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

November 6, 2019

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

RE: Deferral Request
Poker Lake Unit 89
Remediation Permit Number 2RP-3566
Eddy County, New Mexico

Dear Mr. Billings:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following report detailing site assessment, soil sampling, and excavation activities at the Poker Lake Unit (PLU) 89 (Site) in Unit G, Section 25, Township 24 South, Range 30 East, in Eddy County, New Mexico (Figure 1). The purpose of the site assessment, soil sampling, and excavation activities was to address impacts to soil resulting from a crude oil 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.

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 February 22, 2016, a gasket failed on the heater-treater, causing the release of approximately 42 barrels (bbls) of crude oil. The release affected the earthen containment around the process equipment, well pad, and small area of overspray east of the tank battery. A vacuum truck recovered approximately 25 bbls of fluid from within the containment area. The former operator reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 on February 24, 2016, and was assigned Remediation Permit (RP) Number 2RP-3566 (Attachment 1).

SITE CHARACTERIZATION

LTE characterized the Site according to Table 1, *Closure Criteria for Soils Impacted by a Release*, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the NMAC. Depth to groundwater at the Site is estimated to be between greater than 100 feet below ground surface (bgs) based on the nearest water well data. The nearest permitted water well with depth to water data is NM OSE well 02110, located approximately 7,374 feet northwest of the Site. The water well has a depth to groundwater of approximately 400 feet bgs and a total depth of 600 feet bgs. Ground surface elevation at the water well location is 3,412 feet above mean sea level (AMSL), which is approximately 33 feet lower in elevation than the Site. The closest continuously flowing water or significant watercourse to the Site is a tributary to the Pecos River approximately 10,598 feet west-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 greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is located in a low-potential karst area.

CLOSURE CRITERIA

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

- Benzene: 10 milligrams per kilogram (mg/kg);
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg;
- TPH-gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg;
- Total petroleum hydrocarbons (TPH): 2,500 mg/kg; and
- Chloride: 20,000 mg/kg.

SITE ASSESSMENT, EXCAVATION, AND DELINEATION SOIL SAMPLING ACTIVITIES

On April 9, 2018, LTE personnel inspected the Site to evaluate the release extent. Surficial hydrocarbon staining was observed in the release area. An LTE scientist collected four preliminary soil samples (SS1A through SS1D) within the release area to assess the lateral extent of impacted soil. The soil sample locations, depicted on Figure 2, were selected based on information provided on the initial Form C-141 and field observations. To eliminate the effects from weathering and natural degradation of contaminants at the ground surface, the soil samples were collected from each sample location from a depth of 0.5 feet bgs.

The 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 Hall Environmental Analysis Laboratory in Albuquerque, New Mexico, for analysis of BTEX following United States Environmental Protection Agency (USEPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following USEPA Method 8015M/D; and chloride following USEPA Method 300.0. The soil sample locations are depicted on Figure 2.

During September 2019, LTE personnel returned to the Site to oversee site assessment and excavation activities as indicated by visual observations, field screening activities, and laboratory analytical results for the preliminary soil samples.

Potholes and boreholes were advanced via backhoe or hand auger at nine locations on the well pad within and around the release extent. Potholes PH01 through PH03 and boreholes BH01 through BH06 and were advanced to a depth of 4 feet bgs. Two delineation soil samples were collected from each pothole and borehole at depths ranging from 1 foot to 4 feet bgs. Soil from the potholes and boreholes was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photoionization detector (PID) and Hach© chloride QuanTab© test strips, respectively. Field screening results and observations for each pothole and borehole were logged on lithologic/soil sampling logs, which are included in Attachment 2. The pothole and borehole delineation soil sample locations are depicted on Figure 3.

Impacted soil was excavated from the release area as indicated by potholing activities, field screening, and laboratory analytical results for the preliminary 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. Due to the presence of active process equipment in the release area, two separate excavations were completed. Impacted soil was excavated to depths ranging from 1.5 feet to 3 feet bgs. Following removal of impacted soil, LTE collected 5-point composite soil samples every 200 square feet from the sidewalls and floors of the excavations. The 5-point composite samples were collected by depositing five aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples SW01 through SW03 were collected from the sidewalls of the excavations from depths ranging from the surface to 3 feet bgs. Excavation sidewall samples SW04, SW04A, SW05, SW05A, and SW05B were collected as discrete samples, at 1 foot intervals, to delineate the depth of soil impacts that could not excavated due to the proximity of active process equipment. Composite soil samples FS01 through FS04, were collected from the floors of the excavations from depths ranging from 1.5 feet to 3 feet bgs. The excavation extents and excavation soil sample locations are depicted on Figure 4.

The delineation and excavation soil samples were collected, handled, and analyzed as described above and submitted to Xenco Laboratories (Xenco) in Midland, Texas. Photographic documentation was conducted during the Site visits. Photographs are included in Attachment 3.

The combined excavations measured approximately 500 square feet in area with a depth of 1.5 feet to 3 feet bgs. A total of approximately 37 cubic yards of impacted soil were removed from the excavations. The impacted soil was transported and properly disposed of at the Lea Land Landfill located in Hobbs, New Mexico.

ANALYTICAL RESULTS

Laboratory analytical results indicated that GRO/DRO and TPH concentrations exceeded the Closure Criteria in preliminary soil samples SS1A through SS1D. Based on visible surface staining and laboratory analytical results for the preliminary soil samples, delineation and excavation of impacted soil was conducted.

Laboratory analytical results for the delineation soil samples collected from potholes PH01 through PH03 and boreholes BH01 through BH06 indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Based on the laboratory analytical results, the lateral and vertical extent of impacted soil was delineated.

Impacted soil was excavated to the extent possible. Laboratory analytical results for excavation sidewall samples SW01 through SW03, SW04A, and SW05B, and excavation floor samples FS01 through FS04 indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Laboratory analytical results for excavation sidewall samples SW04, SW05, and SW05A, collected at depths of 1 foot to 2 feet bgs, indicated that TPH and GRO/DRO concentrations exceeded the Closure Criteria. Subsequent sidewall samples SW04A and SW05B, collected at depths of 2 feet to 3 feet bgs, were compliant with the Closure Criteria, and confirmed that soil impacts were delineated vertically and did not exceed a depth of 3 feet bgs.

Further excavation of impacted soil beyond sidewall samples SW04 and SW05/SW05A was limited by the presence of active process equipment. XTO safety policy restricts soil disturbing activities to a 2 foot radius of any active process equipment. This XTO safety policy is established to protect workers and reduce the likelihood of compromising the foundation of the process equipment. This policy was enforced where impacted soil was identified within 2 feet of active heater-treaters in excavation sidewall samples SW04 and SW05/SW05A.

