	35	mg/kg	11.08.19 11:00	
o-Xylene	<0.00101	0.101	0.0984	97	0.0895	90	71-133	9	35	mg/kg	11.08.19 11:00	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		105		70-130	%	11.08.19 11:00
4-Bromofluorobenzene	119		119		70-130	%	11.08.19 11:00

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: 642996

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

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

Work Order Comments

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

Project Name:	Remuda Basin #1	Turn Around	
Project Number:	22F-2296	Routine	☑
P.O. Number:		Rush:	
Sampler's Name:	Spencer Lo	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	2.5	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:	30

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
PH01	S	11.7.19	930	1	1	X	X	X
PH01A			945	2				
PH01B			1000	3				
PH02			1020	1				
PH02A			1030	2				
PH02B			1040	3				
PH03			1135	1				
PH03A			1150	2				
PH03B			1200	3				
PH03C			1220	4				

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
		11/8/19 851	2		
			4		
			6		

Revised Date 051418 Rev. 2018.1

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: 642596

Page 1 of 3

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

Work Order Comments

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

Project Name:	Rewuda Basin #1	Turn Around	
Project Number:	2RP-2996	Routine	☑
P.O. Number:		Rush:	
Sampler's Name:	Spencer Lo	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Temperature (°C):		Thermometer ID	NP 1	
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 0=8021)	Chloride (EPA 300.0)
PH04	S	11.7.19	1245	1	1	X	X	X
PH04A			1300	2				
PH04B			1310	3				
PH04C			1320	4				
PH05			1340	1				
PH05A			1400	2				
PH06			1420	1				
PH06A			1440	2				
PH07			1500	1				
PH07A			1510	2				

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
		11/8/19 851	2		
			4		
			6		

Revised Date 051418 Rev. 2018.1

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: 642596

Page 3 of 3

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

Work Order Comments

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

Project Name:	Remuda Basin #1	Turn Around	
Project Number:	2RP-2296	Routine	☑
P.O. Number:		Rush:	
Sampler's Name:	Spencer Lo	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 0=8021)	Chloride (EPA 300.0)
PH07B	S	11.7.19	1520	3	1	x	x	x
PH07C			1530	4				
PH08			1550	1				
PH08A			1600	2				
PH08B			1610	3				
PH08C			1620	4				
PH09			1640	1				
PH09A			1650	1.5				
PH10			1700	1				
PH10A	↓	↓	1710	1.5	↓	↓	↓	↓

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			11/8/19 851	2		
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 11/08/2019 08:51:00 AM

Work Order #: 642596

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

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	2.5
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**
#5 Custody Seals intact on sample bottles?	**Yes**
#6*Custody Seals Signed and dated?	**Yes**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 11/08/2019

Checklist reviewed by: Jessica Kramer Date: 11/08/2019

Jessica Kramer

Analytical Report 649661

for

LT Environmental, Inc.

Project Manager: Dan Moir

Remuda Basin #1

012918058

22-JAN-20

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

22-JAN-20

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

Reference: XENCO Report No(s): **649661**
Remuda Basin #1
Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 649661. 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. 649661 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 649661

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS05	S	01-20-20 09:45	2.5 ft	649661-001
SW07	S	01-20-20 10:00	0 - 2.5 ft	649661-002
SW08	S	01-20-20 10:15	0 - 2.5 ft	649661-003
SW09	S	01-20-20 10:30	0 - 2.5 ft	649661-004
SW10	S	01-20-20 10:45	0 - 2.5 ft	649661-005

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Remuda Basin #1

Project ID: *012918058*
Work Order Number(s): *649661*

Report Date: *22-JAN-20*
Date Received: *01/20/2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3113883 TPH by SW8015 Mod
Surrogate 1-Chlorooctane recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 649661-004.

Batch: LBA-3113991 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Lab Sample ID 649663-005 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD).
Benzene, Ethylbenzene, Toluene, m,p-Xylenes , o-Xylene recovered below QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference.
The Laboratory Control Sample for Toluene, m,p-Xylenes , Benzene, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.

Certificate of Analysis Summary 649661

LT Environmental, Inc., Arvada, CO

Project Name: Remuda Basin #1

Project Id: 012918058
Contact: Dan Moir
Project Location:

Date Received in Lab: Mon Jan-20-20 03:30 pm
Report Date: 22-JAN-20
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	649661-001		649661-002		649661-003		649661-004		649661-005	
	Field Id:	FS05		SW07		SW08		SW09		SW10	
	Depth:	2.5- ft		0-2.5 ft		0-2.5 ft		0-2.5 ft		0-2.5 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-20-20 09:45		Jan-20-20 10:00		Jan-20-20 10:15		Jan-20-20 10:30		Jan-20-20 10:45	
BTEX by EPA 8021B	***Extracted:***	Jan-20-20 16:00		Jan-20-20 16:00		Jan-20-20 16:00		Jan-20-20 16:00		Jan-20-20 16:00	
	Analyzed:	Jan-21-20 07:31		Jan-21-20 07:51		Jan-21-20 08:12		Jan-21-20 08:32		Jan-21-20 08:53	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00198	0.00198	<0.00202	0.00202	<0.00202	0.00202	<0.00198	0.00198
Toluene		<0.00200	0.00200	<0.00198	0.00198	<0.00202	0.00202	<0.00202	0.00202	<0.00198	0.00198
Ethylbenzene		<0.00200	0.00200	<0.00198	0.00198	<0.00202	0.00202	<0.00202	0.00202	<0.00198	0.00198
m,p-Xylenes		<0.00399	0.00399	<0.00397	0.00397	<0.00403	0.00403	<0.00404	0.00404	<0.00396	0.00396
o-Xylene		<0.00200	0.00200	<0.00198	0.00198	<0.00202	0.00202	<0.00202	0.00202	<0.00198	0.00198
Total Xylenes		<0.00200	0.00200	<0.00198	0.00198	<0.00202	0.00202	<0.00202	0.00202	<0.00198	0.00198
Total BTEX		<0.00200	0.00200	<0.00198	0.00198	<0.00202	0.00202	<0.00202	0.00202	<0.00198	0.00198
Chloride by EPA 300	***Extracted:***	Jan-20-20 16:49		Jan-20-20 16:49		Jan-20-20 16:49		Jan-20-20 16:49		Jan-20-20 16:49	
	Analyzed:	Jan-20-20 19:46		Jan-20-20 19:51		Jan-20-20 19:57		Jan-20-20 20:02		Jan-20-20 20:08	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		242	10.1	30.4	10.1	301	9.90	352	10.0	175	9.98
TPH by SW8015 Mod	***Extracted:***	Jan-20-20 17:00		Jan-20-20 17:00		Jan-20-20 17:00		Jan-20-20 17:00		Jan-20-20 17:00	
	Analyzed:	Jan-21-20 00:33		Jan-21-20 00:33		Jan-21-20 00:53		Jan-21-20 00:53		Jan-21-20 01:12	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.3	50.3	<50.3	50.3	<50.3	50.3	<50.2	50.2	<49.8	49.8
Diesel Range Organics (DRO)		<50.3	50.3	<50.3	50.3	<50.3	50.3	<50.2	50.2	<49.8	49.8
Motor Oil Range Hydrocarbons (MRO)		<50.3	50.3	<50.3	50.3	<50.3	50.3	<50.2	50.2	<49.8	49.8
Total GRO-DRO		<50.3	50.3	<50.3	50.3	<50.3	50.3	<50.2	50.2	<49.8	49.8
Total TPH		<50.3	50.3	<50.3	50.3	<50.3	50.3	<50.2	50.2	<49.8	49.8

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

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analytical Results 649661

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**FS05**	Matrix:	Soil	Date Received:	01.20.20 15.30
Lab Sample Id:	649661-001	Date Collected:	01.20.20 09.45	Sample Depth:	2.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JHB			% Moisture:	
Analyst:	JHB	Date Prep:	01.20.20 16.49	Basis:	Wet Weight
Seq Number:	3113985				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**242**	10.1	mg/kg	01.20.20 19.46		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.20.20 17.00	Basis:	Wet Weight
Seq Number:	3113883				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	01.21.20 00.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	01.21.20 00.33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	01.21.20 00.33	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	01.21.20 00.33	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	01.21.20 00.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	01.21.20 00.33	
o-Terphenyl	84-15-1	105	%	70-135	01.21.20 00.33	

Certificate of Analytical Results 649661

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**FS05**	Matrix:	Soil	Date Received:	01.20.20 15.30
Lab Sample Id:	649661-001	Date Collected:	01.20.20 09.45	Sample Depth:	2.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	JHB			% Moisture:	
Analyst:	JHB	Date Prep:	01.20.20 16.00	Basis:	Wet Weight
Seq Number:	3113991				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.21.20 07.31	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.21.20 07.31	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.21.20 07.31	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.21.20 07.31	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.21.20 07.31	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.21.20 07.31	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.21.20 07.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	01.21.20 07.31	
4-Bromofluorobenzene	460-00-4	102	%	70-130	01.21.20 07.31	

Certificate of Analytical Results 649661

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**SW07**	Matrix:	Soil	Date Received:	01.20.20 15.30
Lab Sample Id:	649661-002	Date Collected:	01.20.20 10.00	Sample Depth:	0 - 2.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JHB			% Moisture:	
Analyst:	JHB	Date Prep:	01.20.20 16.49	Basis:	Wet Weight
Seq Number:	3113985				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**30.4**	10.1	mg/kg	01.20.20 19.51		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.20.20 17.00	Basis:	Wet Weight
Seq Number:	3113883				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	01.21.20 00.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	01.21.20 00.33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	01.21.20 00.33	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	01.21.20 00.33	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	01.21.20 00.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	01.21.20 00.33	
o-Terphenyl	84-15-1	108	%	70-135	01.21.20 00.33	

Certificate of Analytical Results 649661

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**SW07**	Matrix:	Soil	Date Received:	01.20.20 15.30
Lab Sample Id:	649661-002	Date Collected:	01.20.20 10.00	Sample Depth:	0 - 2.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	JHB			% Moisture:	
Analyst:	JHB	Date Prep:	01.20.20 16.00	Basis:	Wet Weight
Seq Number:	3113991				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	01.21.20 07.51	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	01.21.20 07.51	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	01.21.20 07.51	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	01.21.20 07.51	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	01.21.20 07.51	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	01.21.20 07.51	U	1
Total BTEX		<0.00198	0.00198	mg/kg	01.21.20 07.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	70-130	01.21.20 07.51	
1,4-Difluorobenzene	540-36-3	103	%	70-130	01.21.20 07.51	

Certificate of Analytical Results 649661

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**SW08**	Matrix:	Soil	Date Received:	01.20.20 15.30
Lab Sample Id:	649661-003	Date Collected:	01.20.20 10.15	Sample Depth:	0 - 2.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JHB			% Moisture:	
Analyst:	JHB	Date Prep:	01.20.20 16.49	Basis:	Wet Weight
Seq Number:	3113985				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**301**	9.90	mg/kg	01.20.20 19.57		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.20.20 17.00	Basis:	Wet Weight
Seq Number:	3113883				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	01.21.20 00.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	01.21.20 00.53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	01.21.20 00.53	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	01.21.20 00.53	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	01.21.20 00.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-135	01.21.20 00.53	
o-Terphenyl	84-15-1	109	%	70-135	01.21.20 00.53	

Certificate of Analytical Results 649661

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**SW08**	Matrix:	Soil	Date Received:	01.20.20 15.30
Lab Sample Id:	649661-003	Date Collected:	01.20.20 10.15	Sample Depth:	0 - 2.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	JHB			% Moisture:	
Analyst:	JHB	Date Prep:	01.20.20 16.00	Basis:	Wet Weight
Seq Number:	3113991				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.21.20 08.12	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.21.20 08.12	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.21.20 08.12	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	01.21.20 08.12	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.21.20 08.12	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	01.21.20 08.12	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.21.20 08.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	01.21.20 08.12	
4-Bromofluorobenzene	460-00-4	100	%	70-130	01.21.20 08.12	

Certificate of Analytical Results 649661

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**SW09**	Matrix:	Soil	Date Received:	01.20.20 15.30
Lab Sample Id:	649661-004	Date Collected:	01.20.20 10.30	Sample Depth:	0 - 2.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JHB			% Moisture:	
Analyst:	JHB	Date Prep:	01.20.20 16.49	Basis:	Wet Weight
Seq Number:	3113985				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**352**	10.0	mg/kg	01.20.20 20.02		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.20.20 17.00	Basis:	Wet Weight
Seq Number:	3113883				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	01.21.20 00.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	01.21.20 00.53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	01.21.20 00.53	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	01.21.20 00.53	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	01.21.20 00.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	138	%	70-135	01.21.20 00.53	**
o-Terphenyl	84-15-1	134	%	70-135	01.21.20 00.53	

Certificate of Analytical Results 649661

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**SW09**	Matrix:	Soil	Date Received:	01.20.20 15.30
Lab Sample Id:	649661-004	Date Collected:	01.20.20 10.30	Sample Depth:	0 - 2.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	JHB			% Moisture:	
Analyst:	JHB	Date Prep:	01.20.20 16.00	Basis:	Wet Weight
Seq Number:	3113991				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.21.20 08.32	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.21.20 08.32	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.21.20 08.32	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	01.21.20 08.32	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.21.20 08.32	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	01.21.20 08.32	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.21.20 08.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	01.21.20 08.32	
4-Bromofluorobenzene	460-00-4	101	%	70-130	01.21.20 08.32	

Certificate of Analytical Results 649661

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**SW10**	Matrix:	Soil	Date Received:	01.20.20 15.30
Lab Sample Id:	649661-005	Date Collected:	01.20.20 10.45	Sample Depth:	0 - 2.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JHB			% Moisture:	
Analyst:	JHB	Date Prep:	01.20.20 16.49	Basis:	Wet Weight
Seq Number:	3113985				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**175**	9.98	mg/kg	01.20.20 20.08		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.20.20 17.00	Basis:	Wet Weight
Seq Number:	3113883				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	01.21.20 01.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	01.21.20 01.12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	01.21.20 01.12	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	01.21.20 01.12	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	01.21.20 01.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	01.21.20 01.12	
o-Terphenyl	84-15-1	104	%	70-135	01.21.20 01.12	

Certificate of Analytical Results 649661

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**SW10**	Matrix:	Soil	Date Received:	01.20.20 15.30
Lab Sample Id:	649661-005	Date Collected:	01.20.20 10.45	Sample Depth:	0 - 2.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	JHB			% Moisture:	
Analyst:	JHB	Date Prep:	01.20.20 16.00	Basis:	Wet Weight
Seq Number:	3113991				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	01.21.20 08.53	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	01.21.20 08.53	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	01.21.20 08.53	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	01.21.20 08.53	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	01.21.20 08.53	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	01.21.20 08.53	U	1
Total BTEX		<0.00198	0.00198	mg/kg	01.21.20 08.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	01.21.20 08.53	
4-Bromofluorobenzene	460-00-4	103	%	70-130	01.21.20 08.53	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 649661

LT Environmental, Inc.

Remuda Basin #1

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3113985 — Matrix: Solid — Date Prep: 01.20.20
MB Sample Id: 7694792-1-BLK — LCS Sample Id: 7694792-1-BKS — LCSD Sample Id: 7694792-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1.39	250	252	101	252	101	90-110	0	20	mg/kg	01.20.20 18:13	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3113985 — Matrix: Soil — Date Prep: 01.20.20
Parent Sample Id: 649573-008 — MS Sample Id: 649573-008 S — MSD Sample Id: 649573-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	79.7	193	333	131	316	122	90-110	5	20	mg/kg	01.20.20 18:53	X

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3113985 — Matrix: Soil — Date Prep: 01.20.20
Parent Sample Id: 649573-018 — MS Sample Id: 649573-018 S — MSD Sample Id: 649573-018 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	382	202	679	147	701	159	90-110	3	20	mg/kg	01.20.20 20:34	X

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3113883 — Matrix: Solid — Date Prep: 01.20.20
MB Sample Id: 7694812-1-BLK — LCS Sample Id: 7694812-1-BKS — LCSD Sample Id: 7694812-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1090	109	1140	114	70-135	4	35	mg/kg	01.20.20 23:34	
Diesel Range Organics (DRO)	<50.0	1000	1210	121	1100	110	70-135	10	35	mg/kg	01.20.20 23:34	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	101		116		124		70-135	%	01.20.20 23:34
o-Terphenyl	102		109		117		70-135	%	01.20.20 23:34

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3113883 — Matrix: Solid — Date Prep: 01.20.20
MB Sample Id: 7694812-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	01.20.20 23:14	

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 649661

LT Environmental, Inc.