The 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 37 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 process equipment. Impacted soil was excavated to the extent possible. Laboratory analytical results for excavation sidewall samples SW04 and

SW05/SW05A, collected at depths of 1 foot to 2 feet bgs, from the final excavation extent indicated that soil with GRO/DRO and TPH concentrations exceeding the Closure Criteria was left in place within 2 feet of active process equipment. The impacted soil remaining in place is delineated vertically and laterally by excavation soil samples SW01 through SW03, SW04A, SW05B, and FS01 through FS04, collected from the sidewalls and floor of the final excavation extent, and delineation soil samples collected from potholes PH01 through PH03 and boreholes BH04 through BH06. An estimated 60 cubic yards of impacted soil remains in place, assuming a maximum 3 foot depth based on the excavation and delineation soil samples listed above collected from depths of 0 to 4 feet bgs, that were compliant with the Closure Criteria.

XTO requests to backfill the existing excavations and complete remediation during any future major construction/alteration or final plugging and abandonment, whichever occurs first. LTE and XTO do not believe deferment will result in imminent risk to human health, the environment, or groundwater. The majority of the released fluids were recovered during initial response activities and no saturated soil remains in-place.

XTO requests deferral of final remediation for RP Number 2RP-3566. Upon approval of this deferral request, XTO will backfill the excavation with material purchased locally and recontour the Site to match pre-existing site conditions. An updated NMOCD Form C-141 is included as Attachment 1.

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

Sincerely,

LT ENVIRONMENTAL, INC.

Aimee Cole
Project Environmental Scientist

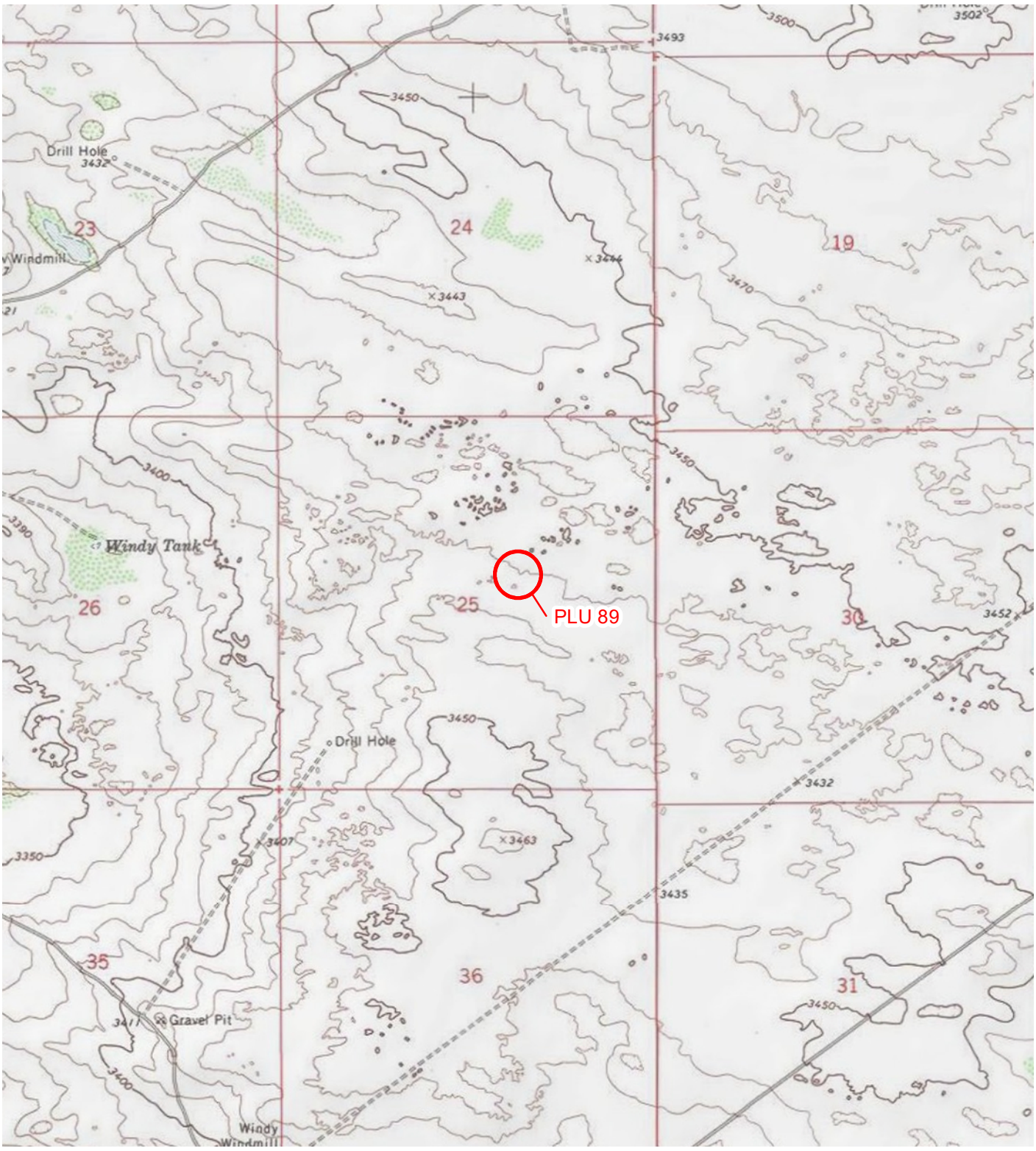
Ashley L. Ager, P.G.
Senior Geologist

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

Attachments:

Figure 1	Site Location Map
Figure 2	Preliminary Soil Sample Locations
Figure 3	Delineation Soil Sample Locations
Figure 4	Excavation Soil Sample Locations
Table 1	Soil Analytical Results
Attachment 1	Initial/Final NMOCD Form C-141 (2RP-3566)
Attachment 2	Lithologic / Soil Sample Logs
Attachment 3	Photographic Log
Attachment 4	Laboratory Analytical Reports

FIGURES



LEGEND

SITE LOCATION

IMAGE COURTESY OF ESRI/USGS

0 2,000 4,000

Feet

N

NEW MEXICO

NOTE: REMEDIATION PERMIT NUMBER 2RP-3566

FIGURE 1
SITE LOCATION MAP
PLU 89
UNIT G SEC 25 T24S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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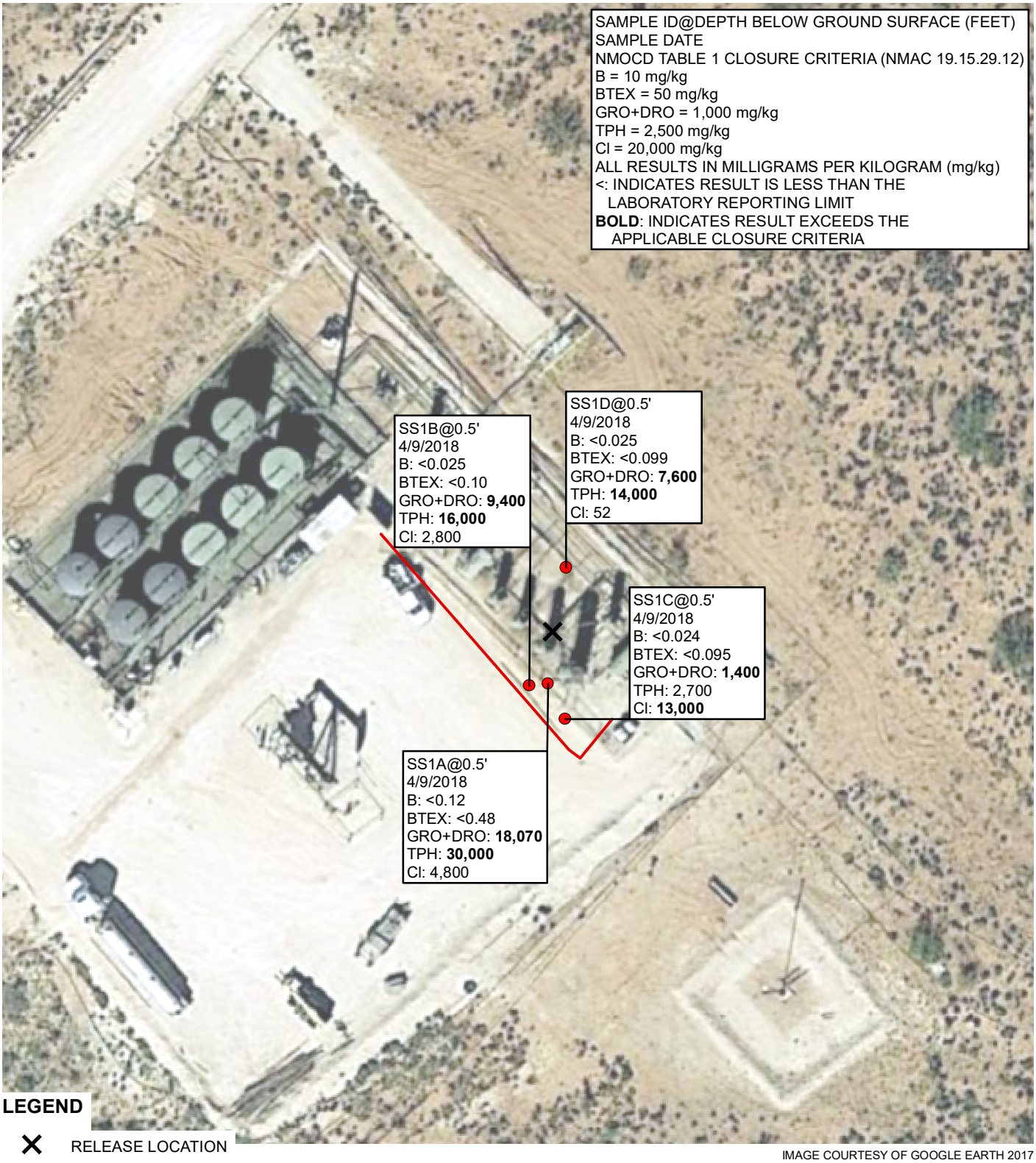

B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
TPH: TOTAL PETROLEUM HYDROCARBONS
Cl: CHLORIDE
NMAC: NEW MEXICO ADMINISTRATIVE CODE
NMOCD: NEW MEXICO OIL CONSERVATION DIVISION
NOTE: REMEDIATION PERMIT NUMBER 2RP-3566

FIGURE 2
PRELIMINARY SOIL SAMPLE LOCATIONS
PLU 89
UNIT G SEC 25 T24S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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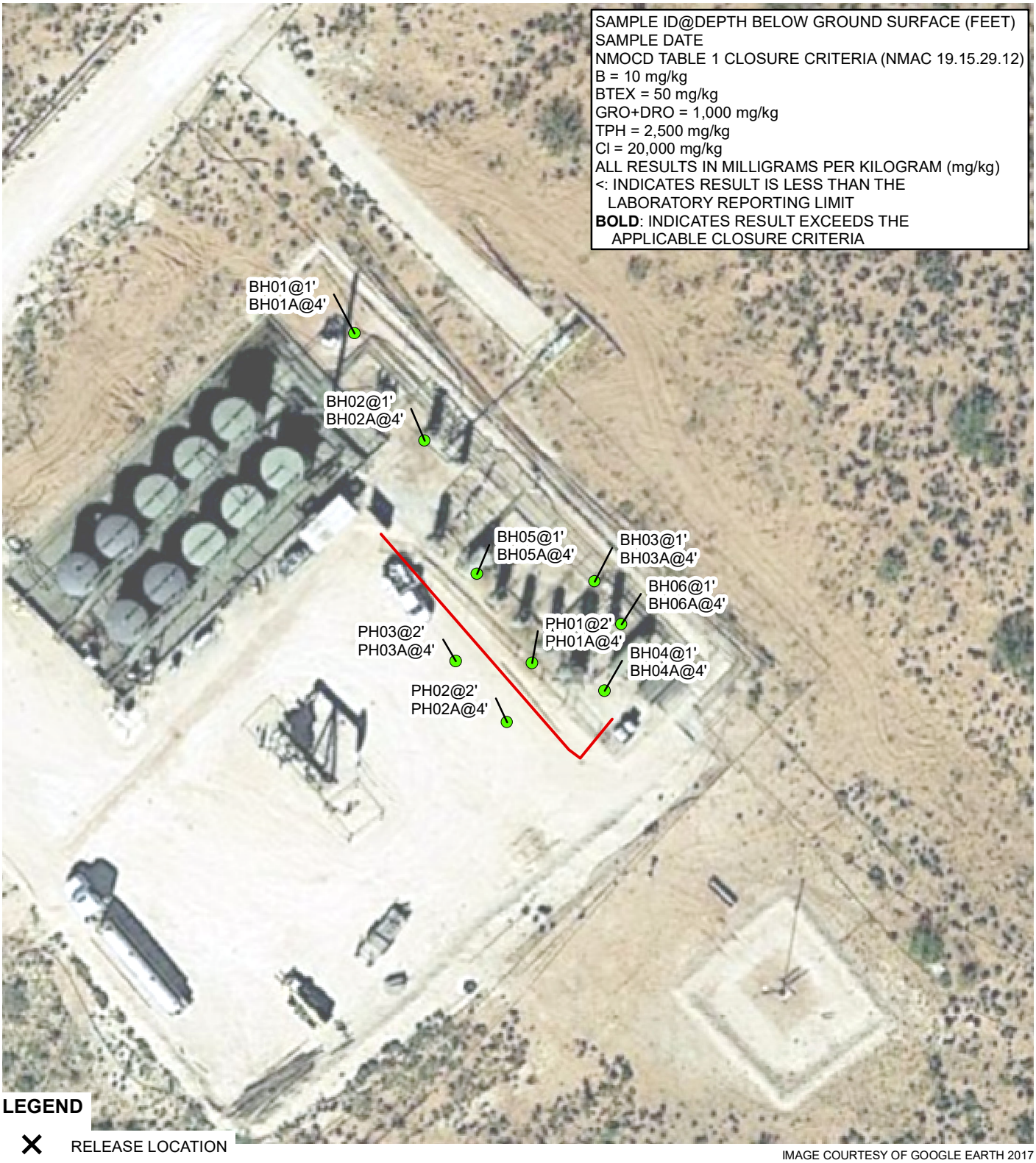