Remuda Basin #1

Analytical Method: TPH by SW8015 Mod | Prep Method: SW8015P
Seq Number: 3113883 | Matrix: Soil | Date Prep: 01.20.20
Parent Sample Id: 649655-004 | MS Sample Id: 649655-004 S | MSD Sample Id: 649655-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.1	1000	1280	128	1170	117	70-135	9	35	mg/kg	01.20.20 23:53	
Diesel Range Organics (DRO)	<50.1	1000	1240	124	1090	109	70-135	13	35	mg/kg	01.20.20 23:53	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	133		129		70-135	%	01.20.20 23:53
o-Terphenyl	129		118		70-135	%	01.20.20 23:53

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3113991 | Matrix: Solid | Date Prep: 01.20.20
MB Sample Id: 7694845-1-BLK | LCS Sample Id: 7694845-1-BKS | LCSD Sample Id: 7694845-1-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	0.0906	91	0.0910	91	70-130	0	35	mg/kg	01.21.20 04:54	
Toluene	<0.00200	0.100	0.0883	88	0.0880	88	70-130	0	35	mg/kg	01.21.20 04:54	
Ethylbenzene	<0.00200	0.100	0.0855	86	0.0842	84	71-129	2	35	mg/kg	01.21.20 04:54	
m,p-Xylenes	<0.00400	0.200	0.177	89	0.173	87	70-135	2	35	mg/kg	01.21.20 04:54	
o-Xylene	<0.00200	0.100	0.0882	88	0.0867	87	71-133	2	35	mg/kg	01.21.20 04:54	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		102		101		70-130	%	01.21.20 04:54
4-Bromofluorobenzene	98		97		96		70-130	%	01.21.20 04:54

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3113991 | Matrix: Soil | Date Prep: 01.20.20
Parent Sample Id: 649663-005 | MS Sample Id: 649663-005 S | MSD Sample Id: 649663-005 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	0.0816	82	0.0670	66	70-130	20	35	mg/kg	01.21.20 05:35	X
Toluene	<0.00200	0.0998	0.0788	79	0.0665	66	70-130	17	35	mg/kg	01.21.20 05:35	X
Ethylbenzene	<0.00200	0.0998	0.0761	76	0.0645	64	71-129	17	35	mg/kg	01.21.20 05:35	X
m,p-Xylenes	<0.00399	0.200	0.157	79	0.135	67	70-135	15	35	mg/kg	01.21.20 05:35	X
o-Xylene	<0.00200	0.0998	0.0786	79	0.0685	68	71-133	14	35	mg/kg	01.21.20 05:35	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		103		70-130	%	01.21.20 05:35
4-Bromofluorobenzene	99		102		70-130	%	01.21.20 05:35

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: 620496641

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

Work Order Comments

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

Project Name:	Remuda Basin #1	Turn Around	
Project Number:	012918058	Routine	☐
P.O. Number:		Rush:	24H
Sampler's Name:	Spencer Lo	Due Date:	

SAMPLE RECEIPT				
Temperature (°C):	2.8	Temp Blank:	(Yes) No	Wet Ice: (Yes) No
Received Intact:	(Yes) No	Thermometer ID	T-NM-007	
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes (No) N/A	Total Containers:	5	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
FS05	S	1.20.20	945	2.5'	1	X	X	X
SW07	S	1.20.20	1000	0-2.5'	1	X	X	X
SW08	S	1.20.20	1015	0-2.5'	1	X	X	X
SW09	S	1.20.20	1030	0-2.5'	1	X	X	X
SW10	S	1.20.20	1045	0-2.5'	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			4/20/20 15:20	2		
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 01.20.2020 03.30.00 PM

Work Order #: 649661

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

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	2.8
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**
#5 Custody Seals intact on sample bottles?	**Yes**
#6*Custody Seals Signed and dated?	**Yes**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**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: Elizabeth McClellan Date: 01.20.2020

Checklist reviewed by: Jessica Kramer Date: 01.21.2020

Jessica Kramer

Analytical Report 649655

for

LT Environmental, Inc.

Project Manager: Dan Moir

Remuda Basin #1

012918058

22-JAN-20

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

22-JAN-20

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

Reference: XENCO Report No(s): **649655**
Remuda Basin #1
Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 649655. 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. 649655 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 649655

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS06	S	01-20-20 11:00	2.5 ft	649655-001
SW11	S	01-20-20 11:15	0 - 2.5 ft	649655-002
SW12	S	01-20-20 11:30	0 - 2.5 ft	649655-003
SW13	S	01-20-20 11:45	0 - 2.5 ft	649655-004
SW14	S	01-20-20 12:00	0 - 2.5 ft	649655-005

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Remuda Basin #1

Project ID: *012918058*
Work Order Number(s): *649655*

Report Date: *22-JAN-20*
Date Received: *01/20/2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3113964 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3113990 Chloride by EPA 300
Lab Sample ID 649663-010 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: 649655-001, -002, -003, -004, -005.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3113991 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Lab Sample ID 649663-005 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Benzene, Ethylbenzene, Toluene, m,p-Xylenes , o-Xylene recovered below QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference.
The Laboratory Control Sample for Toluene, m,p-Xylenes , Benzene, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3113992 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 649655

LT Environmental, Inc., Arvada, CO

Project Name: Remuda Basin #1

Project Id: 012918058
Contact: Dan Moir
Project Location:

Date Received in Lab: Mon Jan-20-20 03:20 pm
Report Date: 22-JAN-20
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	649655-001		649655-002		649655-003		649655-004		649655-005	
	Field Id:	FS06		SW11		SW12		SW13		SW14	
	Depth:	2.5- ft		0-2.5 ft		0-2.5 ft		0-2.5 ft		0-2.5 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-20-20 11:00		Jan-20-20 11:15		Jan-20-20 11:30		Jan-20-20 11:45		Jan-20-20 12:00	
BTEX by EPA 8021B	***Extracted:***	** ** ** **		Jan-20-20 17:00		Jan-20-20 17:00		Jan-20-20 16:00		Jan-20-20 16:00	
	Analyzed:	Jan-21-20 04:09		Jan-21-20 03:12		Jan-21-20 03:33		Jan-21-20 06:50		Jan-21-20 07:11	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00202	0.00202	<0.00199	0.00199	<0.00202	0.00202	<0.00202	0.00202	<0.00202	0.00202
Toluene		<0.00202	0.00202	<0.00199	0.00199	<0.00202	0.00202	<0.00202	0.00202	<0.00202	0.00202
Ethylbenzene		<0.00202	0.00202	<0.00199	0.00199	<0.00202	0.00202	<0.00202	0.00202	<0.00202	0.00202
m,p-Xylenes		<0.00404	0.00404	<0.00398	0.00398	<0.00405	0.00405	<0.00404	0.00404	<0.00404	0.00404
o-Xylene		<0.00202	0.00202	<0.00199	0.00199	<0.00202	0.00202	<0.00202	0.00202	<0.00202	0.00202
Total Xylenes		<0.00202	0.00202	<0.00199	0.00199	<0.00202	0.00202	<0.00202	0.00202	<0.00202	0.00202
Total BTEX		<0.00202	0.00202	<0.00199	0.00199	<0.00202	0.00202	<0.00202	0.00202	<0.00202	0.00202
Chloride by EPA 300	***Extracted:***	Jan-20-20 16:10		Jan-20-20 16:10		Jan-20-20 16:10		Jan-20-20 16:10		Jan-20-20 16:10	
	Analyzed:	Jan-20-20 22:00		Jan-20-20 22:06		Jan-20-20 22:11		Jan-20-20 22:17		Jan-20-20 22:33	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		29.2	10.1	186	10.0	320	10.0	234	9.94	341	10.1
TPH by SW8015 Mod	***Extracted:***	Jan-20-20 17:36		Jan-20-20 17:36		Jan-20-20 17:36		Jan-20-20 17:00		Jan-20-20 17:00	
	Analyzed:	Jan-20-20 22:35		Jan-20-20 22:54		Jan-20-20 22:54		Jan-20-20 23:53		Jan-21-20 00:13	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<49.8	49.8	<49.8	49.8	<50.3	50.3	<50.0	50.0	<50.3	50.3
Diesel Range Organics (DRO)		<49.8	49.8	<49.8	49.8	<50.3	50.3	<50.0	50.0	<50.3	50.3
Motor Oil Range Hydrocarbons (MRO)		<49.8	49.8	<49.8	49.8	<50.3	50.3	<50.0	50.0	<50.3	50.3
Total GRO-DRO		<49.8	49.8	<49.8	49.8	<50.3	50.3	<50.0	50.0	<50.3	50.3
Total TPH		<49.8	49.8	<49.8	49.8	<50.3	50.3	<50.0	50.0	<50.3	50.3

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

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analytical Results 649655

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**FS06**	Matrix:	Soil	Date Received:	01.20.20 15.20
Lab Sample Id:	649655-001	Date Collected:	01.20.20 11.00	Sample Depth:	2.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JHB			% Moisture:	
Analyst:	JHB	Date Prep:	01.20.20 16.10	Basis:	Wet Weight
Seq Number:	3113990				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**29.2**	10.1	mg/kg	01.20.20 22.00		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.20.20 17.36	Basis:	Wet Weight
Seq Number:	3113865				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	01.20.20 22.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	01.20.20 22.35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	01.20.20 22.35	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	01.20.20 22.35	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	01.20.20 22.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	01.20.20 22.35	
o-Terphenyl	84-15-1	109	%	70-135	01.20.20 22.35	

Certificate of Analytical Results 649655

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**FS06**	Matrix:	Soil	Date Received:	01.20.20 15.20
Lab Sample Id:	649655-001	Date Collected:	01.20.20 11.00	Sample Depth:	2.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	JHB			% Moisture:	
Analyst:	JHB	Date Prep:	01.20.20 13.39	Basis:	Wet Weight
Seq Number:	3113964				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.21.20 04.09	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.21.20 04.09	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.21.20 04.09	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	01.21.20 04.09	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.21.20 04.09	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	01.21.20 04.09	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.21.20 04.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	93	%	70-130	01.21.20 04.09	
1,4-Difluorobenzene	540-36-3	105	%	70-130	01.21.20 04.09	

Certificate of Analytical Results 649655

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**SW11**	Matrix:	Soil	Date Received:	01.20.20 15.20
Lab Sample Id:	649655-002	Date Collected:	01.20.20 11.15	Sample Depth:	0 - 2.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JHB			% Moisture:	
Analyst:	JHB	Date Prep:	01.20.20 16.10	Basis:	Wet Weight
Seq Number:	3113990				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**186**	10.0	mg/kg	01.20.20 22.06		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.20.20 17.36	Basis:	Wet Weight
Seq Number:	3113865				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	01.20.20 22.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	01.20.20 22.54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	01.20.20 22.54	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	01.20.20 22.54	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	01.20.20 22.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	01.20.20 22.54	
o-Terphenyl	84-15-1	107	%	70-135	01.20.20 22.54	

Certificate of Analytical Results 649655

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**SW11**	Matrix:	Soil	Date Received:	01.20.20 15.20
Lab Sample Id:	649655-002	Date Collected:	01.20.20 11.15	Sample Depth:	0 - 2.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	JHB			% Moisture:	
Analyst:	JHB	Date Prep:	01.20.20 17.00	Basis:	Wet Weight
Seq Number:	3113992				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.21.20 03.12	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.21.20 03.12	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.21.20 03.12	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.21.20 03.12	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.21.20 03.12	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.21.20 03.12	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.21.20 03.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	01.21.20 03.12	
1,4-Difluorobenzene	540-36-3	103	%	70-130	01.21.20 03.12	

Certificate of Analytical Results 649655

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**SW12**	Matrix:	Soil	Date Received:	01.20.20 15.20
Lab Sample Id:	649655-003	Date Collected:	01.20.20 11.30	Sample Depth:	0 - 2.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JHB			% Moisture:	
Analyst:	JHB	Date Prep:	01.20.20 16.10	Basis:	Wet Weight
Seq Number:	3113990				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**320**	10.0	mg/kg	01.20.20 22.11		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.20.20 17.36	Basis:	Wet Weight
Seq Number:	3113865				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	01.20.20 22.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	01.20.20 22.54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	01.20.20 22.54	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	01.20.20 22.54	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	01.20.20 22.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	01.20.20 22.54	
o-Terphenyl	84-15-1	106	%	70-135	01.20.20 22.54	

Certificate of Analytical Results 649655

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**SW12**	Matrix:	Soil	Date Received:	01.20.20 15.20
Lab Sample Id:	649655-003	Date Collected:	01.20.20 11.30	Sample Depth:	0 - 2.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	JHB			% Moisture:	
Analyst:	JHB	Date Prep:	01.20.20 17.00	Basis:	Wet Weight
Seq Number:	3113992				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.21.20 03.33	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.21.20 03.33	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.21.20 03.33	U	1
m,p-Xylenes	179601-23-1	<0.00405	0.00405	mg/kg	01.21.20 03.33	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.21.20 03.33	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	01.21.20 03.33	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.21.20 03.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	70-130	01.21.20 03.33	
1,4-Difluorobenzene	540-36-3	101	%	70-130	01.21.20 03.33	

Certificate of Analytical Results 649655

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**SW13**	Matrix:	Soil	Date Received:	01.20.20 15.20
Lab Sample Id:	649655-004	Date Collected:	01.20.20 11.45	Sample Depth:	0 - 2.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JHB			% Moisture:	
Analyst:	JHB	Date Prep:	01.20.20 16.10	Basis:	Wet Weight
Seq Number:	3113990				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**234**	9.94	mg/kg	01.20.20 22.17		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.20.20 17.00	Basis:	Wet Weight
Seq Number:	3113883				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	01.20.20 23.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	01.20.20 23.53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.20.20 23.53	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	01.20.20 23.53	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.20.20 23.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	01.20.20 23.53	
o-Terphenyl	84-15-1	100	%	70-135	01.20.20 23.53	

Certificate of Analytical Results 649655

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**SW13**	Matrix:	Soil	Date Received:	01.20.20 15.20
Lab Sample Id:	649655-004	Date Collected:	01.20.20 11.45	Sample Depth:	0 - 2.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	JHB			% Moisture:	
Analyst:	JHB	Date Prep:	01.20.20 16.00	Basis:	Wet Weight
Seq Number:	3113991				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.21.20 06.50	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.21.20 06.50	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.21.20 06.50	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	01.21.20 06.50	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.21.20 06.50	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	01.21.20 06.50	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.21.20 06.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	01.21.20 06.50	
4-Bromofluorobenzene	460-00-4	100	%	70-130	01.21.20 06.50	

Certificate of Analytical Results 649655

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**SW14**	Matrix:	Soil	Date Received:	01.20.20 15.20
Lab Sample Id:	649655-005	Date Collected:	01.20.20 12.00	Sample Depth:	0 - 2.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JHB			% Moisture:	
Analyst:	JHB	Date Prep:	01.20.20 16.10	Basis:	Wet Weight
Seq Number:	3113990				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**341**	10.1	mg/kg	01.20.20 22.33		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.20.20 17.00	Basis:	Wet Weight
Seq Number:	3113883				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	01.21.20 00.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	01.21.20 00.13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	01.21.20 00.13	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	01.21.20 00.13	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	01.21.20 00.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	01.21.20 00.13	
o-Terphenyl	84-15-1	112	%	70-135	01.21.20 00.13	

Certificate of Analytical Results 649655

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**SW14**	Matrix:	Soil	Date Received:	01.20.20 15.20
Lab Sample Id:	649655-005	Date Collected:	01.20.20 12.00	Sample Depth:	0 - 2.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	JHB			% Moisture:	
Analyst:	JHB	Date Prep:	01.20.20 16.00	Basis:	Wet Weight
Seq Number:	3113991				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.21.20 07.11	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.21.20 07.11	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.21.20 07.11	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	01.21.20 07.11	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.21.20 07.11	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	01.21.20 07.11	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.21.20 07.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	70-130	01.21.20 07.11	
1,4-Difluorobenzene	540-36-3	101	%	70-130	01.21.20 07.11	

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 649655

LT Environmental, Inc.

Remuda Basin #1

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3113990 — Matrix: Solid — Date Prep: 01.20.20
MB Sample Id: 7694796-1-BLK — LCS Sample Id: 7694796-1-BKS — LCSD Sample Id: 7694796-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1.41	250	258	103	258	103	90-110	0	20	mg/kg	01.20.20 21:39	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3113990 — Matrix: Soil — Date Prep: 01.20.20
Parent Sample Id: 649655-001 — MS Sample Id: 649655-001 S — MSD Sample Id: 649655-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	29.2	189	287	136	288	137	90-110	0	20	mg/kg	01.20.20 21:50	X

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3113990 — Matrix: Soil — Date Prep: 01.20.20
Parent Sample Id: 649663-010 — MS Sample Id: 649663-010 S — MSD Sample Id: 649663-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	285	198	553	135	495	107	90-110	11	20	mg/kg	01.20.20 23:44	X

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3113883 — Matrix: Solid — Date Prep: 01.20.20
MB Sample Id: 7694812-1-BLK — LCS Sample Id: 7694812-1-BKS — LCSD Sample Id: 7694812-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1090	109	1140	114	70-135	4	35	mg/kg	01.20.20 23:34	
Diesel Range Organics (DRO)	<50.0	1000	1210	121	1100	110	70-135	10	35	mg/kg	01.20.20 23:34	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	101		116		124		70-135	%	01.20.20 23:34
o-Terphenyl	102		109		117		70-135	%	01.20.20 23:34

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 649655

LT Environmental, Inc.