B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
TPH: TOTAL PETROLEUM HYDROCARBONS
Cl: CHLORIDE
NMAC: NEW MEXICO ADMINISTRATIVE CODE
NMOCD: NEW MEXICO OIL CONSERVATION DIVISION
NOTE: REMEDIATION PERMIT NUMBER 2RP-3566

FIGURE 3
DELINEATION SOIL SAMPLE LOCATIONS
PLU 89
UNIT G SEC 25 T24S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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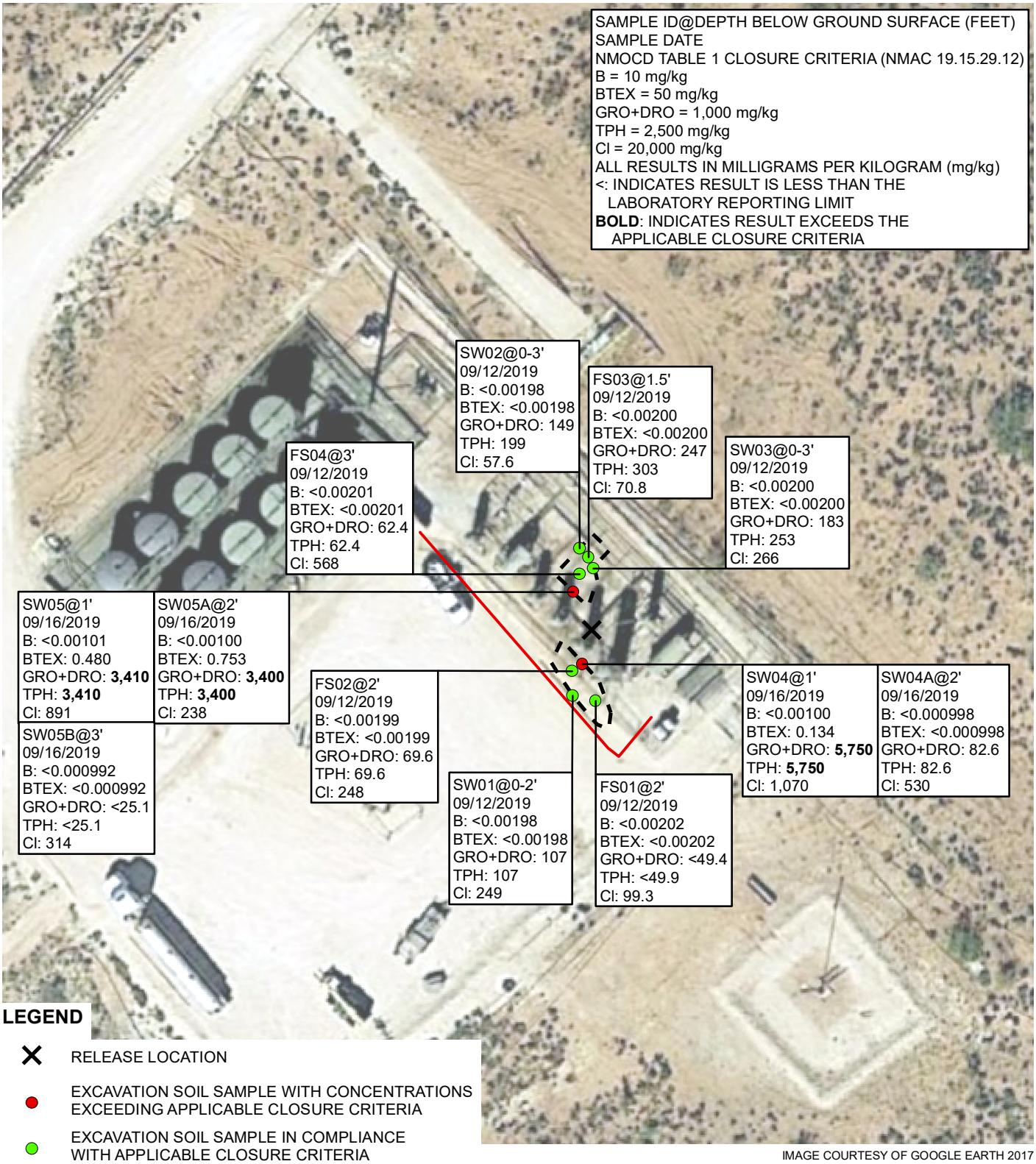

FIGURE 4
EXCAVATION SOIL SAMPLE LOCATIONS
PLU 89
UNIT G SEC 25 T24S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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TABLES

Released to Imaging: 3/20/2023 9:22:43 AM
Received by OCD: 3/20/2023 9:14:54 AM

TABLE 1
SOIL ANALYTICAL RESULTS

PLU 89
REMEDIATION PERMIT NUMBER 2RP-3566
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
SS1A	0.5	04/09/2018	<0.120	<0.240	<0.240	<0.480	<0.480	76.0	18,000	12,000	**18,076**	**30,000**	4,800
SS1B	0.5	04/09/2018	<0.025	<0.050	<0.050	<0.100	<0.100	<5.00	9,400	6,500	**9,400**	**16,000**	2,800
SS1C	0.5	04/09/2018	<0.024	<0.047	<0.047	<0.0950	<0.095	<4.70	1,400	1,300	**1,400**	**2,700**	13,000
SS1D	0.5	04/09/2018	<0.025	<0.050	<0.050	<0.099	<0.099	<5.00	7,600	6,100	**7,600**	**14,000**	52.0
PH01	2	09/06/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<25.0	<25.0	<25.0	<25.0	<25.0	22.9
PH01A	4	09/06/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<25.0	<25.0	<25.0	<25.0	<25.0	37.0
PH02	2	09/06/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<25.1	<25.1	<25.1	<25.1	<25.1	76.5
PH02A	4	09/06/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<24.9	<24.9	<24.9	<24.9	<24.9	86.1
PH03	2	09/06/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<25.0	<25.0	<25.0	<25.0	<25.0	222
PH03A	4	09/06/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<25.1	<25.1	<25.1	<25.1	<25.1	350
BH01	1	09/09/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<25.0	<25.0	<25.0	<25.0	<25.0	12.3
BH01A	4	09/09/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<24.9	<24.9	<24.9	<24.9	<24.9	<4.96
BH02	1	09/09/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<25.0	<25.0	<25.0	<25.0	<25.0	533
BH02A	4	09/09/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<24.9	122	<24.9	122	122	67.3
BH03	1	09/09/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<25.0	63.0	<25.0	63.0	63.0	30.3
BH03A	4	09/09/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<24.9	589	113	589	702	121
BH04	1	09/09/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<25.0	<25.0	<25.0	<25.0	<25.0	8.57
BH04A	4	09/09/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<25.0	<25.0	<25.0	<25.0	<25.0	51.3
BH05	1	09/16/2019	<0.000992	<0.000992	<0.000992	<0.000992	<0.000992	<25.1	<25.1	<25.1	<25.1	<25.1	97.8
BH05A	4	09/16/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<25.0	<25.0	<25.0	<25.0	<25.0	202
BH06	1	09/16/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<25.1	<25.1	<25.1	<25.1	<25.1	38.0
BH06A	4	09/16/2019	<0.000998	<0.000998	<0.000998	<0.000998	<0.000998	<25.1	<25.1	<25.1	<25.1	<25.1	42.0
SW01	0-2	09/12/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.0	107	<50.0	107	107	249
SW02	0-3	09/12/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.9	149	50.1	149	199	57.6
SW03	0-3	09/12/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	183	69.9	183	253	266
SW04	1	09/16/2019	<0.00100	0.00582	0.0254	0.103	0.134	260	5,490	<249	**5,750**	**5,750**	1,070
SW04A	2	09/16/2019	<0.000998	<0.000998	<0.000998	<0.000998	<0.000998	<24.9	82.6	<24.9	82.6	82.6	530

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TABLE 1
SOIL ANALYTICAL RESULTS

PLU 89
REMEDIATION PERMIT NUMBER 2RP-3566
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
SW05	1	09/16/2019	<0.00101	0.0223	0.0818	0.376	0.480	277	3,130	<125	**3,410**	**3,410**	891
SW05A	2	09/16/2019	<0.00100	0.00633	0.136	0.611	0.753	237	3,160	<25.1	**3,400**	**3,400**	238
SW05B	3	09/16/2019	<0.000992	<0.000992	<0.000992	<0.000992	<0.000992	<25.1	<25.1	<25.1	<25.1	<25.1	314
FS01	2	09/12/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.9	<49.9	<49.9	<49.9	<49.9	99.3
FS02	2	09/12/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.0	69.6	<50.0	69.6	69.6	248
FS03	1.5	09/12/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	247	56.1	247	303	70.8
FS04	3	09/12/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<49.8	62.4	<49.8	62.4	62.4	568
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	**1,000**	**2,500**	**20,000**

Notes:

bgs - below ground surface

BTEX - benzene, toluene, ethylbenzene, and total xylenes

DRO - diesel range organics

GRO - gasoline range organics

mg/kg - milligrams per kilogram

ORO - motor oil range organics

NMAC - New Mexico Administrative Code

NMOCD - New Mexico Oil Conservation Division

NE - not established

TPH - total petroleum hydrocarbons

Bold - indicates result exceeds the applicable regulatory standard

< - indicates result is below laboratory reporting limits

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

ATTACHMENT 1: INITIAL/FINAL NMOCD FORM C-141 (2RP-3566)

NM OIL CONSERVATION
ARTESIA DISTRICT
FEB 24 2016
RECEIVED

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

nAB1605729044 2RP-3566

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: BOPCO, L.P.	Contact: Bradley Blevins
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 575-887-7329
Facility Name: PLU 89	Facility Type: Exploration and Production

Surface Owner: Federal	Mineral Owner: Federal	API No. 3001527787

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
G	25	24S	30E	2310		1980		Eddy

Latitude: 32.18976 **Longitude**: 103.83205

NATURE OF RELEASE

Type of Release: Crude Oil	Volume of Release: 42 barrels Oil	Volume Recovered: 25 barrels oil
Source of Release: Gasket failure on heater treater	Date and Hour of Occurrence: 2-22-16 @ 4:00pm	Date and Hour of Discovery: 2-22-16 @ 4:30pm
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher, Heather Patterson, Jim Amos BLM	
By Whom? Bradley Blevins	Date and Hour: 2-22-16 @ 5:08pm	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

BOPCO EHS was notified of a release that occurred at the PLU 89 due to a gasket failure on the heater treater. The gasket failed on the top portion of the manway flange releasing oil to the earthen containment, well pad and small overspray to the east side of the battery. The heater was isolated until repairs can be made.

Describe Area Affected and Cleanup Action Taken.*

The gasket failed on the top portion of the manway flange releasing oil to the earthen containment, a vacuum truck was called to the location and was able to recover 25 barrels of oil from inside the containment area.

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: Bradley Blevins

Printed Name: Bradley Blevins

Title: Assistant Remediation Foreman

E-mail Address: bblevins@basspet.com

Date: 2-24-16 Phone: 432-214-3704

* Attach Additional Sheets If Necessary

OIL CONSERVATION DIVISION

Signed By Mike Bratcher

Approved by Environmental Specialist:

Approval Date: 2/25/16 Expiration Date: N/A

Conditions of Approval: Attached ☐

Remediation per O.C.D. Rules & Guidelines
SUBMIT REMEDIATION PROPOSAL NO LATER THAN: 3/26/16

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-3566
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-3566
Contact mailing address: 522 W. Mermod, Suite 704 Carlsbad, NM 88220	

Location of Release Source

Latitude 32.18976 Longitude -103.83205
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: PLU 89	Site Type: Production Well Facility
Date Release Discovered: 2/22/2016	API# *(if applicable):* 30-015-27787

Unit Letter	Section	Township	Range	County
G	25	24S	30E	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): 42	Volume Recovered (bbls): 25
☐ Produced Water	Volume Released (bbls):	Volume Recovered (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 gasket failed on the top portion of the manway flange, releasing oil to the earthen containment, well pad, and small overspray to the east side of the battery. A vacuum truck was called to the location and was able to recover 25 barrels of oil from inside the containment.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

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Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? Release volume was greater than 25 bbls.