Remuda Basin #1

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3113865 — Matrix: Solid — Date Prep: 01.20.20
MB Sample Id: 7694760-1-BLK — LCS Sample Id: 7694760-1-BKS — LCSD Sample Id: 7694760-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1050	105	1100	110	70-135	5	35	mg/kg	01.20.20 18:57	
Diesel Range Organics (DRO)	<50.0	1000	1060	106	1060	106	70-135	0	35	mg/kg	01.20.20 18:57	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	102		121		118		70-135	%	01.20.20 18:57
o-Terphenyl	100		114		114		70-135	%	01.20.20 18:57

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3113883 — Matrix: Solid — Date Prep: 01.20.20
MB Sample Id: 7694812-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	01.20.20 23:14	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3113865 — Matrix: Solid — Date Prep: 01.20.20
MB Sample Id: 7694760-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	01.20.20 18:57	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3113883 — Matrix: Soil — Date Prep: 01.20.20
Parent Sample Id: 649655-004 — MS Sample Id: 649655-004 S — MSD Sample Id: 649655-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.1	1000	1280	128	1170	117	70-135	9	35	mg/kg	01.20.20 23:53	
Diesel Range Organics (DRO)	<50.1	1000	1240	124	1090	109	70-135	13	35	mg/kg	01.20.20 23:53	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	133		129		70-135	%	01.20.20 23:53
o-Terphenyl	129		118		70-135	%	01.20.20 23:53

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 649655

LT Environmental, Inc.

Remuda Basin #1

Analytical Method: TPH by SW8015 Mod | Prep Method: SW8015P
Seq Number: 3113865 | Matrix: Soil | Date Prep: 01.20.20
Parent Sample Id: 649573-008 | MS Sample Id: 649573-008 S | MSD Sample Id: 649573-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.9	997	1100	110	1080	108	70-135	2	35	mg/kg	01.20.20 19:37	
Diesel Range Organics (DRO)	<49.9	997	1230	123	1090	109	70-135	12	35	mg/kg	01.20.20 19:37	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	119		121		70-135	%	01.20.20 19:37
o-Terphenyl	108		114		70-135	%	01.20.20 19:37

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3113992 | Matrix: Solid | Date Prep: 01.20.20
MB Sample Id: 7694831-1-BLK | LCS Sample Id: 7694831-1-BKS | LCSD Sample Id: 7694831-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0978	98	0.0937	94	70-130	4	35	mg/kg	01.20.20 18:14	
Toluene	<0.00200	0.100	0.0943	94	0.0910	91	70-130	4	35	mg/kg	01.20.20 18:14	
Ethylbenzene	<0.00200	0.100	0.0915	92	0.0884	88	71-129	3	35	mg/kg	01.20.20 18:14	
m,p-Xylenes	<0.00400	0.200	0.189	95	0.183	92	70-135	3	35	mg/kg	01.20.20 18:14	
o-Xylene	<0.00200	0.100	0.0932	93	0.0905	91	71-133	3	35	mg/kg	01.20.20 18:14	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		102		101		70-130	%	01.20.20 18:14
4-Bromofluorobenzene	97		98		95		70-130	%	01.20.20 18:14

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3113964 | Matrix: Solid | Date Prep: 01.20.20
MB Sample Id: 7694838-1-BLK | LCS Sample Id: 7694838-1-BKS | LCSD Sample Id: 7694838-1-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	0.112	112	0.0972	97	70-130	14	35	mg/kg	01.20.20 18:54	
Toluene	<0.00200	0.100	0.103	103	0.0902	90	70-130	13	35	mg/kg	01.20.20 18:54	
Ethylbenzene	<0.00200	0.100	0.0999	100	0.0877	88	71-129	13	35	mg/kg	01.20.20 18:54	
m,p-Xylenes	<0.00400	0.200	0.196	98	0.173	87	70-135	12	35	mg/kg	01.20.20 18:54	
o-Xylene	<0.00200	0.100	0.0977	98	0.0869	87	71-133	12	35	mg/kg	01.20.20 18:54	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		106		104		70-130	%	01.20.20 18:54
4-Bromofluorobenzene	84		89		92		70-130	%	01.20.20 18:54

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

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

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

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

QC Summary 649655

LT Environmental, Inc.

Remuda Basin #1

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3113991 — Matrix: Solid — Date Prep: 01.20.20
MB Sample Id: 7694845-1-BLK — LCS Sample Id: 7694845-1-BKS — LCSD Sample Id: 7694845-1-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	0.0906	91	0.0910	91	70-130	0	35	mg/kg	01.21.20 04:54	
Toluene	<0.00200	0.100	0.0883	88	0.0880	88	70-130	0	35	mg/kg	01.21.20 04:54	
Ethylbenzene	<0.00200	0.100	0.0855	86	0.0842	84	71-129	2	35	mg/kg	01.21.20 04:54	
m,p-Xylenes	<0.00400	0.200	0.177	89	0.173	87	70-135	2	35	mg/kg	01.21.20 04:54	
o-Xylene	<0.00200	0.100	0.0882	88	0.0867	87	71-133	2	35	mg/kg	01.21.20 04:54	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		102		101		70-130	%	01.21.20 04:54
4-Bromofluorobenzene	98		97		96		70-130	%	01.21.20 04:54

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3113992 — Matrix: Soil — Date Prep: 01.20.20
Parent Sample Id: 649562-001 — MS Sample Id: 649562-001 S — MSD Sample Id: 649562-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.0800	80	0.0954	96	70-130	18	35	mg/kg	01.20.20 18:55	
Toluene	<0.00199	0.0994	0.0777	78	0.0924	93	70-130	17	35	mg/kg	01.20.20 18:55	
Ethylbenzene	<0.00199	0.0994	0.0749	75	0.0897	90	71-129	18	35	mg/kg	01.20.20 18:55	
m,p-Xylenes	<0.000749	0.199	0.155	78	0.185	93	70-135	18	35	mg/kg	01.20.20 18:55	
o-Xylene	<0.00199	0.0994	0.0767	77	0.0921	93	71-133	18	35	mg/kg	01.20.20 18:55	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		104		70-130	%	01.20.20 18:55
4-Bromofluorobenzene	99		98		70-130	%	01.20.20 18:55

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3113964 — Matrix: Soil — Date Prep: 01.20.20
Parent Sample Id: 649573-008 — MS Sample Id: 649573-008 S — MSD Sample Id: 649573-008 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	0.0612	61	0.106	106	70-130	54	35	mg/kg	01.20.20 19:35	XF
Toluene	<0.00200	0.0998	0.0742	74	0.0974	98	70-130	27	35	mg/kg	01.20.20 19:35	
Ethylbenzene	<0.00200	0.0998	0.0775	78	0.0952	96	71-129	20	35	mg/kg	01.20.20 19:35	
m,p-Xylenes	<0.00399	0.200	0.151	76	0.188	94	70-135	22	35	mg/kg	01.20.20 19:35	
o-Xylene	<0.00200	0.0998	0.0780	78	0.0940	94	71-133	19	35	mg/kg	01.20.20 19:35	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	94		108		70-130	%	01.20.20 19:35
4-Bromofluorobenzene	107		94		70-130	%	01.20.20 19:35

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 649655

LT Environmental, Inc.

Remuda Basin #1

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

Seq Number: 3113991 Matrix: Soil Date Prep: 01.20.20

Parent Sample Id: 649663-005 MS Sample Id: 649663-005 S MSD Sample Id: 649663-005 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	0.0816	82	0.0670	66	70-130	20	35	mg/kg	01.21.20 05:35	X
Toluene	<0.00200	0.0998	0.0788	79	0.0665	66	70-130	17	35	mg/kg	01.21.20 05:35	X
Ethylbenzene	<0.00200	0.0998	0.0761	76	0.0645	64	71-129	17	35	mg/kg	01.21.20 05:35	X
m,p-Xylenes	<0.00399	0.200	0.157	79	0.135	67	70-135	15	35	mg/kg	01.21.20 05:35	X
o-Xylene	<0.00200	0.0998	0.0786	79	0.0685	68	71-133	14	35	mg/kg	01.21.20 05:35	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		103		70-130	%	01.21.20 05:35
4-Bromofluorobenzene	99		102		70-130	%	01.21.20 05:35

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: 619655

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

Work Order Comments

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

Project Name:	Remuda Basin #1	Turn Around	
Project Number:	012918058	Routine ☐	
P.O. Number:		Rush: 24H	
Sampler's Name:	Spencer Lo	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	2.8	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:	5

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
FS06	S	1.20.20	1100	2.5'	1	X	X	X
SW11	S	1.20.20	1115	0-2.5'	1	X	X	X
SW12	S	1.20.20	1130	0-2.5'	1	X	X	X
SW13	S	1.20.20	1145	0-2.5'	1	X	X	X
SW14	S	1.20.20	1200	0-2.5'	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

ice: 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 ervice. 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 enco. 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
		4/20/20 15:20	2		
			4		
			6		

Revised Date 051418 Rev. 2018.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 01.20.2020 03.20.00 PM

Work Order #: 649655

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

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	2.8
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**
#5 Custody Seals intact on sample bottles?	**Yes**
#6*Custody Seals Signed and dated?	**Yes**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 01.20.2020

Checklist reviewed by: Jessica Kramer Date: 01.21.2020

Jessica Kramer

Analytical Report 649663

for

LT Environmental, Inc.

Project Manager: Dan Moir

Remuda Basin #1

12918058

22-JAN-20

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

22-JAN-20

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

Reference: XENCO Report No(s): **649663**
Remuda Basin #1
Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 649663. 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. 649663 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 649663

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	01-17-20 14:50	8 ft	649663-001
FS02	S	01-17-20 16:50	9 ft	649663-002
SW01	S	01-17-20 15:00	0 - 8 ft	649663-003
SW02	S	01-17-20 16:00	0 - 9 ft	649663-004
SW03	S	01-17-20 16:10	0 - 9 ft	649663-005
SW04	S	01-17-20 16:20	0 - 9 ft	649663-006
SW05	S	01-17-20 16:30	0 - 8 ft	649663-007
SW06	S	01-17-20 09:15	0 - 8 ft	649663-008
FS03	S	01-17-20 09:30	9 ft	649663-009
FS04	S	01-17-20 12:15	8 ft	649663-010

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Remuda Basin #1

Project ID: *12918058*
Work Order Number(s): *649663*

Report Date: *22-JAN-20*
Date Received: *01/20/2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3113990 Chloride by EPA 300
Lab Sample ID 649663-010 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 649663-001, -002, -003, -004, -005, -006, -007, -008, -009, -010.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3113991 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Lab Sample ID 649663-005 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Benzene, Ethylbenzene, Toluene, m,p-Xylenes , o-Xylene recovered below QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 649663-001, -002, -003, -004, -005, -006, -007, -008, -009, -010.
The Laboratory Control Sample for Toluene, m,p-Xylenes , Benzene, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.

Certificate of Analysis Summary 649663

LT Environmental, Inc., Arvada, CO

Project Name: Remuda Basin #1

Project Id: 12918058
Contact: Dan Moir
Project Location:

Date Received in Lab: Mon Jan-20-20 03:30 pm
Report Date: 22-JAN-20
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	649663-001		649663-002		649663-003		649663-004		649663-005		649663-006	
	Field Id:	FS01		FS02		SW01		SW02		SW03		SW04	
	Depth:	8- ft		9- ft		0-8 ft		0-9 ft		0-9 ft		0-9 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-17-20 14:50		Jan-17-20 16:50		Jan-17-20 15:00		Jan-17-20 16:00		Jan-17-20 16:10		Jan-17-20 16:20	
BTEX by EPA 8021B	***Extracted:***	Jan-20-20 16:00		Jan-20-20 16:00		Jan-20-20 16:00		Jan-20-20 16:00		Jan-20-20 16:00		Jan-20-20 16:00	
	Analyzed:	Jan-21-20 09:13		Jan-21-20 09:33		Jan-21-20 09:54		Jan-21-20 11:09		Jan-21-20 11:29		Jan-21-20 11:50	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00201	0.00201	<0.00202	0.00202	<0.00202	0.00202	<0.00199	0.00199	<0.00198	0.00198	<0.00202	0.00202
Toluene		<0.00201	0.00201	<0.00202	0.00202	<0.00202	0.00202	<0.00199	0.00199	<0.00198	0.00198	<0.00202	0.00202
Ethylbenzene		<0.00201	0.00201	<0.00202	0.00202	<0.00202	0.00202	<0.00199	0.00199	<0.00198	0.00198	<0.00202	0.00202
m,p-Xylenes		<0.00402	0.00402	<0.00404	0.00404	<0.00403	0.00403	<0.00398	0.00398	<0.00395	0.00395	<0.00404	0.00404
o-Xylene		<0.00201	0.00201	<0.00202	0.00202	<0.00202	0.00202	<0.00199	0.00199	<0.00198	0.00198	<0.00202	0.00202
Total Xylenes		<0.00201	0.00201	<0.00202	0.00202	<0.00202	0.00202	<0.00199	0.00199	<0.00198	0.00198	<0.00202	0.00202
Total BTEX		<0.00201	0.00201	<0.00202	0.00202	<0.00202	0.00202	<0.00199	0.00199	<0.00198	0.00198	<0.00202	0.00202
Chloride by EPA 300	***Extracted:***	Jan-20-20 16:10		Jan-20-20 16:10		Jan-20-20 16:10		Jan-20-20 16:10		Jan-20-20 16:10		Jan-20-20 16:10	
	Analyzed:	Jan-20-20 22:49		Jan-20-20 22:54		Jan-20-20 23:00		Jan-20-20 23:05		Jan-20-20 23:10		Jan-20-20 22:38	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		325	10.0	264	10.1	650	10.0	386	10.1	342	9.96	1600	20.1
TPH by SW8015 Mod	***Extracted:***	Jan-20-20 17:00		Jan-20-20 17:00		Jan-20-20 17:00		Jan-20-20 17:00		Jan-20-20 17:00		Jan-20-20 17:00	
	Analyzed:	Jan-21-20 01:12		Jan-21-20 01:32		Jan-21-20 01:32		Jan-21-20 01:52		Jan-21-20 02:11		Jan-21-20 02:11	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<50.1	50.1	<50.1	50.1	<50.2	50.2	<50.1	50.1	<50.3	50.3
Diesel Range Organics (DRO)		<50.0	50.0	<50.1	50.1	<50.1	50.1	<50.2	50.2	<50.1	50.1	<50.3	50.3
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<50.1	50.1	<50.1	50.1	<50.2	50.2	<50.1	50.1	<50.3	50.3
Total GRO-DRO		<50.0	50.0	<50.1	50.1	<50.1	50.1	<50.2	50.2	<50.1	50.1	<50.3	50.3
Total TPH		<50.0	50.0	<50.1	50.1	<50.1	50.1	<50.2	50.2	<50.1	50.1	<50.3	50.3

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Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analysis Summary 649663

LT Environmental, Inc., Arvada, CO

Project Name: Remuda Basin #1

Project Id: 12918058
Contact: Dan Moir
Project Location:

Date Received in Lab: Mon Jan-20-20 03:30 pm
Report Date: 22-JAN-20
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	649663-007		649663-008		649663-009		649663-010					
	Field Id:	SW05		SW06		FS03		FS04					
	Depth:	0-8 ft		0-8 ft		9- ft		8- ft					
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	Jan-17-20 16:30		Jan-17-20 09:15		Jan-17-20 09:30		Jan-17-20 12:15					
BTEX by EPA 8021B	***Extracted:***	Jan-20-20 16:00		Jan-20-20 16:00		Jan-20-20 16:00		Jan-20-20 16:00					
	Analyzed:	Jan-21-20 12:10		Jan-21-20 12:30		Jan-21-20 12:51		Jan-21-20 13:11					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00202	0.00202	<0.00201	0.00201	<0.00201	0.00201	<0.00202	0.00202				
Toluene		<0.00202	0.00202	<0.00201	0.00201	<0.00201	0.00201	<0.00202	0.00202				
Ethylbenzene		<0.00202	0.00202	<0.00201	0.00201	<0.00201	0.00201	<0.00202	0.00202				
m,p-Xylenes		<0.00403	0.00403	<0.00402	0.00402	<0.00402	0.00402	<0.00404	0.00404				
o-Xylene		<0.00202	0.00202	<0.00201	0.00201	<0.00201	0.00201	<0.00202	0.00202				
Total Xylenes		<0.00202	0.00202	<0.00201	0.00201	<0.00201	0.00201	<0.00202	0.00202				
Total BTEX		<0.00202	0.00202	<0.00201	0.00201	<0.00201	0.00201	<0.00202	0.00202				
Chloride by EPA 300	***Extracted:***	Jan-20-20 16:10		Jan-20-20 16:10		Jan-20-20 16:10		Jan-20-20 16:10					
	Analyzed:	Jan-20-20 22:44		Jan-20-20 23:16		Jan-20-20 23:21		Jan-20-20 23:39					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		2010	20.1	457	10.0	451	10.0	285	9.96				
TPH by SW8015 Mod	***Extracted:***	Jan-20-20 17:00		Jan-20-20 17:00		Jan-20-20 17:00		Jan-20-20 17:00					
	Analyzed:	Jan-21-20 02:31		Jan-21-20 02:31		Jan-21-20 02:51		Jan-21-20 02:51					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<50.2	50.2	<50.3	50.3	<50.3	50.3				
Diesel Range Organics (DRO)		<50.0	50.0	<50.2	50.2	<50.3	50.3	<50.3	50.3				
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<50.2	50.2	<50.3	50.3	<50.3	50.3				
Total GRO-DRO		<50.0	50.0	<50.2	50.2	<50.3	50.3	<50.3	50.3				
Total TPH		<50.0	50.0	<50.2	50.2	<50.3	50.3	<50.3	50.3				