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
By Bradley Blevins to Mike Bratcher/Heather Patterson (NMOCD) and Jim Amos (BLM) on February 22, 2016, at 5:08 pm.

Initial Response

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

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

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

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

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: _____ Date: 11-6-2019

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

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
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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?	>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.

State of New Mexico
Oil Conservation Division

Incident ID	
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Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 11-6-2019

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

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

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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: 11-6-2019

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

OCD Only

Received by: _____ Date: _____

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

Signature: Brittany Hall Date: 3/20/2023

ATTACHMENT 2: LITHOLOGIC / SOIL SAMPLE LOGS

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

Identifier: PH01	Date: 9/6/19
Project Name: PLU 89	RP Number: 2RP-3566
Logged By: BB	Method: Backhoe
Hole Diameter: NA	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			CALICHE, dry, lt brn - tan, poly cmtd, no odor, fill.
					1			
D	0.4 (128)	0.5	N	PH01	2	2'	SP	SAND, dry, red-brown, poorly graded, f., trace clay, no odor. (14:50)
					3			
D	0.8 (128)	0.1	N	PH01A	4	4'	SP	SAND (Same As Above) (14:55)
								EOP @ 4'
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

Identifier: PH02	Date: 9/6/19
Project Name: PLU 89	RP Number: 2RP-3566
Logged By: BB	Method: Backhoe
Hole Diameter: N/A	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		CLCHE fill.	CALICHE, dry, lt brown-tan, poorly cmtd, no odor, FM
					1			
D	1.0K(128)	0.3	N	PH02	2	2'	SP	SAND, dry, red-brown, poorly graded, f., trace clay, no odor. (15:10).
					3			
D	1.0K(128)	0.1	N	PH02A	4	4'	SP	SAA (Same As Above) (15-15).
					5			EOP @ 4'
					6			
					7			
					8			
					9			
					10			
					11			
					12			

LT Environmental, Inc.

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

Compliance · Engineering · Remediation

Identifier: PH03	Date: 9/6/19
Project Name: PLU 89	RP Number: 2RP-3566
Logged By: BB	Method: Backhoe
Hole Diameter: N/A	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		SLCHE fill	CALICHE, dry, lt brown-tan, poly cased, no odor, fill.
					1			
D	1.8(180)	0.3	N	PH03	2	2'	SP	SAND, dry, red-brown, poorly graded, f., trace clay, no odor. (15:20)
					3			
D	1.8(180)	0.1	N	PH03A	4	4'	SP	SAND (Same As Above) (15:25)
					5			EOP @ 4'
					6			
					7			
					8			
					9			
					10			
					11			
					12			

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

Identifier: BH01	Date: 9/9/19
Project Name: PLV 89	RP Number: 2RP-3566
Logged By: BB	Method: Hand Auger
Lat/Long:	Field Screening: PID, Chloride:
Hole Diameter: 3.5"	Total Depth: 4'

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0		CLCHE fill	CALICHE, tan, dry, moderately consolidated, some brown sand, fill, no odor.
D	0.4 (<128)	0.5	N	BH01	1	1'	SP	SAND, dry, red-brown, poorly graded, f., trace clay, no odor. (14:20)
					2			
					3			
D	0.0 (<128)	0.0	N	BH01A	4	4'	SP	SAA (Same As Above) (14:35)
					5			EOB@4'
					6			
					7			
					8			
					9			
					10			
					11			
					12			

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

Identifier: BH02	Date: 9/9/19
Project Name: PLU 89	RP Number: 2RP-3561
Logged By: BB	Method: Hand Auger
Hole Diameter: 3.5"	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		CLCHE fill	CALICHE, dry, tan, moderately consolidated, some brown sand, no odor, fill.
D	0.4 (<128)	0.5	N	BH02	1	1'	SP	SAND, dry, red-brown, poorly graded, f., trace clay, no odor (15:00)
					2			
					3			
D	0.2 (<128)	2.8	N	BH02A	4	4'	SP	SAA (Same As Above) (15:10)
					5			EOB @ 4'
					6			
					7			
					8			
					9			
					10			
					11			
					12			

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

Identifier:	Date:
BH03	9/9/19
Project Name:	**RP Number:**
PLU 89	2RP-3566
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: BB / Method: Hand Auger
Lat/Long: / Field Screening: PID, Chloride.	Hole Diameter: 3.5" / Total Depth: 4'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0		CLCHE fill.	CALICHE, dry, tan, moderately consolidated, some brown sand, fill, no odor.
D	0.6 (<128)	2.3	N	BH03	1	1'	SP	SAND, dry, red-brown, poorly graded, f., trace clay, no odor. (15:35)
					2			
					3			
D	0.4 (<128)	8.1	N	BH03A	4	4'	SP	SAA (Same As Above) (15:45)
					5			EOB @ 4'
					6			
					7			
					8			
					9			
					10			
					11			
					12			

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

Identifier: BH04	Date: 9/9/19
Project Name: PLU 89	RP Number: 2RP-3566
Logged By: BB	Method: Hand Auger
Hole Diameter: 3.5"	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		CLCHE, fill	CALICHE, tan, dry, moderately consolidated, some lt brown sand, no odor, fill.
D	0.8 (<128)	0.6	N	BH04	1	1'	SP	SAND, dry, red-brown, poorly graded, f., trace clay, no odor. (16:10)
					2			
					3			
D	0.6 (<128)	0.5	N	BH04A	4	4'	SP	SAA (Same As Above) (16:30)
					5			TD @ 4'
					6			
					7			
					8			
					9			
					10			
					11			
					12			

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

Identifier: BH05	Date: 9/16/19
Project Name: PLU 89	RP Number: ERP-3566
Logged By: BB	Method: Hand Auger
Lat/Long:	Field Screening: PID, Chloride.
Hole Diameter: 3.5"	Total Depth: 4'

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0		CALICHE fill	CALICHE, dry, lt brn-tan, prly cmtd, no odor, some brown sand, fill.
D	1.0 (<128)	5.9	N	BH05	1	1'	SP	SAND, dry, red-brown, poorly graded f., trace clay. (10:30)
					2			
					3			
D	1.2 (<128)	3.8	N	BH05.4	4	4'	SP	SAND (Same As Above) (10:40)
					5			EOB @ 4'
					6			
					7			
					8			
					9			
					10			
					11			
					12			

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

Identifier: BH06	Date: 9/16/19
Project Name: PLU 89	RP Number: 2RP-3566
Logged By: BB	Method: Hand Auger
Lat/Long:	Field Screening: PID, Chloride.
Hole Diameter: 3.5"	Total Depth: 4'

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0		CLCHE fill.	CALICHE, dry, lt brown - tan, prly cnsld, no odor, some brown sand, fill.
D	1.0 (<128)	5.1	N	BH06	1	1'	SP	SAND, dry, red-brown, poorly graded, f., trace clay, (10:50)
					2			
					3			
D	0.2 (<128)	4.6	N	BH06A	4	4'	SP	SAA (Same As Above) (11:00)
					5			EOB @ 4'
					6			
					7			
					8			
					9			
					10			
					11			
					12			

ATTACHMENT 3: PHOTOGRAPHIC LOG

South facing view of release area during site assessment activities.

Project: 012918094	XTO Energy, Inc. PLU 89	LTE Advancing Opportunity
September 6, 2019	Photographic Log	

South facing view of the open excavation on the north side of the process equipment.

Project: 012918094	XTO Energy, Inc. PLU 89	Advancing Opportunity
September 16, 2019	Photographic Log	

East facing view of the open excavation on the south side of the process equipment.

Project: 012918094	XTO Energy, Inc. PLU 89	Advancing Opportunity
September 16, 2019	Photographic Log	

ATTACHMENT 4: LABORATORY ANALYTICAL REPORTS

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

April 24, 2018

Adrian Baker
LTE
3300 N A St Bldg 1 #103
Midland, TX 79705
TEL: (432) 704-5178
FAX

RE: PLU 89 OrderNo.: 1804853

Dear Adrian Baker:

Hall Environmental Analysis Laboratory received 4 sample(s) on 4/17/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **1804853**
Date Reported: **4/24/2018**

CLIENT: LTE
Client Sample ID: SS1A
Project: PLU 89
Collection Date: 4/9/2018 12:30:00 PM
Lab ID: 1804853-001 **Matrix:** SOIL **Received Date:** 4/17/2018 9:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	4800	300		mg/Kg	200	4/23/2018 9:38:45 PM	37711
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	18000	910		mg/Kg	100	4/19/2018 8:28:22 PM	37670
Motor Oil Range Organics (MRO)	12000	4600		mg/Kg	100	4/19/2018 8:28:22 PM	37670
Surr: DNOP	0	70-130	S	%Rec	100	4/19/2018 8:28:22 PM	37670
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	76	24		mg/Kg	5	4/19/2018 12:25:14 AM	37656
Surr: BFB	188	15-316		%Rec	5	4/19/2018 12:25:14 AM	37656
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Methyl tert-butyl ether (MTBE)	ND	0.48		mg/Kg	5	4/19/2018 12:25:14 AM	37656
Benzene	ND	0.12		mg/Kg	5	4/19/2018 12:25:14 AM	37656
Toluene	ND	0.24		mg/Kg	5	4/19/2018 12:25:14 AM	37656
Ethylbenzene	ND	0.24		mg/Kg	5	4/19/2018 12:25:14 AM	37656
Xylenes, Total	ND	0.48		mg/Kg	5	4/19/2018 12:25:14 AM	37656
Surr: 4-Bromofluorobenzene	82.9	80-120		%Rec	5	4/19/2018 12:25:14 AM	37656

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order **1804853**
Date Reported: **4/24/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: LTE **Client Sample ID:** SS1B
Project: PLU 89 **Collection Date:** 4/9/2018 12:35:00 PM
Lab ID: 1804853-002 **Matrix:** SOIL **Received Date:** 4/17/2018 9:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	2800	75		mg/Kg	50	4/23/2018 10:15:58 PM	37711
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	9400	960		mg/Kg	100	4/19/2018 8:52:23 PM	37670
Motor Oil Range Organics (MRO)	6500	4800		mg/Kg	100	4/19/2018 8:52:23 PM	37670
Surr: DNOP	0	70-130	S	%Rec	100	4/19/2018 8:52:23 PM	37670
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/19/2018 1:12:22 AM	37656
Surr: BFB	93.0	15-316		%Rec	1	4/19/2018 1:12:22 AM	37656
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	4/19/2018 1:12:22 AM	37656
Benzene	ND	0.025		mg/Kg	1	4/19/2018 1:12:22 AM	37656
Toluene	ND	0.050		mg/Kg	1	4/19/2018 1:12:22 AM	37656
Ethylbenzene	ND	0.050		mg/Kg	1	4/19/2018 1:12:22 AM	37656
Xylenes, Total	ND	0.10		mg/Kg	1	4/19/2018 1:12:22 AM	37656
Surr: 4-Bromofluorobenzene	74.6	80-120	S	%Rec	1	4/19/2018 1:12:22 AM	37656

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order **1804853**
Date Reported: **4/24/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: LTE **Client Sample ID:** SS1C
Project: PLU 89 **Collection Date:** 4/9/2018 12:40:00 PM
Lab ID: 1804853-003 **Matrix:** SOIL **Received Date:** 4/17/2018 9:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	13000	750		mg/Kg	500	4/23/2018 10:28:22 PM	37711
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**TOM**
Diesel Range Organics (DRO)	1400	97		mg/Kg	10	4/19/2018 9:16:23 PM	37670
Motor Oil Range Organics (MRO)	1300	480		mg/Kg	10	4/19/2018 9:16:23 PM	37670
Surr: DNOP	0	70-130	S	%Rec	10	4/19/2018 9:16:23 PM	37670
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/19/2018 1:35:50 AM	37656
Surr: BFB	85.0	15-316		%Rec	1	4/19/2018 1:35:50 AM	37656
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Methyl tert-butyl ether (MTBE)	ND	0.095		mg/Kg	1	4/19/2018 1:35:50 AM	37656
Benzene	ND	0.024		mg/Kg	1	4/19/2018 1:35:50 AM	37656
Toluene	ND	0.047		mg/Kg	1	4/19/2018 1:35:50 AM	37656
Ethylbenzene	ND	0.047		mg/Kg	1	4/19/2018 1:35:50 AM	37656
Xylenes, Total	ND	0.095		mg/Kg	1	4/19/2018 1:35:50 AM	37656
Surr: 4-Bromofluorobenzene	76.7	80-120	S	%Rec	1	4/19/2018 1:35:50 AM	37656