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Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analytical Results 649663

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	01.20.20 15.30
Lab Sample Id:	649663-001	Date Collected:	01.17.20 14.50	Sample Depth:	8 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JHB			% Moisture:	
Analyst:	JHB	Date Prep:	01.20.20 16.10	Basis:	Wet Weight
Seq Number:	3113990				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**325**	10.0	mg/kg	01.20.20 22.49		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.20.20 17.00	Basis:	Wet Weight
Seq Number:	3113883				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	01.21.20 01.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	01.21.20 01.12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.21.20 01.12	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	01.21.20 01.12	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.21.20 01.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	01.21.20 01.12	
o-Terphenyl	84-15-1	101	%	70-135	01.21.20 01.12	

Certificate of Analytical Results 649663

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	01.20.20 15.30
Lab Sample Id:	649663-001	Date Collected:	01.17.20 14.50	Sample Depth:	8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	JHB			% Moisture:	
Analyst:	JHB	Date Prep:	01.20.20 16.00	Basis:	Wet Weight
Seq Number:	3113991				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.21.20 09.13	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.21.20 09.13	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.21.20 09.13	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.21.20 09.13	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.21.20 09.13	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	01.21.20 09.13	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.21.20 09.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	01.21.20 09.13	
4-Bromofluorobenzene	460-00-4	103	%	70-130	01.21.20 09.13	

Certificate of Analytical Results 649663

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	01.20.20 15.30
Lab Sample Id:	649663-002	Date Collected:	01.17.20 16.50	Sample Depth:	9 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JHB			% Moisture:	
Analyst:	JHB	Date Prep:	01.20.20 16.10	Basis:	Wet Weight
Seq Number:	3113990				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**264**	10.1	mg/kg	01.20.20 22.54		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.20.20 17.00	Basis:	Wet Weight
Seq Number:	3113883				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	01.21.20 01.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	01.21.20 01.32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	01.21.20 01.32	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	01.21.20 01.32	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	01.21.20 01.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	01.21.20 01.32	
o-Terphenyl	84-15-1	89	%	70-135	01.21.20 01.32	

Certificate of Analytical Results 649663

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	01.20.20 15.30
Lab Sample Id:	649663-002	Date Collected:	01.17.20 16.50	Sample Depth:	9 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	JHB			% Moisture:	
Analyst:	JHB	Date Prep:	01.20.20 16.00	Basis:	Wet Weight
Seq Number:	3113991				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.21.20 09.33	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.21.20 09.33	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.21.20 09.33	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	01.21.20 09.33	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.21.20 09.33	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	01.21.20 09.33	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.21.20 09.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	01.21.20 09.33	
4-Bromofluorobenzene	460-00-4	99	%	70-130	01.21.20 09.33	

Certificate of Analytical Results 649663

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	01.20.20 15.30
Lab Sample Id:	649663-003	Date Collected:	01.17.20 15.00	Sample Depth:	0 - 8 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JHB			% Moisture:	
Analyst:	JHB	Date Prep:	01.20.20 16.10	Basis:	Wet Weight
Seq Number:	3113990				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**650**	10.0	mg/kg	01.20.20 23.00		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.20.20 17.00	Basis:	Wet Weight
Seq Number:	3113883				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	01.21.20 01.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	01.21.20 01.32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	01.21.20 01.32	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	01.21.20 01.32	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	01.21.20 01.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	01.21.20 01.32	
o-Terphenyl	84-15-1	100	%	70-135	01.21.20 01.32	

Certificate of Analytical Results 649663

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	01.20.20 15.30
Lab Sample Id:	649663-003	Date Collected:	01.17.20 15.00	Sample Depth:	0 - 8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	JHB			% Moisture:	
Analyst:	JHB	Date Prep:	01.20.20 16.00	Basis:	Wet Weight
Seq Number:	3113991				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.21.20 09.54	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.21.20 09.54	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.21.20 09.54	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	01.21.20 09.54	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.21.20 09.54	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	01.21.20 09.54	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.21.20 09.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	01.21.20 09.54	
1,4-Difluorobenzene	540-36-3	102	%	70-130	01.21.20 09.54	

Certificate of Analytical Results 649663

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	01.20.20 15.30
Lab Sample Id:	649663-004	Date Collected:	01.17.20 16.00	Sample Depth:	0 - 9 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JHB			% Moisture:	
Analyst:	JHB	Date Prep:	01.20.20 16.10	Basis:	Wet Weight
Seq Number:	3113990				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**386**	10.1	mg/kg	01.20.20 23.05		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.20.20 17.00	Basis:	Wet Weight
Seq Number:	3113883				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	01.21.20 01.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	01.21.20 01.52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	01.21.20 01.52	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	01.21.20 01.52	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	01.21.20 01.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	01.21.20 01.52	
o-Terphenyl	84-15-1	100	%	70-135	01.21.20 01.52	

Certificate of Analytical Results 649663

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	01.20.20 15.30
Lab Sample Id:	649663-004	Date Collected:	01.17.20 16.00	Sample Depth:	0 - 9 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	JHB			% Moisture:	
Analyst:	JHB	Date Prep:	01.20.20 16.00	Basis:	Wet Weight
Seq Number:	3113991				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.21.20 11.09	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.21.20 11.09	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.21.20 11.09	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.21.20 11.09	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.21.20 11.09	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.21.20 11.09	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.21.20 11.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	01.21.20 11.09	
4-Bromofluorobenzene	460-00-4	99	%	70-130	01.21.20 11.09	

Certificate of Analytical Results 649663

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	01.20.20 15.30
Lab Sample Id:	649663-005	Date Collected:	01.17.20 16.10	Sample Depth:	0 - 9 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JHB			% Moisture:	
Analyst:	JHB	Date Prep:	01.20.20 16.10	Basis:	Wet Weight
Seq Number:	3113990				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**342**	9.96	mg/kg	01.20.20 23.10		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.20.20 17.00	Basis:	Wet Weight
Seq Number:	3113883				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	01.21.20 02.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	01.21.20 02.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	01.21.20 02.11	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	01.21.20 02.11	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	01.21.20 02.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	01.21.20 02.11	
o-Terphenyl	84-15-1	96	%	70-135	01.21.20 02.11	

Certificate of Analytical Results 649663

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	01.20.20 15.30
Lab Sample Id:	649663-005	Date Collected:	01.17.20 16.10	Sample Depth:	0 - 9 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	JHB			% Moisture:	
Analyst:	JHB	Date Prep:	01.20.20 16.00	Basis:	Wet Weight
Seq Number:	3113991				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	01.21.20 11.29	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	01.21.20 11.29	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	01.21.20 11.29	U	1
m,p-Xylenes	179601-23-1	<0.00395	0.00395	mg/kg	01.21.20 11.29	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	01.21.20 11.29	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	01.21.20 11.29	U	1
Total BTEX		<0.00198	0.00198	mg/kg	01.21.20 11.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	95	%	70-130	01.21.20 11.29	
1,4-Difluorobenzene	540-36-3	103	%	70-130	01.21.20 11.29	

Certificate of Analytical Results 649663

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	01.20.20 15.30
Lab Sample Id:	649663-006	Date Collected:	01.17.20 16.20	Sample Depth:	0 - 9 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JHB			% Moisture:	
Analyst:	JHB	Date Prep:	01.20.20 16.10	Basis:	Wet Weight
Seq Number:	3113990				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1600**	20.1	mg/kg	01.20.20 22.38		2

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.20.20 17.00	Basis:	Wet Weight
Seq Number:	3113883				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	01.21.20 02.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	01.21.20 02.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	01.21.20 02.11	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	01.21.20 02.11	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	01.21.20 02.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	01.21.20 02.11	
o-Terphenyl	84-15-1	98	%	70-135	01.21.20 02.11	

Certificate of Analytical Results 649663

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	01.20.20 15.30
Lab Sample Id:	649663-006	Date Collected:	01.17.20 16.20	Sample Depth:	0 - 9 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	JHB			% Moisture:	
Analyst:	JHB	Date Prep:	01.20.20 16.00	Basis:	Wet Weight
Seq Number:	3113991				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.21.20 11.50	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.21.20 11.50	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.21.20 11.50	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	01.21.20 11.50	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.21.20 11.50	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	01.21.20 11.50	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.21.20 11.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	01.21.20 11.50	
1,4-Difluorobenzene	540-36-3	103	%	70-130	01.21.20 11.50	

Certificate of Analytical Results 649663

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**SW05**	Matrix:	Soil	Date Received:	01.20.20 15.30
Lab Sample Id:	649663-007	Date Collected:	01.17.20 16.30	Sample Depth:	0 - 8 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JHB			% Moisture:	
Analyst:	JHB	Date Prep:	01.20.20 16.10	Basis:	Wet Weight
Seq Number:	3113990				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2010**	20.1	mg/kg	01.20.20 22.44		2

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.20.20 17.00	Basis:	Wet Weight
Seq Number:	3113883				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	01.21.20 02.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	01.21.20 02.31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.21.20 02.31	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	01.21.20 02.31	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.21.20 02.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	01.21.20 02.31	
o-Terphenyl	84-15-1	95	%	70-135	01.21.20 02.31	

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LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**SW05**	Matrix:	Soil	Date Received:	01.20.20 15.30
Lab Sample Id:	649663-007	Date Collected:	01.17.20 16.30	Sample Depth:	0 - 8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	JHB			% Moisture:	
Analyst:	JHB	Date Prep:	01.20.20 16.00	Basis:	Wet Weight
Seq Number:	3113991				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.21.20 12.10	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.21.20 12.10	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.21.20 12.10	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	01.21.20 12.10	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.21.20 12.10	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	01.21.20 12.10	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.21.20 12.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	70-130	01.21.20 12.10	
1,4-Difluorobenzene	540-36-3	103	%	70-130	01.21.20 12.10	

Certificate of Analytical Results 649663

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**SW06**	Matrix:	Soil	Date Received:	01.20.20 15.30
Lab Sample Id:	649663-008	Date Collected:	01.17.20 09.15	Sample Depth:	0 - 8 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JHB			% Moisture:	
Analyst:	JHB	Date Prep:	01.20.20 16.10	Basis:	Wet Weight
Seq Number:	3113990				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**457**	10.0	mg/kg	01.20.20 23.16		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.20.20 17.00	Basis:	Wet Weight
Seq Number:	3113883				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	01.21.20 02.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	01.21.20 02.31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	01.21.20 02.31	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	01.21.20 02.31	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	01.21.20 02.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	01.21.20 02.31	
o-Terphenyl	84-15-1	102	%	70-135	01.21.20 02.31	

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LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**SW06**	Matrix:	Soil	Date Received:	01.20.20 15.30
Lab Sample Id:	649663-008	Date Collected:	01.17.20 09.15	Sample Depth:	0 - 8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	JHB			% Moisture:	
Analyst:	JHB	Date Prep:	01.20.20 16.00	Basis:	Wet Weight
Seq Number:	3113991				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.21.20 12.30	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.21.20 12.30	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.21.20 12.30	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.21.20 12.30	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.21.20 12.30	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	01.21.20 12.30	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.21.20 12.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	01.21.20 12.30	
1,4-Difluorobenzene	540-36-3	102	%	70-130	01.21.20 12.30	

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LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	01.20.20 15.30
Lab Sample Id:	649663-009	Date Collected:	01.17.20 09.30	Sample Depth:	9 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JHB			% Moisture:	
Analyst:	JHB	Date Prep:	01.20.20 16.10	Basis:	Wet Weight
Seq Number:	3113990				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**451**	10.0	mg/kg	01.20.20 23.21		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.20.20 17.00	Basis:	Wet Weight
Seq Number:	3113883				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	01.21.20 02.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	01.21.20 02.51	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	01.21.20 02.51	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	01.21.20 02.51	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	01.21.20 02.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	01.21.20 02.51	
o-Terphenyl	84-15-1	95	%	70-135	01.21.20 02.51	

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LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	01.20.20 15.30
Lab Sample Id:	649663-009	Date Collected:	01.17.20 09.30	Sample Depth:	9 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	JHB			% Moisture:	
Analyst:	JHB	Date Prep:	01.20.20 16.00	Basis:	Wet Weight
Seq Number:	3113991				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.21.20 12.51	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.21.20 12.51	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.21.20 12.51	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.21.20 12.51	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.21.20 12.51	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	01.21.20 12.51	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.21.20 12.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	01.21.20 12.51	
1,4-Difluorobenzene	540-36-3	100	%	70-130	01.21.20 12.51	

Certificate of Analytical Results 649663

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	01.20.20 15.30
Lab Sample Id:	649663-010	Date Collected:	01.17.20 12.15	Sample Depth:	8 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JHB			% Moisture:	
Analyst:	JHB	Date Prep:	01.20.20 16.10	Basis:	Wet Weight
Seq Number:	3113990				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**285**	9.96	mg/kg	01.20.20 23.39		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.20.20 17.00	Basis:	Wet Weight
Seq Number:	3113883				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	01.21.20 02.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	01.21.20 02.51	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	01.21.20 02.51	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	01.21.20 02.51	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	01.21.20 02.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	01.21.20 02.51	
o-Terphenyl	84-15-1	100	%	70-135	01.21.20 02.51	

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LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	01.20.20 15.30
Lab Sample Id:	649663-010	Date Collected:	01.17.20 12.15	Sample Depth:	8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	JHB			% Moisture:	
Analyst:	JHB	Date Prep:	01.20.20 16.00	Basis:	Wet Weight
Seq Number:	3113991				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.21.20 13.11	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.21.20 13.11	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.21.20 13.11	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	01.21.20 13.11	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.21.20 13.11	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	01.21.20 13.11	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.21.20 13.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	01.21.20 13.11	
4-Bromofluorobenzene	460-00-4	101	%	70-130	01.21.20 13.11	

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 649663

LT Environmental, Inc.

Remuda Basin #1

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3113990 — Matrix: Solid — Date Prep: 01.20.20
MB Sample Id: 7694796-1-BLK — LCS Sample Id: 7694796-1-BKS — LCSD Sample Id: 7694796-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1.41	250	258	103	258	103	90-110	0	20	mg/kg	01.20.20 21:39	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3113990 — Matrix: Soil — Date Prep: 01.20.20
Parent Sample Id: 649655-001 — MS Sample Id: 649655-001 S — MSD Sample Id: 649655-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	29.2	189	287	136	288	137	90-110	0	20	mg/kg	01.20.20 21:50	X

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3113990 — Matrix: Soil — Date Prep: 01.20.20
Parent Sample Id: 649663-010 — MS Sample Id: 649663-010 S — MSD Sample Id: 649663-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	285	198	553	135	495	107	90-110	11	20	mg/kg	01.20.20 23:44	X

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3113883 — Matrix: Solid — Date Prep: 01.20.20
MB Sample Id: 7694812-1-BLK — LCS Sample Id: 7694812-1-BKS — LCSD Sample Id: 7694812-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1090	109	1140	114	70-135	4	35	mg/kg	01.20.20 23:34	
Diesel Range Organics (DRO)	<50.0	1000	1210	121	1100	110	70-135	10	35	mg/kg	01.20.20 23:34	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	101		116		124		70-135	%	01.20.20 23:34
o-Terphenyl	102		109		117		70-135	%	01.20.20 23:34

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3113883 — Matrix: Solid — Date Prep: 01.20.20
MB Sample Id: 7694812-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	01.20.20 23:14	

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 649663

LT Environmental, Inc.

Remuda Basin #1

Analytical Method: TPH by SW8015 Mod | Prep Method: SW8015P
Seq Number: 3113883 | Matrix: Soil | Date Prep: 01.20.20
Parent Sample Id: 649655-004 | MS Sample Id: 649655-004 S | MSD Sample Id: 649655-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.1	1000	1280	128	1170	117	70-135	9	35	mg/kg	01.20.20 23:53	
Diesel Range Organics (DRO)	<50.1	1000	1240	124	1090	109	70-135	13	35	mg/kg	01.20.20 23:53	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	133		129		70-135	%	01.20.20 23:53
o-Terphenyl	129		118		70-135	%	01.20.20 23:53

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3113991 | Matrix: Solid | Date Prep: 01.20.20
MB Sample Id: 7694845-1-BLK | LCS Sample Id: 7694845-1-BKS | LCSD Sample Id: 7694845-1-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	0.0906	91	0.0910	91	70-130	0	35	mg/kg	01.21.20 04:54	
Toluene	<0.00200	0.100	0.0883	88	0.0880	88	70-130	0	35	mg/kg	01.21.20 04:54	
Ethylbenzene	<0.00200	0.100	0.0855	86	0.0842	84	71-129	2	35	mg/kg	01.21.20 04:54	
m,p-Xylenes	<0.00400	0.200	0.177	89	0.173	87	70-135	2	35	mg/kg	01.21.20 04:54	
o-Xylene	<0.00200	0.100	0.0882	88	0.0867	87	71-133	2	35	mg/kg	01.21.20 04:54	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		102		101		70-130	%	01.21.20 04:54
4-Bromofluorobenzene	98		97		96		70-130	%	01.21.20 04:54

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3113991 | Matrix: Soil | Date Prep: 01.20.20
Parent Sample Id: 649663-005 | MS Sample Id: 649663-005 S | MSD Sample Id: 649663-005 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	0.0816	82	0.0670	66	70-130	20	35	mg/kg	01.21.20 05:35	X
Toluene	<0.00200	0.0998	0.0788	79	0.0665	66	70-130	17	35	mg/kg	01.21.20 05:35	X
Ethylbenzene	<0.00200	0.0998	0.0761	76	0.0645	64	71-129	17	35	mg/kg	01.21.20 05:35	X
m,p-Xylenes	<0.00399	0.200	0.157	79	0.135	67	70-135	15	35	mg/kg	01.21.20 05:35	X
o-Xylene	<0.00200	0.0998	0.0786	79	0.0685	68	71-133	14	35	mg/kg	01.21.20 05:35	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		103		70-130	%	01.21.20 05:35
4-Bromofluorobenzene	99		102		70-130	%	01.21.20 05:35

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: 6049663

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

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

Work Order Comments

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

Project Name:	Remuda Basin #1	Turn Around	
Project Number:	012918058	Routine	☐
P.O. Number:		Rush:	24H
Sampler's Name:	Spencer Lo	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	2.8	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:	10	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
FS01	S	1.17.20	1450	8'	1	X	X	X
FS02	S	1.17.20	1650	9'	1	X	X	X
SW01	S	1.17.20	1500	0-8'	1	X	X	X
SW02	S	1.17.20	1600	0-9'	1	X	X	X
SW03	S	1.17.20	1610	0-9'	1	X	X	X
SW04	S	1.17.20	1620	0-9'	1	X	X	X
SW05	S	1.17.20	1630	0-8'	1	X	X	X
SW06	S	1.20.20	915	0-8'	1	X	X	X
FS03	S	1.20.20	930	9'	1	X	X	X
FS04	S	1.20.20	1215	8'	1	X	X	X

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
		1/20/20 15:20	2		
			4		
			6		

Revised Date 051418 Rev. 2018.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 01.20.2020 03.30.00 PM

Work Order #: 649663

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

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	2.8
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**
#5 Custody Seals intact on sample bottles?	**Yes**
#6*Custody Seals Signed and dated?	**Yes**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 01.20.2020

Checklist reviewed by: Jessica Kramer Date: 01.21.2020

Jessica Kramer

Analytical Report 655308

for

LT Environmental, Inc.

Project Manager: Dan Moir

Remuda Basin Battery #1

012918058

13-MAR-20

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

13-MAR-20

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

Reference: XENCO Report No(s): **655308**
Remuda Basin Battery #1
Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 655308. 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. 655308 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 Manager

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 655308

LT Environmental, Inc., Arvada, CO

Remuda Basin Battery #1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH 10	S	03-09-20 10:35	2 ft	655308-001
PH 10A	S	03-09-20 10:42	3 ft	655308-002
PH 10B	S	03-09-20 10:50	3.5 ft	655308-003
SW 15	S	03-10-20 16:00	0 - 9 ft	655308-004

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Remuda Basin Battery #1

Project ID: *012918058*
Work Order Number(s): *655308*

Report Date: *13-MAR-20*
Date Received: *03/11/2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3119320 BTEX by EPA 8021B

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

Certificate of Analysis Summary 655308

LT Environmental, Inc., Arvada, CO

Project Name: Remuda Basin Battery #1

Project Id: 012918058
Contact: Dan Moir
Project Location:

Date Received in Lab: Wed Mar-11-20 11:20 am
Report Date: 13-MAR-20
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	655308-001		655308-002		655308-003		655308-004					
	Field Id:	PH 10		PH 10A		PH 10B		SW 15					
	Depth:	2- ft		3- ft		3.5- ft		0-9 ft					
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	Mar-09-20 10:35		Mar-09-20 10:42		Mar-09-20 10:50		Mar-10-20 16:00					
BTEX by EPA 8021B	***Extracted:***	Mar-11-20 13:00		Mar-11-20 13:00		Mar-11-20 13:00		Mar-11-20 13:00					
	Analyzed:	Mar-11-20 16:49		Mar-11-20 17:15		Mar-11-20 17:42		Mar-11-20 18:03					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00199	0.00199	<0.00200	0.00200	<0.00202	0.00202	<0.00202	0.00202				
Toluene		<0.00199	0.00199	<0.00200	0.00200	<0.00202	0.00202	<0.00202	0.00202				
Ethylbenzene		<0.00199	0.00199	<0.00200	0.00200	<0.00202	0.00202	<0.00202	0.00202				
m,p-Xylenes		<0.00398	0.00398	<0.00400	0.00400	<0.00404	0.00404	<0.00404	0.00404				
o-Xylene		<0.00199	0.00199	<0.00200	0.00200	<0.00202	0.00202	<0.00202	0.00202				
Total Xylenes		<0.00199	0.00199	<0.00200	0.00200	<0.00202	0.00202	<0.00202	0.00202				
Total BTEX		<0.00199	0.00199	<0.00200	0.00200	<0.00202	0.00202	<0.00202	0.00202				
Chloride by EPA 300	***Extracted:***	Mar-11-20 11:48		Mar-11-20 11:48		Mar-11-20 11:48		Mar-11-20 11:48					
	Analyzed:	Mar-11-20 12:52		Mar-11-20 12:57		Mar-11-20 13:03		Mar-11-20 13:09					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		65.0	10.0	93.9	9.92	95.5	10.1	852	49.9				
TPH by SW8015 Mod	***Extracted:***	Mar-11-20 12:20		Mar-11-20 12:20		Mar-11-20 12:20		Mar-11-20 12:20					
	Analyzed:	Mar-11-20 14:34		Mar-11-20 14:34		Mar-11-20 15:35		Mar-11-20 15:35					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<50.2	50.2	<50.2	50.2	<50.2	50.2	<49.9	49.9				
Diesel Range Organics (DRO)		<50.2	50.2	<50.2	50.2	<50.2	50.2	<49.9	49.9				
Motor Oil Range Hydrocarbons (MRO)		<50.2	50.2	<50.2	50.2	<50.2	50.2	<49.9	49.9				
Total GRO-DRO		<50.2	50.2	<50.2	50.2	<50.2	50.2	<49.9	49.9				
Total TPH		<50.2	50.2	<50.2	50.2	<50.2	50.2	<49.9	49.9				

Jessica Kramer
Project Manager

Certificate of Analytical Results 655308

LT Environmental, Inc., Arvada, CO

Remuda Basin Battery #1

Sample Id:	**PH 10**	Matrix:	Soil	Date Received:	03.11.20 11.20
Lab Sample Id:	655308-001	Date Collected:	03.09.20 10.35	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.11.20 11.48	Basis:	Wet Weight
Seq Number:	3119239				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**65.0**	10.0	mg/kg	03.11.20 12.52		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	03.11.20 12.20	Basis:	Wet Weight
Seq Number:	3119329				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	03.11.20 14.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	03.11.20 14.34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	03.11.20 14.34	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	03.11.20 14.34	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	03.11.20 14.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	03.11.20 14.34	
o-Terphenyl	84-15-1	97	%	70-135	03.11.20 14.34	

Certificate of Analytical Results 655308

LT Environmental, Inc., Arvada, CO

Remuda Basin Battery #1

Sample Id:	**PH 10**	Matrix:	Soil	Date Received:	03.11.20 11.20
Lab Sample Id:	655308-001	Date Collected:	03.09.20 10.35	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.11.20 13.00	Basis:	Wet Weight
Seq Number:	3119320				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.11.20 16.49	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.11.20 16.49	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.11.20 16.49	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.11.20 16.49	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.11.20 16.49	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.11.20 16.49	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.11.20 16.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	113	%	70-130	03.11.20 16.49	
4-Bromofluorobenzene	460-00-4	94	%	70-130	03.11.20 16.49	

Certificate of Analytical Results 655308

LT Environmental, Inc., Arvada, CO

Remuda Basin Battery #1

Sample Id:	**PH 10A**	Matrix:	Soil	Date Received:	03.11.20 11.20
Lab Sample Id:	655308-002	Date Collected:	03.09.20 10.42	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.11.20 11.48	Basis:	Wet Weight
Seq Number:	3119239				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**93.9**	9.92	mg/kg	03.11.20 12.57		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	03.11.20 12.20	Basis:	Wet Weight
Seq Number:	3119334				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	03.11.20 14.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	03.11.20 14.34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	03.11.20 14.34	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	03.11.20 14.34	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	03.11.20 14.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	77	%	70-135	03.11.20 14.34	
o-Terphenyl	84-15-1	83	%	70-135	03.11.20 14.34	

Certificate of Analytical Results 655308

LT Environmental, Inc., Arvada, CO

Remuda Basin Battery #1

Sample Id:	**PH 10A**	Matrix:	Soil	Date Received:	03.11.20 11.20
Lab Sample Id:	655308-002	Date Collected:	03.09.20 10.42	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.11.20 13.00	Basis:	Wet Weight
Seq Number:	3119320				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.11.20 17.15	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.11.20 17.15	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.11.20 17.15	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	03.11.20 17.15	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.11.20 17.15	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.11.20 17.15	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.11.20 17.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	03.11.20 17.15	
4-Bromofluorobenzene	460-00-4	84	%	70-130	03.11.20 17.15	

Certificate of Analytical Results 655308

LT Environmental, Inc., Arvada, CO

Remuda Basin Battery #1

Sample Id:	**PH 10B**	Matrix:	Soil	Date Received:	03.11.20 11.20
Lab Sample Id:	655308-003	Date Collected:	03.09.20 10.50	Sample Depth:	3.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.11.20 11.48	Basis:	Wet Weight
Seq Number:	3119239				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**95.5**	10.1	mg/kg	03.11.20 13.03		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	03.11.20 12.20	Basis:	Wet Weight
Seq Number:	3119334				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	03.11.20 15.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	03.11.20 15.35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	03.11.20 15.35	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	03.11.20 15.35	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	03.11.20 15.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	03.11.20 15.35	
o-Terphenyl	84-15-1	99	%	70-135	03.11.20 15.35	

Certificate of Analytical Results 655308

LT Environmental, Inc., Arvada, CO

Remuda Basin Battery #1

Sample Id:	**PH 10B**	Matrix:	Soil	Date Received:	03.11.20 11.20
Lab Sample Id:	655308-003	Date Collected:	03.09.20 10.50	Sample Depth:	3.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.11.20 13.00	Basis:	Wet Weight
Seq Number:	3119320				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	03.11.20 17.42	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	03.11.20 17.42	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	03.11.20 17.42	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	03.11.20 17.42	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	03.11.20 17.42	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	03.11.20 17.42	U	1
Total BTEX		<0.00202	0.00202	mg/kg	03.11.20 17.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	110	%	70-130	03.11.20 17.42	
4-Bromofluorobenzene	460-00-4	88	%	70-130	03.11.20 17.42	

Certificate of Analytical Results 655308

LT Environmental, Inc., Arvada, CO

Remuda Basin Battery #1

Sample Id:	**SW 15**	Matrix:	Soil	Date Received:	03.11.20 11.20
Lab Sample Id:	655308-004	Date Collected:	03.10.20 16.00	Sample Depth:	0 - 9 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.11.20 11.48	Basis:	Wet Weight
Seq Number:	3119239				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**852**	49.9	mg/kg	03.11.20 13.09		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	03.11.20 12.20	Basis:	Wet Weight
Seq Number:	3119329				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	03.11.20 15.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	03.11.20 15.35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	03.11.20 15.35	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	03.11.20 15.35	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	03.11.20 15.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	03.11.20 15.35	
o-Terphenyl	84-15-1	91	%	70-135	03.11.20 15.35	

Certificate of Analytical Results 655308

LT Environmental, Inc., Arvada, CO

Remuda Basin Battery #1

Sample Id:	**SW 15**	Matrix:	Soil	Date Received:	03.11.20 11.20
Lab Sample Id:	655308-004	Date Collected:	03.10.20 16.00	Sample Depth:	0 - 9 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.11.20 13.00	Basis:	Wet Weight
Seq Number:	3119320				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	03.11.20 18.03	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	03.11.20 18.03	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	03.11.20 18.03	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	03.11.20 18.03	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	03.11.20 18.03	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	03.11.20 18.03	U	1
Total BTEX		<0.00202	0.00202	mg/kg	03.11.20 18.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	81	%	70-130	03.11.20 18.03	
1,4-Difluorobenzene	540-36-3	88	%	70-130	03.11.20 18.03	

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 655308

LT Environmental, Inc.

Remuda Basin Battery #1

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3119239 — Matrix: Solid — Date Prep: 03.11.20
MB Sample Id: 7698564-1-BLK — LCS Sample Id: 7698564-1-BKS — LCSD Sample Id: 7698564-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	258	103	258	103	90-110	0	20	mg/kg	03.11.20 11:23	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3119239 — Matrix: Soil — Date Prep: 03.11.20
Parent Sample Id: 655268-001 — MS Sample Id: 655268-001 S — MSD Sample Id: 655268-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	485	198	692	105	703	110	90-110	2	20	mg/kg	03.11.20 11:42	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3119329 — Matrix: Solid — Date Prep: 03.11.20
MB Sample Id: 7698656-1-BLK — LCS Sample Id: 7698656-1-BKS — LCSD Sample Id: 7698656-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	940	94	915	92	70-135	3	35	mg/kg	03.11.20 13:53	
Diesel Range Organics (DRO)	<50.0	1000	1010	101	983	98	70-135	3	35	mg/kg	03.11.20 13:53	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	96		111		107		70-135	%	03.11.20 13:53
o-Terphenyl	102		109		105		70-135	%	03.11.20 13:53

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3119334 — Matrix: Solid — Date Prep: 03.11.20
MB Sample Id: 7698657-1-BLK — LCS Sample Id: 7698657-1-BKS — LCSD Sample Id: 7698657-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	921	92	872	87	70-135	5	35	mg/kg	03.11.20 13:53	
Diesel Range Organics (DRO)	<50.0	1000	1080	108	1000	100	70-135	8	35	mg/kg	03.11.20 13:53	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	112		119		123		70-135	%	03.11.20 13:53
o-Terphenyl	131		131		116		70-135	%	03.11.20 13:53

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 655308

LT Environmental, Inc.

Remuda Basin Battery #1

Analytical Method: TPH by SW8015 Mod
Seq Number: 3119329
Matrix: Solid
MB Sample Id: 7698656-1-BLK
Prep Method: SW8015P
Date Prep: 03.11.20

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	03.11.20 13:33	

Analytical Method: TPH by SW8015 Mod
Seq Number: 3119334
Matrix: Solid
MB Sample Id: 7698657-1-BLK
Prep Method: SW8015P
Date Prep: 03.11.20

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	03.11.20 13:33	

Analytical Method: TPH by SW8015 Mod
Seq Number: 3119329
Matrix: Soil
Parent Sample Id: 655308-001
MS Sample Id: 655308-001 S
MSD Sample Id: 655308-001 SD
Prep Method: SW8015P
Date Prep: 03.11.20

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	832	83	875	88	70-135	5	35	mg/kg	03.11.20 14:54	
Diesel Range Organics (DRO)	<50.0	1000	883	88	943	94	70-135	7	35	mg/kg	03.11.20 14:54	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	99		105		70-135	%	03.11.20 14:54
o-Terphenyl	95		103		70-135	%	03.11.20 14:54

Analytical Method: TPH by SW8015 Mod
Seq Number: 3119334
Matrix: Soil
Parent Sample Id: 655308-002
MS Sample Id: 655308-002 S
MSD Sample Id: 655308-002 SD
Prep Method: SW8015P
Date Prep: 03.11.20

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.2	1000	811	81	887	89	70-135	9	35	mg/kg	03.11.20 14:54	
Diesel Range Organics (DRO)	<50.2	1000	869	87	965	97	70-135	10	35	mg/kg	03.11.20 14:54	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	111		106		70-135	%	03.11.20 14:54
o-Terphenyl	98		107		70-135	%	03.11.20 14:54

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference 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

Final 1.000

QC Summary 655308

LT Environmental, Inc.

Remuda Basin Battery #1

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3119320 Matrix: Solid Date Prep: 03.11.20
MB Sample Id: 7698620-1-BLK LCS Sample Id: 7698620-1-BKS LCSD Sample Id: 7698620-1-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	0.117	117	0.121	121	70-130	3	35	mg/kg	03.11.20 15:07	
Toluene	<0.00200	0.100	0.106	106	0.109	109	70-130	3	35	mg/kg	03.11.20 15:07	
Ethylbenzene	<0.00200	0.100	0.100	100	0.103	103	71-129	3	35	mg/kg	03.11.20 15:07	
m,p-Xylenes	<0.00400	0.200	0.194	97	0.198	99	70-135	2	35	mg/kg	03.11.20 15:07	
o-Xylene	<0.00200	0.100	0.0992	99	0.102	102	71-133	3	35	mg/kg	03.11.20 15:07	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	114		111		111		70-130	%	03.11.20 15:07
4-Bromofluorobenzene	91		90		88		70-130	%	03.11.20 15:07

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3119320 Matrix: Soil Date Prep: 03.11.20
Parent Sample Id: 655308-001 MS Sample Id: 655308-001 S MSD Sample Id: 655308-001 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	0.117	117	0.113	113	70-130	3	35	mg/kg	03.11.20 15:48	
Toluene	<0.00200	0.0998	0.105	105	0.0991	99	70-130	6	35	mg/kg	03.11.20 15:48	
Ethylbenzene	<0.00200	0.0998	0.0967	97	0.0873	87	71-129	10	35	mg/kg	03.11.20 15:48	
m,p-Xylenes	<0.00399	0.200	0.186	93	0.167	84	70-135	11	35	mg/kg	03.11.20 15:48	
o-Xylene	<0.00200	0.0998	0.0935	94	0.0848	85	71-133	10	35	mg/kg	03.11.20 15:48	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	109		111		70-130	%	03.11.20 15:48
4-Bromofluorobenzene	86		91		70-130	%	03.11.20 15:48

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

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: 655308

Page 1 of 1

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrel
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO-Energy
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM
Phone:	432.704.5178	Email:	dmoir@ltenv.com cagbor@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 BASIN BATTERY #1	Turn Around	
Project Number:	012918058	Routine	☐
P.O. Number:		Rush:	3 DAYS
Sampler's Name:	Chris Agbor	Due Date:	

SAMPLE RECEIPT			
Temperature (°C):	1.0	Temp Blank:	(Yes) No
Received Intact:	(Yes) No	Wet Ice:	(Yes) No
Cooler Custody Seals:	Yes (No) N/A	Thermometer ID	TNM007
Sample Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
		Total Containers:	4

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	Sample Comments
PH 10	S	3/9/20	1035	2	1	X	X	X	COMPOSITE
PH 10A	S	3/9/20	1042	3	1	X	X	X	COMPOSITE
PH 10B	S	3/9/20	1050	3.5	1	X	X	X	COMPOSITE
SW 15	S	3/10/20	1600	0 - 9	1	X	X	X	COMPOSITE

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
		3/11/20 11:20	2		
			4		
			6		

Revised Date 051418 Rev. 2018.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 03.11.2020 11.20.00 AM

Work Order #: 655308

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

Temperature Measuring device used : T-NM-007

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 03.11.2020

Checklist reviewed by: Jessica Kramer Date: 03.13.2020

Jessica Kramer

Analytical Report 657640

for

LT Environmental, Inc.

Project Manager: Dan Moir

Remuda Basin #1

012918058

02-APR-20

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

02-APR-20

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

Reference: XENCO Report No(s): **657640**
Remuda Basin #1
Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 657640. 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. 657640 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 Manager

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 657640

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW05A	S	04-01-20 10:30	2 ft	657640-001
SW05B	S	04-01-20 10:50	6 ft	657640-002
SW04A	S	04-01-20 10:40	4 ft	657640-003
SW04B	S	04-01-20 11:00	8 ft	657640-004

Version: 1.%

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Remuda Basin #1

Project ID: *012918058*
Work Order Number(s): *657640*

Report Date: *02-APR-20*
Date Received: *04/01/2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3121698 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3121704 Chloride by EPA 300
Lab Sample ID 657640-004 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: 657640-001, -002, -003, -004.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Certificate of Analysis Summary 657640

LT Environmental, Inc., Arvada, CO

Project Name: Remuda Basin #1

Project Id: 012918058
Contact: Dan Moir
Project Location:

Date Received in Lab: Wed Apr-01-20 04:58 pm
Report Date: 02-APR-20
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	657640-001		657640-002		657640-003		657640-004					
	Field Id:	SW05A		SW05B		SW04A		SW04B					
	Depth:	2- ft		6- ft		4- ft		8- ft					
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	Apr-01-20 10:30		Apr-01-20 10:50		Apr-01-20 10:40		Apr-01-20 11:00					
BTEX by EPA 8021B	***Extracted:***	Apr-01-20 20:09		Apr-01-20 20:09		Apr-01-20 20:09		Apr-01-20 20:09					
	Analyzed:	Apr-02-20 03:28		Apr-02-20 03:48		Apr-02-20 04:09		Apr-02-20 04:29					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00202	0.00202	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199				
Toluene		<0.00202	0.00202	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199				
Ethylbenzene		<0.00202	0.00202	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199				
m,p-Xylenes		<0.00404	0.00404	<0.00398	0.00398	<0.00398	0.00398	<0.00398	0.00398				
o-Xylene		<0.00202	0.00202	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199				
Total Xylenes		<0.00202	0.00202	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199				
Total BTEX		<0.00202	0.00202	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199				
Chloride by EPA 300	***Extracted:***	Apr-01-20 18:38		Apr-01-20 18:38		Apr-01-20 18:38		Apr-01-20 18:38					
	Analyzed:	Apr-01-20 23:14		Apr-01-20 23:20		Apr-01-20 23:26		Apr-01-20 23:32					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		2280	49.9	5470	49.6	2620	49.8	2100 X	50.2				
TPH by SW8015 Mod	***Extracted:***	Apr-02-20 09:00		Apr-02-20 09:00		Apr-02-20 09:00		Apr-02-20 09:00					
	Analyzed:	Apr-02-20 12:34		Apr-02-20 12:55		Apr-02-20 13:15		Apr-02-20 13:36					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<50.3	50.3	<50.0	50.0	<49.8	49.8	<50.2	50.2				
Diesel Range Organics (DRO)		<50.3	50.3	<50.0	50.0	<49.8	49.8	<50.2	50.2				
Motor Oil Range Hydrocarbons (MRO)		<50.3	50.3	<50.0	50.0	<49.8	49.8	<50.2	50.2				
Total GRO-DRO		<50.3	50.3	<50.0	50.0	<49.8	49.8	<50.2	50.2				
Total TPH		<50.3	50.3	<50.0	50.0	<49.8	49.8	<50.2	50.2				

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

Version: 1.%

Jessica Kramer
Project Manager

Final 1.000

Certificate of Analytical Results 657640

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**SW05A**	Matrix:	Soil	Date Received:	04.01.20 16.58
Lab Sample Id:	657640-001	Date Collected:	04.01.20 10.30	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.01.20 18.38	Basis:	Wet Weight
Seq Number:	3121704				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2280**	49.9	mg/kg	04.01.20 23.14		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.02.20 09.00	Basis:	Wet Weight
Seq Number:	3121741				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	04.02.20 12.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	04.02.20 12.34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	04.02.20 12.34	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	04.02.20 12.34	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	04.02.20 12.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	04.02.20 12.34	
o-Terphenyl	84-15-1	110	%	70-135	04.02.20 12.34	

Certificate of Analytical Results 657640

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**SW05A**	Matrix:	Soil	Date Received:	04.01.20 16.58
Lab Sample Id:	657640-001	Date Collected:	04.01.20 10.30	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.01.20 20.09	Basis:	Wet Weight
Seq Number:	3121698				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	04.02.20 03.28	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	04.02.20 03.28	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	04.02.20 03.28	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	04.02.20 03.28	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	04.02.20 03.28	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	04.02.20 03.28	U	1
Total BTEX		<0.00202	0.00202	mg/kg	04.02.20 03.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	94	%	70-130	04.02.20 03.28	
1,4-Difluorobenzene	540-36-3	109	%	70-130	04.02.20 03.28	

Certificate of Analytical Results 657640

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**SW05B**	Matrix:	Soil	Date Received:	04.01.20 16.58
Lab Sample Id:	657640-002	Date Collected:	04.01.20 10.50	Sample Depth:	6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.01.20 18.38	Basis:	Wet Weight
Seq Number:	3121704				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**5470**	49.6	mg/kg	04.01.20 23.20		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.02.20 09.00	Basis:	Wet Weight
Seq Number:	3121741				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	04.02.20 12.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	04.02.20 12.55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	04.02.20 12.55	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	04.02.20 12.55	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	04.02.20 12.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	04.02.20 12.55	
o-Terphenyl	84-15-1	110	%	70-135	04.02.20 12.55	

Certificate of Analytical Results 657640

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**SW05B**	Matrix:	Soil	Date Received:	04.01.20 16.58
Lab Sample Id:	657640-002	Date Collected:	04.01.20 10.50	Sample Depth:	6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.01.20 20.09	Basis:	Wet Weight
Seq Number:	3121698				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.02.20 03.48	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.02.20 03.48	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.02.20 03.48	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.02.20 03.48	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.02.20 03.48	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.02.20 03.48	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.02.20 03.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	95	%	70-130	04.02.20 03.48	
1,4-Difluorobenzene	540-36-3	110	%	70-130	04.02.20 03.48	

Certificate of Analytical Results 657640

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**SW04A**	Matrix:	Soil	Date Received:	04.01.20 16.58
Lab Sample Id:	657640-003	Date Collected:	04.01.20 10.40	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.01.20 18.38	Basis:	Wet Weight
Seq Number:	3121704				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2620**	49.8	mg/kg	04.01.20 23.26		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.02.20 09.00	Basis:	Wet Weight
Seq Number:	3121741				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	04.02.20 13.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	04.02.20 13.15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	04.02.20 13.15	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	04.02.20 13.15	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	04.02.20 13.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	04.02.20 13.15	
o-Terphenyl	84-15-1	106	%	70-135	04.02.20 13.15	

Certificate of Analytical Results 657640

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**SW04A**	Matrix:	Soil	Date Received:	04.01.20 16.58
Lab Sample Id:	657640-003	Date Collected:	04.01.20 10.40	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.01.20 20.09	Basis:	Wet Weight
Seq Number:	3121698				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.02.20 04.09	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.02.20 04.09	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.02.20 04.09	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.02.20 04.09	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.02.20 04.09	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.02.20 04.09	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.02.20 04.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	112	%	70-130	04.02.20 04.09	
4-Bromofluorobenzene	460-00-4	100	%	70-130	04.02.20 04.09	

Certificate of Analytical Results 657640

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**SW04B**	Matrix:	Soil	Date Received:	04.01.20 16.58
Lab Sample Id:	657640-004	Date Collected:	04.01.20 11.00	Sample Depth:	8 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.01.20 18.38	Basis:	Wet Weight
Seq Number:	3121704				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2100**	50.2	mg/kg	04.01.20 23.32	X	5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.02.20 09.00	Basis:	Wet Weight
Seq Number:	3121741				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	04.02.20 13.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	04.02.20 13.36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	04.02.20 13.36	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	04.02.20 13.36	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	04.02.20 13.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	04.02.20 13.36	
o-Terphenyl	84-15-1	107	%	70-135	04.02.20 13.36	

Certificate of Analytical Results 657640

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**SW04B**	Matrix:	Soil	Date Received:	04.01.20 16.58
Lab Sample Id:	657640-004	Date Collected:	04.01.20 11.00	Sample Depth:	8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.01.20 20.09	Basis:	Wet Weight
Seq Number:	3121698				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.02.20 04.29	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.02.20 04.29	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.02.20 04.29	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.02.20 04.29	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.02.20 04.29	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.02.20 04.29	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.02.20 04.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	110	%	70-130	04.02.20 04.29	
4-Bromofluorobenzene	460-00-4	96	%	70-130	04.02.20 04.29	

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 657640

LT Environmental, Inc.

Remuda Basin #1

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3121704 — Matrix: Solid — Date Prep: 04.01.20
MB Sample Id: 7700329-1-BLK — LCS Sample Id: 7700329-1-BKS — LCSD Sample Id: 7700329-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	257	103	253	101	90-110	2	20	mg/kg	04.01.20 21:55	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3121704 — Matrix: Soil — Date Prep: 04.01.20
Parent Sample Id: 657638-003 — MS Sample Id: 657638-003 S — MSD Sample Id: 657638-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	65.5	200	257	96	259	97	90-110	1	20	mg/kg	04.01.20 22:11	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3121704 — Matrix: Soil — Date Prep: 04.01.20
Parent Sample Id: 657640-004 — MS Sample Id: 657640-004 S — MSD Sample Id: 657640-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2100	247	2380	113	2400	121	90-110	1	20	mg/kg	04.01.20 23:38	X

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3121741 — Matrix: Solid — Date Prep: 04.02.20
MB Sample Id: 7700357-1-BLK — LCS Sample Id: 7700357-1-BKS — LCSD Sample Id: 7700357-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	990	99	890	89	70-135	11	35	mg/kg	04.02.20 09:28	
Diesel Range Organics (DRO)	<50.0	1000	1150	115	1020	102	70-135	12	35	mg/kg	04.02.20 09:28	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	104		124		107		70-135	%	04.02.20 09:28
o-Terphenyl	109		121		106		70-135	%	04.02.20 09:28

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3121741 — Matrix: Solid — Date Prep: 04.02.20
MB Sample Id: 7700357-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	04.02.20 09:07	

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 657640

LT Environmental, Inc.

Remuda Basin #1

Analytical Method: TPH by SW8015 Mod | Prep Method: SW8015P
Seq Number: 3121741 | Matrix: Soil | Date Prep: 04.02.20
Parent Sample Id: 657638-007 | MS Sample Id: 657638-007 S | MSD Sample Id: 657638-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.8	995	842	85	815	82	70-135	3	35	mg/kg	04.02.20 10:29	
Diesel Range Organics (DRO)	<49.8	995	978	98	948	95	70-135	3	35	mg/kg	04.02.20 10:29	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	126		133		70-135	%	04.02.20 10:29
o-Terphenyl	126		122		70-135	%	04.02.20 10:29

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3121698 | Matrix: Solid | Date Prep: 04.01.20
MB Sample Id: 7700318-1-BLK | LCS Sample Id: 7700318-1-BKS | LCSD Sample Id: 7700318-1-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	0.105	105	0.104	104	70-130	1	35	mg/kg	04.02.20 01:26	
Toluene	<0.00200	0.100	0.0990	99	0.0988	99	70-130	0	35	mg/kg	04.02.20 01:26	
Ethylbenzene	<0.00200	0.100	0.0926	93	0.0922	92	71-129	0	35	mg/kg	04.02.20 01:26	
m,p-Xylenes	<0.00400	0.200	0.190	95	0.188	94	70-135	1	35	mg/kg	04.02.20 01:26	
o-Xylene	<0.00200	0.100	0.0973	97	0.0965	97	71-133	1	35	mg/kg	04.02.20 01:26	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	109		108		109		70-130	%	04.02.20 01:26
4-Bromofluorobenzene	97		92		95		70-130	%	04.02.20 01:26

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3121698 | Matrix: Soil | Date Prep: 04.01.20
Parent Sample Id: 657364-045 | MS Sample Id: 657364-045 S | MSD Sample Id: 657364-045 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0956	96	0.0928	93	70-130	3	35	mg/kg	04.02.20 02:06	
Toluene	<0.00200	0.100	0.0888	89	0.0881	89	70-130	1	35	mg/kg	04.02.20 02:06	
Ethylbenzene	<0.00200	0.100	0.0830	83	0.0816	82	71-129	2	35	mg/kg	04.02.20 02:06	
m,p-Xylenes	<0.00401	0.200	0.171	86	0.168	84	70-135	2	35	mg/kg	04.02.20 02:06	
o-Xylene	<0.00200	0.100	0.0866	87	0.0852	86	71-133	2	35	mg/kg	04.02.20 02:06	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		108		70-130	%	04.02.20 02:06
4-Bromofluorobenzene	94		95		70-130	%	04.02.20 02:06

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: 6G97640

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 Energy
Address:	3300 North A Street	Address:	3104 East Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	slo@ltenv.com, dmoir@ltenv.com, kkennedy@ltenv.com

Work Order Comments

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

Project Name:	Remuda Basin #1	Turn Around	
Project Number:	012918058	Routine ☐	
P.O. Number:		Rush: 24H	
Sampler's Name:	Spencer Lo	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No	
Temperature (°C):	3.0	Thermometer ID		
Received Intact:	(Yes) No	TNM007		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes (No) N/A	Total Containers:	4	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
SW05A	S	4.1.20	1030	2'	1	X	X	X
SW05B	S	4.1.20	1050	6'	1	X	X	X
SW04A	S	4.1.20	1040	4'	1	X	X	X
SW04B	S	4.1.20	1100	8'	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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		7/1/20 16:58	2		
3			4		
5			6		

Revised Date 051418 Rev. 2018.

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 04.01.2020 04.58.00 PM

Work Order #: 657640

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 04.01.2020

Checklist reviewed by: Jessica Kramer Date: 04.02.2020

Jessica Kramer

Analytical Report 657642

for

LT Environmental, Inc.

Project Manager: Dan Moir

Remuda Basin #1

012918058

02-APR-20

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

02-APR-20

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

Reference: XENCO Report No(s): **657642**
Remuda Basin #1
Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 657642. 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. 657642 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 Manager

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 657642

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW16	S	04-01-20 14:25	0 - 8 ft	657642-001

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Remuda Basin #1

Project ID: *012918058*
Work Order Number(s): *657642*

Report Date: *02-APR-20*
Date Received: *04/01/2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3121698 BTEX by EPA 8021B

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

Certificate of Analysis Summary 657642

LT Environmental, Inc., Arvada, CO

Project Name: Remuda Basin #1

Project Id: 012918058
Contact: Dan Moir
Project Location:

Date Received in Lab: Wed Apr-01-20 04:58 pm
Report Date: 02-APR-20
Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	657642-001					
	Field Id:	SW16					
	Depth:	0-8 ft					
	Matrix:	SOIL					
	Sampled:	Apr-01-20 14:25					
BTEX by EPA 8021B	***Extracted:***	Apr-01-20 20:09					
	Analyzed:	Apr-02-20 05:10					
	Units/RL:	mg/kg	RL				
Benzene		<0.00200	0.00200				
Toluene		<0.00200	0.00200				
Ethylbenzene		<0.00200	0.00200				
m,p-Xylenes		<0.00401	0.00401				
o-Xylene		<0.00200	0.00200				
Total Xylenes		<0.00200	0.00200				
Total BTEX		<0.00200	0.00200				
Chloride by EPA 300	***Extracted:***	Apr-01-20 18:38					
	Analyzed:	Apr-02-20 00:08					
	Units/RL:	mg/kg	RL				
Chloride		182	50.1				
TPH by SW8015 Mod	***Extracted:***	Apr-02-20 09:00					
	Analyzed:	Apr-02-20 14:16					
	Units/RL:	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<49.9	49.9				
Diesel Range Organics (DRO)		<49.9	49.9				
Motor Oil Range Hydrocarbons (MRO)		<49.9	49.9				
Total GRO-DRO		<49.9	49.9				
Total TPH		<49.9	49.9				

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

Jessica Kramer
Project Manager

Certificate of Analytical Results 657642

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**SW16**	Matrix:	Soil	Date Received:	04.01.20 16.58
Lab Sample Id:	657642-001	Date Collected:	04.01.20 14.25	Sample Depth:	0 - 8 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.01.20 18.38	Basis:	Wet Weight
Seq Number:	3121704				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**182**	50.1	mg/kg	04.02.20 00.08		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.02.20 09.00	Basis:	Wet Weight
Seq Number:	3121741				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	04.02.20 14.16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	04.02.20 14.16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	04.02.20 14.16	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	04.02.20 14.16	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	04.02.20 14.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	04.02.20 14.16	
o-Terphenyl	84-15-1	104	%	70-135	04.02.20 14.16	

Certificate of Analytical Results 657642

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**SW16**	Matrix:	Soil	Date Received:	04.01.20 16.58
Lab Sample Id:	657642-001	Date Collected:	04.01.20 14.25	Sample Depth:	0 - 8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.01.20 20.09	Basis:	Wet Weight
Seq Number:	3121698				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.02.20 05.10	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.02.20 05.10	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.02.20 05.10	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	04.02.20 05.10	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.02.20 05.10	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.02.20 05.10	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.02.20 05.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	96	%	70-130	04.02.20 05.10	
1,4-Difluorobenzene	540-36-3	111	%	70-130	04.02.20 05.10	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 657642

LT Environmental, Inc.

Remuda Basin #1

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3121704 — Matrix: Solid — Date Prep: 04.01.20
MB Sample Id: 7700329-1-BLK — LCS Sample Id: 7700329-1-BKS — LCSD Sample Id: 7700329-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	257	103	253	101	90-110	2	20	mg/kg	04.01.20 21:55	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3121704 — Matrix: Soil — Date Prep: 04.01.20
Parent Sample Id: 657638-003 — MS Sample Id: 657638-003 S — MSD Sample Id: 657638-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	65.5	200	257	96	259	97	90-110	1	20	mg/kg	04.01.20 22:11	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3121704 — Matrix: Soil — Date Prep: 04.01.20
Parent Sample Id: 657640-004 — MS Sample Id: 657640-004 S — MSD Sample Id: 657640-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2100	247	2380	113	2400	121	90-110	1	20	mg/kg	04.01.20 23:38	X

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3121741 — Matrix: Solid — Date Prep: 04.02.20
MB Sample Id: 7700357-1-BLK — LCS Sample Id: 7700357-1-BKS — LCSD Sample Id: 7700357-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	990	99	890	89	70-135	11	35	mg/kg	04.02.20 09:28	
Diesel Range Organics (DRO)	<50.0	1000	1150	115	1020	102	70-135	12	35	mg/kg	04.02.20 09:28	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	104		124		107		70-135	%	04.02.20 09:28
o-Terphenyl	109		121		106		70-135	%	04.02.20 09:28

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3121741 — Matrix: Solid — Date Prep: 04.02.20
MB Sample Id: 7700357-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	04.02.20 09:07	

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

Final 1.000

QC Summary 657642

LT Environmental, Inc.

Remuda Basin #1

Analytical Method: TPH by SW8015 Mod | Prep Method: SW8015P
Seq Number: 3121741 | Matrix: Soil | Date Prep: 04.02.20
Parent Sample Id: 657638-007 | MS Sample Id: 657638-007 S | MSD Sample Id: 657638-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.8	995	842	85	815	82	70-135	3	35	mg/kg	04.02.20 10:29	
Diesel Range Organics (DRO)	<49.8	995	978	98	948	95	70-135	3	35	mg/kg	04.02.20 10:29	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	126		133		70-135	%	04.02.20 10:29
o-Terphenyl	126		122		70-135	%	04.02.20 10:29

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3121698 | Matrix: Solid | Date Prep: 04.01.20
MB Sample Id: 7700318-1-BLK | LCS Sample Id: 7700318-1-BKS | LCSD Sample Id: 7700318-1-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	0.105	105	0.104	104	70-130	1	35	mg/kg	04.02.20 01:26	
Toluene	<0.00200	0.100	0.0990	99	0.0988	99	70-130	0	35	mg/kg	04.02.20 01:26	
Ethylbenzene	<0.00200	0.100	0.0926	93	0.0922	92	71-129	0	35	mg/kg	04.02.20 01:26	
m,p-Xylenes	<0.00400	0.200	0.190	95	0.188	94	70-135	1	35	mg/kg	04.02.20 01:26	
o-Xylene	<0.00200	0.100	0.0973	97	0.0965	97	71-133	1	35	mg/kg	04.02.20 01:26	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	109		108		109		70-130	%	04.02.20 01:26
4-Bromofluorobenzene	97		92		95		70-130	%	04.02.20 01:26

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3121698 | Matrix: Soil | Date Prep: 04.01.20
Parent Sample Id: 657364-045 | MS Sample Id: 657364-045 S | MSD Sample Id: 657364-045 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0956	96	0.0928	93	70-130	3	35	mg/kg	04.02.20 02:06	
Toluene	<0.00200	0.100	0.0888	89	0.0881	89	70-130	1	35	mg/kg	04.02.20 02:06	
Ethylbenzene	<0.00200	0.100	0.0830	83	0.0816	82	71-129	2	35	mg/kg	04.02.20 02:06	
m,p-Xylenes	<0.00401	0.200	0.171	86	0.168	84	70-135	2	35	mg/kg	04.02.20 02:06	
o-Xylene	<0.00200	0.100	0.0866	87	0.0852	86	71-133	2	35	mg/kg	04.02.20 02:06	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		108		70-130	%	04.02.20 02:06
4-Bromofluorobenzene	94		95		70-130	%	04.02.20 02:06

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

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

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

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

Final 1.000

Chain of Custody

Work Order No: 457642

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 Energy
Address:	3300 North A Street	Address:	3104 East Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	slo@ltenv.com, dmoir@ltenv.com, kkennedy@ltenv.com

Work Order Comments

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

Project Name:	Remuda Basin #1	Turn Around	
Project Number:	012918058	Routine	☐
P.O. Number:		Rush:	24H
Sampler's Name:	Spencer Lo	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No	
Temperature (°C):	3.0	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:	1	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
SW16	S	4.1.20	1425	0-8'	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
Spencer Lo		4/1/20 16:58	2		
			4		
			6		

Revised Date 051418 Rev. 2018.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 04.01.2020 04.58.00 PM

Work Order #: 657642

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 04.01.2020

Checklist reviewed by: Jessica Kramer Date: 04.02.2020

Jessica Kramer

Analytical Report 657641

for

LT Environmental, Inc.

Project Manager: Dan Moir

Remuda Basin #1

012918058

02-APR-20

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

02-APR-20

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

Reference: XENCO Report No(s): **657641**
Remuda Basin #1
Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 657641. 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. 657641 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 Manager

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 657641

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS07	S	04-01-20 14:35	8 ft	657641-001

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Remuda Basin #1

Project ID: *012918058*
Work Order Number(s): *657641*

Report Date: *02-APR-20*
Date Received: *04/01/2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3121698 BTEX by EPA 8021B

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

Certificate of Analysis Summary 657641

LT Environmental, Inc., Arvada, CO

Project Name: Remuda Basin #1

Project Id: 012918058
Contact: Dan Moir
Project Location:

Date Received in Lab: Wed Apr-01-20 04:58 pm
Report Date: 02-APR-20
Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	657641-001					
	Field Id:	FS07					
	Depth:	8- ft					
	Matrix:	SOIL					
	Sampled:	Apr-01-20 14:35					
BTEX by EPA 8021B	***Extracted:***	Apr-01-20 20:09					
	Analyzed:	Apr-02-20 04:50					
	Units/RL:	mg/kg	RL				
Benzene		<0.00200	0.00200				
Toluene		<0.00200	0.00200				
Ethylbenzene		<0.00200	0.00200				
m,p-Xylenes		<0.00400	0.00400				
o-Xylene		<0.00200	0.00200				
Total Xylenes		<0.00200	0.00200				
Total BTEX		<0.00200	0.00200				
Chloride by EPA 300	***Extracted:***	Apr-01-20 18:38					
	Analyzed:	Apr-01-20 23:50					
	Units/RL:	mg/kg	RL				
Chloride		261	50.1				
TPH by SW8015 Mod	***Extracted:***	Apr-02-20 09:00					
	Analyzed:	Apr-02-20 13:56					
	Units/RL:	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<50.2	50.2				
Diesel Range Organics (DRO)		<50.2	50.2				
Motor Oil Range Hydrocarbons (MRO)		<50.2	50.2				
Total GRO-DRO		<50.2	50.2				
Total TPH		<50.2	50.2				

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

Jessica Kramer
Project Manager

Final 1.000

Certificate of Analytical Results 657641

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**FS07**	Matrix:	Soil	Date Received:	04.01.20 16.58
Lab Sample Id:	657641-001	Date Collected:	04.01.20 14.35	Sample Depth:	8 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.01.20 18.38	Basis:	Wet Weight
Seq Number:	3121704				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**261**	50.1	mg/kg	04.01.20 23.50		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.02.20 09.00	Basis:	Wet Weight
Seq Number:	3121741				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	04.02.20 13.56	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	04.02.20 13.56	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	04.02.20 13.56	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	04.02.20 13.56	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	04.02.20 13.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	04.02.20 13.56	
o-Terphenyl	84-15-1	109	%	70-135	04.02.20 13.56	

Certificate of Analytical Results 657641

LT Environmental, Inc., Arvada, CO

Remuda Basin #1

Sample Id:	**FS07**	Matrix:	Soil	Date Received:	04.01.20 16.58
Lab Sample Id:	657641-001	Date Collected:	04.01.20 14.35	Sample Depth:	8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.01.20 20.09	Basis:	Wet Weight
Seq Number:	3121698				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.02.20 04.50	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.02.20 04.50	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.02.20 04.50	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	04.02.20 04.50	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.02.20 04.50	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.02.20 04.50	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.02.20 04.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	70-130	04.02.20 04.50	
1,4-Difluorobenzene	540-36-3	110	%	70-130	04.02.20 04.50	

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 657641

LT Environmental, Inc.

Remuda Basin #1

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3121704 — Matrix: Solid — Date Prep: 04.01.20
MB Sample Id: 7700329-1-BLK — LCS Sample Id: 7700329-1-BKS — LCSD Sample Id: 7700329-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	257	103	253	101	90-110	2	20	mg/kg	04.01.20 21:55	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3121704 — Matrix: Soil — Date Prep: 04.01.20
Parent Sample Id: 657638-003 — MS Sample Id: 657638-003 S — MSD Sample Id: 657638-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	65.5	200	257	96	259	97	90-110	1	20	mg/kg	04.01.20 22:11	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3121704 — Matrix: Soil — Date Prep: 04.01.20
Parent Sample Id: 657640-004 — MS Sample Id: 657640-004 S — MSD Sample Id: 657640-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2100	247	2380	113	2400	121	90-110	1	20	mg/kg	04.01.20 23:38	X

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3121741 — Matrix: Solid — Date Prep: 04.02.20
MB Sample Id: 7700357-1-BLK — LCS Sample Id: 7700357-1-BKS — LCSD Sample Id: 7700357-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	990	99	890	89	70-135	11	35	mg/kg	04.02.20 09:28	
Diesel Range Organics (DRO)	<50.0	1000	1150	115	1020	102	70-135	12	35	mg/kg	04.02.20 09:28	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	104		124		107		70-135	%	04.02.20 09:28
o-Terphenyl	109		121		106		70-135	%	04.02.20 09:28

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3121741 — Matrix: Solid — Date Prep: 04.02.20
MB Sample Id: 7700357-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	04.02.20 09:07	

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 657641

LT Environmental, Inc.

Remuda Basin #1

Analytical Method: TPH by SW8015 Mod | Prep Method: SW8015P
Seq Number: 3121741 | Matrix: Soil | Date Prep: 04.02.20
Parent Sample Id: 657638-007 | MS Sample Id: 657638-007 S | MSD Sample Id: 657638-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.8	995	842	85	815	82	70-135	3	35	mg/kg	04.02.20 10:29	
Diesel Range Organics (DRO)	<49.8	995	978	98	948	95	70-135	3	35	mg/kg	04.02.20 10:29	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	126		133		70-135	%	04.02.20 10:29
o-Terphenyl	126		122		70-135	%	04.02.20 10:29

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3121698 | Matrix: Solid | Date Prep: 04.01.20
MB Sample Id: 7700318-1-BLK | LCS Sample Id: 7700318-1-BKS | LCSD Sample Id: 7700318-1-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	0.105	105	0.104	104	70-130	1	35	mg/kg	04.02.20 01:26	
Toluene	<0.00200	0.100	0.0990	99	0.0988	99	70-130	0	35	mg/kg	04.02.20 01:26	
Ethylbenzene	<0.00200	0.100	0.0926	93	0.0922	92	71-129	0	35	mg/kg	04.02.20 01:26	
m,p-Xylenes	<0.00400	0.200	0.190	95	0.188	94	70-135	1	35	mg/kg	04.02.20 01:26	
o-Xylene	<0.00200	0.100	0.0973	97	0.0965	97	71-133	1	35	mg/kg	04.02.20 01:26	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	109		108		109		70-130	%	04.02.20 01:26
4-Bromofluorobenzene	97		92		95		70-130	%	04.02.20 01:26

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3121698 | Matrix: Soil | Date Prep: 04.01.20
Parent Sample Id: 657364-045 | MS Sample Id: 657364-045 S | MSD Sample Id: 657364-045 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0956	96	0.0928	93	70-130	3	35	mg/kg	04.02.20 02:06	
Toluene	<0.00200	0.100	0.0888	89	0.0881	89	70-130	1	35	mg/kg	04.02.20 02:06	
Ethylbenzene	<0.00200	0.100	0.0830	83	0.0816	82	71-129	2	35	mg/kg	04.02.20 02:06	
m,p-Xylenes	<0.00401	0.200	0.171	86	0.168	84	70-135	2	35	mg/kg	04.02.20 02:06	
o-Xylene	<0.00200	0.100	0.0866	87	0.0852	86	71-133	2	35	mg/kg	04.02.20 02:06	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		108		70-130	%	04.02.20 02:06
4-Bromofluorobenzene	94		95		70-130	%	04.02.20 02:06

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: 657641

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 Energy
Address:	3300 North A Street	Address:	3104 East Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	slo@ltenv.com, dmoir@ltenv.com, kkennedy@ltenv.com

Work Order Comments

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

Project Name:	Remuda Basin #1	Turn Around	
Project Number:	012918058	Routine	☐
P.O. Number:		Rush:	24H
Sampler's Name:	Spencer Lo	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No	
Temperature (°C):	3.0	Thermometer ID		
Received Intact:	(Yes) No		TNM007	
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes (No) N/A	Total Containers:	1	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
FS07	S	4.1.20	1435	8'	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
Spencer Lo		4/1/20 16:58	2		
			4		
			6		

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 04.01.2020 04.58.00 PM

Work Order #: 657641

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 04.01.2020

Checklist reviewed by: Jessica Kramer Date: 04.02.2020

Jessica Kramer

Analytical Report 660038

for

LT Environmental, Inc.

Project Manager: Dan Moir

Remuda Basin Battery #1

012918058

04.29.2020

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

04.29.2020

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

Reference: XENCO Report No(s): **660038**
Remuda Basin Battery #1
Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 660038. 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. 660038 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 Manager

A Small Business and Minority Company

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

Sample Cross Reference 660038

LT Environmental, Inc., Arvada, CO

Remuda Basin Battery #1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW17	S	04.28.2020 09:11	2.0 ft	660038-001
SW18	S	04.28.2020 09:22	4.0 ft	660038-002
SW05	S	04.28.2020 13:52	12.0 ft	660038-003
SW04	S	04.28.2020 15:03	16.0 ft	660038-004

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Remuda Basin Battery #1

Project ID: *012918058*
Work Order Number(s): *660038*

Report Date: *04.29.2020*
Date Received: *04.28.2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3124503 TPH by SW8015 Mod

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

Samples affected are: 659919-021 SD.

Certificate of Analysis Summary 660038

LT Environmental, Inc., Arvada, CO

Project Name: Remuda Basin Battery #1

Project Id: 012918058
Contact: Dan Moir
Project Location:

Date Received in Lab: Tue 04.28.2020 16:39
Report Date: 04.29.2020 16:23
Project Manager: Jessica Kramer

Analysis Requested		660038-001		660038-002		660038-003		660038-004			
	Field Id:	SW17		SW18		SW05		SW04			
	Depth:	2.0- ft		4.0- ft		12.0- ft		16.0- ft			
	Matrix:	SOIL		SOIL		SOIL		SOIL			
	Sampled:	04.28.2020 09:11		04.28.2020 09:22		04.28.2020 13:52		04.28.2020 15:03			
BTEX by EPA 8021B	*Extracted:*	04.28.2020 18:00		04.28.2020 18:00		04.28.2020 18:00		04.28.2020 18:00			
	Analyzed:	04.29.2020 00:20		04.29.2020 00:42		04.29.2020 01:03		04.29.2020 01:24			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzene		<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199	<0.00201	0.00201		
Toluene		<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199	<0.00201	0.00201		
Ethylbenzene		<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199	<0.00201	0.00201		
m,p-Xylenes		<0.00398	0.00398	<0.00398	0.00398	<0.00398	0.00398	<0.00402	0.00402		
o-Xylene		<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199	<0.00201	0.00201		
Total Xylenes		<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199	<0.00201	0.00201		
Total BTEX		<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199	<0.00201	0.00201		
Chloride by EPA 300	*Extracted:*	04.28.2020 17:30		04.28.2020 17:30		04.28.2020 17:30		04.28.2020 17:30			
	Analyzed:	04.28.2020 19:19		04.28.2020 19:24		04.28.2020 19:30		04.28.2020 19:47			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		111	10.0	230	10.1	651	50.5	191	9.94		
TPH by SW8015 Mod	*Extracted:*	04.28.2020 17:10		04.28.2020 17:10		04.28.2020 17:10		04.28.2020 17:10			
	Analyzed:	04.28.2020 19:18		04.28.2020 19:38		04.28.2020 19:59		04.28.2020 20:19			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)		<49.9	49.9	<50.1	50.1	<50.0	50.0	<49.8	49.8		
Diesel Range Organics (DRO)		<49.9	49.9	<50.1	50.1	<50.0	50.0	<49.8	49.8		
Motor Oil Range Hydrocarbons (MRO)		<49.9	49.9	<50.1	50.1	<50.0	50.0	<49.8	49.8		
Total GRO-DRO		<49.9	49.9	<50.1	50.1	<50.0	50.0	<49.8	49.8		
Total TPH		<49.9	49.9	<50.1	50.1	<50.0	50.0	<49.8	49.8		

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

Jessica Kramer
Project Manager

Certificate of Analytical Results 660038

LT Environmental, Inc., Arvada, CO

Remuda Basin Battery #1

Sample Id:	**SW17**	Matrix:	Soil	Date Received:	04.28.2020 16:39
Lab Sample Id:	660038-001	Date Collected:	04.28.2020 09:11	Sample Depth:	2.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.28.2020 17:30	Basis:	Wet Weight
Seq Number:	3124455				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**111**	10.0	mg/kg	04.28.2020 19:19		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.28.2020 17:10	Basis:	Wet Weight
Seq Number:	3124503				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	04.28.2020 19:18	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	04.28.2020 19:18	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	04.28.2020 19:18	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	04.28.2020 19:18	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	04.28.2020 19:18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	76	%	70-135	04.28.2020 19:18	
o-Terphenyl	84-15-1	80	%	70-135	04.28.2020 19:18	

Certificate of Analytical Results 660038

LT Environmental, Inc., Arvada, CO

Remuda Basin Battery #1

Sample Id:	**SW17**	Matrix:	Soil	Date Received:	04.28.2020 16:39
Lab Sample Id:	660038-001	Date Collected:	04.28.2020 09:11	Sample Depth:	2.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.28.2020 18:00	Basis:	Wet Weight
Seq Number:	3124449				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.29.2020 00:20	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.29.2020 00:20	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.29.2020 00:20	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.29.2020 00:20	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.29.2020 00:20	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.29.2020 00:20	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.29.2020 00:20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	113	%	70-130	04.29.2020 00:20	
4-Bromofluorobenzene	460-00-4	107	%	70-130	04.29.2020 00:20	

Certificate of Analytical Results 660038

LT Environmental, Inc., Arvada, CO

Remuda Basin Battery #1

Sample Id:	**SW18**	Matrix:	Soil	Date Received:	04.28.2020 16:39
Lab Sample Id:	660038-002	Date Collected:	04.28.2020 09:22	Sample Depth:	4.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.28.2020 17:30	Basis:	Wet Weight
Seq Number:	3124455				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**230**	10.1	mg/kg	04.28.2020 19:24		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.28.2020 17:10	Basis:	Wet Weight
Seq Number:	3124503				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	04.28.2020 19:38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	04.28.2020 19:38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	04.28.2020 19:38	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	04.28.2020 19:38	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	04.28.2020 19:38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	75	%	70-135	04.28.2020 19:38	
o-Terphenyl	84-15-1	79	%	70-135	04.28.2020 19:38	

Certificate of Analytical Results 660038

LT Environmental, Inc., Arvada, CO

Remuda Basin Battery #1

Sample Id:	**SW18**	Matrix:	Soil	Date Received:	04.28.2020 16:39
Lab Sample Id:	660038-002	Date Collected:	04.28.2020 09:22	Sample Depth:	4.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.28.2020 18:00	Basis:	Wet Weight
Seq Number:	3124449				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.29.2020 00:42	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.29.2020 00:42	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.29.2020 00:42	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.29.2020 00:42	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.29.2020 00:42	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.29.2020 00:42	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.29.2020 00:42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	108	%	70-130	04.29.2020 00:42	
1,4-Difluorobenzene	540-36-3	116	%	70-130	04.29.2020 00:42	

Certificate of Analytical Results 660038

LT Environmental, Inc., Arvada, CO

Remuda Basin Battery #1

Sample Id:	**SW05**	Matrix:	Soil	Date Received:	04.28.2020 16:39
Lab Sample Id:	660038-003	Date Collected:	04.28.2020 13:52	Sample Depth:	12.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.28.2020 17:30	Basis:	Wet Weight
Seq Number:	3124455				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**651**	50.5	mg/kg	04.28.2020 19:30		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.28.2020 17:10	Basis:	Wet Weight
Seq Number:	3124503				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	04.28.2020 19:59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	04.28.2020 19:59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	04.28.2020 19:59	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	04.28.2020 19:59	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	04.28.2020 19:59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	04.28.2020 19:59	
o-Terphenyl	84-15-1	97	%	70-135	04.28.2020 19:59	

Certificate of Analytical Results 660038

LT Environmental, Inc., Arvada, CO

Remuda Basin Battery #1

Sample Id:	**SW05**	Matrix:	Soil	Date Received:	04.28.2020 16:39
Lab Sample Id:	660038-003	Date Collected:	04.28.2020 13:52	Sample Depth:	12.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.28.2020 18:00	Basis:	Wet Weight
Seq Number:	3124449				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.29.2020 01:03	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.29.2020 01:03	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.29.2020 01:03	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.29.2020 01:03	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.29.2020 01:03	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.29.2020 01:03	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.29.2020 01:03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	70-130	04.29.2020 01:03	
1,4-Difluorobenzene	540-36-3	114	%	70-130	04.29.2020 01:03	

Certificate of Analytical Results 660038

LT Environmental, Inc., Arvada, CO

Remuda Basin Battery #1

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	04.28.2020 16:39
Lab Sample Id:	660038-004	Date Collected:	04.28.2020 15:03	Sample Depth:	16.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.28.2020 17:30	Basis:	Wet Weight
Seq Number:	3124455				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**191**	9.94	mg/kg	04.29.2020 09:40		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.28.2020 17:10	Basis:	Wet Weight
Seq Number:	3124503				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	04.28.2020 20:19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	04.28.2020 20:19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	04.28.2020 20:19	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	04.28.2020 20:19	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	04.28.2020 20:19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	04.28.2020 20:19	
o-Terphenyl	84-15-1	107	%	70-135	04.28.2020 20:19	

Certificate of Analytical Results 660038

LT Environmental, Inc., Arvada, CO

Remuda Basin Battery #1

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	04.28.2020 16:39
Lab Sample Id:	660038-004	Date Collected:	04.28.2020 15:03	Sample Depth:	16.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.28.2020 18:00	Basis:	Wet Weight
Seq Number:	3124449				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.29.2020 01:24	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.29.2020 01:24	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.29.2020 01:24	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.29.2020 01:24	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.29.2020 01:24	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.29.2020 01:24	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.29.2020 01:24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	70-130	04.29.2020 01:24	
1,4-Difluorobenzene	540-36-3	115	%	70-130	04.29.2020 01:24	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 660038

XENCO LABORATORIES

LT Environmental, Inc.

Remuda Basin Battery #1

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3124455 — Matrix: Solid — Date Prep: 04.28.2020
MB Sample Id: 7702278-1-BLK — LCS Sample Id: 7702278-1-BKS — LCSD Sample Id: 7702278-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	253	101	254	102	90-110	0	20	mg/kg	04.28.2020 18:46	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3124455 — Matrix: Soil — Date Prep: 04.28.2020
Parent Sample Id: 660027-001 — MS Sample Id: 660027-001 S — MSD Sample Id: 660027-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	48.4	200	257	104	258	105	90-110	0	20	mg/kg	04.28.2020 19:02	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3124455 — Matrix: Soil — Date Prep: 04.28.2020
Parent Sample Id: 660037-003 — MS Sample Id: 660037-003 S — MSD Sample Id: 660037-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1130	200	1330	100	1330	100	90-110	0	20	mg/kg	04.28.2020 20:21	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3124503 — Matrix: Solid — Date Prep: 04.28.2020
MB Sample Id: 7702299-1-BLK — LCS Sample Id: 7702299-1-BKS — LCSD Sample Id: 7702299-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	933	93	878	88	70-135	6	35	mg/kg	04.28.2020 12:38	
Diesel Range Organics (DRO)	<50.0	1000	1030	103	978	98	70-135	5	35	mg/kg	04.28.2020 12:38	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	121		130		127		70-135	%	04.28.2020 12:38
o-Terphenyl	130		132		130		70-135	%	04.28.2020 12:38

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3124503 — Matrix: Solid — Date Prep: 04.28.2020
MB Sample Id: 7702299-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	04.28.2020 12:17	

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

QC Summary 660038

LT Environmental, Inc.

Remuda Basin Battery #1

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3124503 Matrix: Soil Date Prep: 04.28.2020
Parent Sample Id: 659919-021 MS Sample Id: 659919-021 S MSD Sample Id: 659919-021 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)	<50.2	1000	956	96	1110	111	70-135	15	35	mg/kg	04.28.2020 16:33	
Diesel Range Organics (DRO)	<50.2	1000	1080	108	1160	116	70-135	7	35	mg/kg	04.28.2020 16:33	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	125		132		70-135	%	04.28.2020 16:33
o-Terphenyl	121		137	**	70-135	%	04.28.2020 16:33

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3124449 Matrix: Solid Date Prep: 04.28.2020
MB Sample Id: 7702273-1-BLK LCS Sample Id: 7702273-1-BKS LCSD Sample Id: 7702273-1-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	0.110	110	0.117	117	70-130	6	35	mg/kg	04.28.2020 22:12	
Toluene	<0.00200	0.100	0.0984	98	0.106	106	70-130	7	35	mg/kg	04.28.2020 22:12	
Ethylbenzene	<0.00200	0.100	0.0929	93	0.0989	99	71-129	6	35	mg/kg	04.28.2020 22:12	
m,p-Xylenes	<0.00400	0.200	0.181	91	0.193	97	70-135	6	35	mg/kg	04.28.2020 22:12	
o-Xylene	<0.00200	0.100	0.0932	93	0.0996	100	71-133	7	35	mg/kg	04.28.2020 22:12	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	113		108		112		70-130	%	04.28.2020 22:12
4-Bromofluorobenzene	108		98		100		70-130	%	04.28.2020 22:12

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3124449 Matrix: Soil Date Prep: 04.28.2020
Parent Sample Id: 660036-001 MS Sample Id: 660036-001 S MSD Sample Id: 660036-001 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	0.126	125	0.120	120	70-130	5	35	mg/kg	04.28.2020 22:55	
Toluene	<0.00202	0.101	0.113	112	0.105	105	70-130	7	35	mg/kg	04.28.2020 22:55	
Ethylbenzene	<0.00202	0.101	0.106	105	0.0982	98	71-129	8	35	mg/kg	04.28.2020 22:55	
m,p-Xylenes	<0.00404	0.202	0.206	102	0.191	96	70-135	8	35	mg/kg	04.28.2020 22:55	
o-Xylene	<0.00202	0.101	0.105	104	0.0989	99	71-133	6	35	mg/kg	04.28.2020 22:55	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		108		70-130	%	04.28.2020 22:55
4-Bromofluorobenzene	92		96		70-130	%	04.28.2020 22:55

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

Chain of Custody

Work Order No: 4E00038

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 Energy
Address:	3300 North A Street	Address:	522 W. Mermod St.
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849 Email:		Jhill@ltenv.com, dmoir@ltenv.com

Work Order Comments

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

Project Name:	Remuda Basin Battery #1	Turn Around	
Project Number:	01291 8058	Routine ☐	
P.O. Number:	2RP-2296	Rush: 24 hr	
Sampler's Name:	Jeremy Hill	Due Date: 4/29/20	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	2.4	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:	4	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	Sample Comments
SW17	S	4/28/20	0911	2.0'	1	X	X	X	discrete
SW18			0922	4.0'					
SW05			1352	12.0'					
SW04			1503	16.0'					

Work Order Notes

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
		4/28/20 16:39	2		
			4		
			6		

Revised Date 051418 Rev. 2018.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 04.28.2020 04.39.00 PM

Work Order #: 660038

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

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	2.4	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**	
#5 Custody Seals intact on sample bottles?	**Yes**	
#6*Custody Seals Signed and dated?	**Yes**	
#7 *Chain of Custody present?	**Yes**	
#8 Any missing/extra samples?	**No**	
#9 Chain of Custody signed when relinquished/ received?	**Yes**	
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**	
#11 Container label(s) legible and intact?	**Yes**	
#12 Samples in proper container/ bottle?	**Yes**	Samples received in bulk containers.
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**No**	
#18 Water VOC samples have zero headspace?	**N/A**	

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 04.28.2020

Checklist reviewed by: Jessica Kramer Date: 04.29.2020

Jessica Kramer

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 8263
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jharimon	The Workplan/Remediation Plan is approved XTO's deferral requests to complete final remediation of impacted soil within 2 feet of active production equipment, during any future major deconstruction/alteration and/or abandonment, whichever occurs first, at this time, OCD approves the request. The Deferral Request and C-141 will be accepted for record and marked accordingly. The release will remain open in OCD database files and reflect an open environmental issue. The OCD will not close a release, where contaminants are left in place, due to close proximity to equipment. The incident will only be closed after all contaminated soil has been remediated to meet OCD Spill Rule Standards.	9/27/2022