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order **1804853**
Date Reported: **4/24/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: LTE **Client Sample ID:** SS1D
Project: PLU 89 **Collection Date:** 4/9/2018 12:45:00 PM
Lab ID: 1804853-004 **Matrix:** SOIL **Received Date:** 4/17/2018 9:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**CJS**
Chloride	52	30		mg/Kg	20	4/20/2018 3:59:05 PM	37711
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**TOM**
Diesel Range Organics (DRO)	7600	990		mg/Kg	100	4/19/2018 9:40:14 PM	37670
Motor Oil Range Organics (MRO)	6100	4900		mg/Kg	100	4/19/2018 9:40:14 PM	37670
Surr: DNOP	0	70-130	S	%Rec	100	4/19/2018 9:40:14 PM	37670
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/19/2018 1:59:18 AM	37656
Surr: BFB	78.3	15-316		%Rec	1	4/19/2018 1:59:18 AM	37656
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Methyl tert-butyl ether (MTBE)	ND	0.099		mg/Kg	1	4/19/2018 1:59:18 AM	37656
Benzene	ND	0.025		mg/Kg	1	4/19/2018 1:59:18 AM	37656
Toluene	ND	0.050		mg/Kg	1	4/19/2018 1:59:18 AM	37656
Ethylbenzene	ND	0.050		mg/Kg	1	4/19/2018 1:59:18 AM	37656
Xylenes, Total	ND	0.099		mg/Kg	1	4/19/2018 1:59:18 AM	37656
Surr: 4-Bromofluorobenzene	73.7	80-120	S	%Rec	1	4/19/2018 1:59:18 AM	37656

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1804853**
24-Apr-18

Client: LTE
Project: PLU 89

Sample ID	**MB-37711**	SampType:	**mblk**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**37711**	RunNo:	**50728**					
Prep Date:	**4/20/2018**	Analysis Date:	**4/20/2018**	SeqNo:	**1646561**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	**LCS-37711**	SampType:	**lcs**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**37711**	RunNo:	**50728**					
Prep Date:	**4/20/2018**	Analysis Date:	**4/20/2018**	SeqNo:	**1646562**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	96.2	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1804853**

24-Apr-18

Client: LTE

Project: PLU 89

Sample ID	**LCS-37670**	SampType:	**LCS**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**LCSS**	Batch ID:	**37670**		RunNo:	**50693**				
Prep Date:	**4/18/2018**	Analysis Date:	**4/19/2018**		SeqNo:	**1644506**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	50.00	0	89.0	70	130			
Surr: DNOP	4.2		5.000		84.7	70	130			

Sample ID	**MB-37670**	SampType:	**MBLK**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**PBS**	Batch ID:	**37670**		RunNo:	**50693**				
Prep Date:	**4/18/2018**	Analysis Date:	**4/19/2018**		SeqNo:	**1644507**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.6		10.00		96.1	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1804853**

24-Apr-18

Client: LTE

Project: PLU 89

Sample ID	**MB-37656**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**PBS**	Batch ID:	**37656**	RunNo:	**50648**					
Prep Date:	**4/17/2018**	Analysis Date:	**4/18/2018**	SeqNo:	**1643693**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	880		1000		88.5	15	316			

Sample ID	**LCS-37656**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**LCSS**	Batch ID:	**37656**	RunNo:	**50648**					
Prep Date:	**4/17/2018**	Analysis Date:	**4/18/2018**	SeqNo:	**1643694**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.0	25.00	0	111	75.9	131			
Surr: BFB	1000		1000		104	15	316			

Sample ID	**1804853-002AMS**	SampType:	**MS**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**SS1B**	Batch ID:	**37656**	RunNo:	**50648**					
Prep Date:	**4/17/2018**	Analysis Date:	**4/18/2018**	SeqNo:	**1643697**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	30	5.0	24.95	1.990	112	77.8	128			
Surr: BFB	1100		998.0		113	15	316			

Sample ID	**1804853-002AMSD**	SampType:	**MSD**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**SS1B**	Batch ID:	**37656**	RunNo:	**50648**					
Prep Date:	**4/17/2018**	Analysis Date:	**4/18/2018**	SeqNo:	**1643698**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.0	24.75	1.990	106	77.8	128	5.27	20	
Surr: BFB	1100		990.1		108	15	316	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1804853**

24-Apr-18

Client: LTE

Project: PLU 89

Sample ID **MB-37656**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **37656**	RunNo: **50648**
Prep Date: **4/17/2018**	Analysis Date: **4/18/2018**	SeqNo: **1643727** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	0.10								
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.82		1.000		81.6	80	120			

Sample ID **LCS-37656**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **37656**	RunNo: **50648**
Prep Date: **4/17/2018**	Analysis Date: **4/18/2018**	SeqNo: **1643728** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	0.87	0.10	1.000	0	86.9	70.1	121			
Benzene	0.95	0.025	1.000	0	95.2	77.3	128			
Toluene	0.95	0.050	1.000	0	95.3	79.2	125			
Ethylbenzene	0.94	0.050	1.000	0	94.1	80.7	127			
Xylenes, Total	2.9	0.10	3.000	0	96.5	81.6	129			
Surr: 4-Bromofluorobenzene	0.84		1.000		84.0	80	120			

Sample ID **1804853-001AMS**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **SS1A**	Batch ID: **37656**	RunNo: **50648**
Prep Date: **4/17/2018**	Analysis Date: **4/18/2018**	SeqNo: **1643732** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	0.82	0.48	0.9671	0	84.6	56.9	130			
Benzene	0.86	0.12	0.9671	0.05459	83.7	68.5	133			
Toluene	0.88	0.24	0.9671	0.05411	85.3	75	130			
Ethylbenzene	0.94	0.24	0.9671	0.1135	85.6	79.4	128			
Xylenes, Total	2.9	0.48	2.901	0.3507	88.0	77.3	131			
Surr: 4-Bromofluorobenzene	4.3		4.836		88.5	80	120			

Sample ID **1804853-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **SS1A**	Batch ID: **37656**	RunNo: **50648**
Prep Date: **4/17/2018**	Analysis Date: **4/18/2018**	SeqNo: **1643733** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	0.80	0.49	0.9775	0	81.4	56.9	130	2.79	20	
Benzene	0.84	0.12	0.9775	0.05459	79.9	68.5	133	3.39	20	
Toluene	0.90	0.24	0.9775	0.05411	86.8	75	130	2.60	20	
Ethylbenzene	0.92	0.24	0.9775	0.1135	83.0	79.4	128	1.80	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1804853**

24-Apr-18

Client: LTE

Project: PLU 89

Sample ID	**1804853-001AMSD**	SampType:	**MSD**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**SS1A**	Batch ID:	**37656**	RunNo:	**50648**					
Prep Date:	**4/17/2018**	Analysis Date:	**4/18/2018**	SeqNo:	**1643733**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Xylenes, Total	2.8	0.49	2.933	0.3507	83.1	77.3	131	4.00	20	
Surr: 4-Bromofluorobenzene	4.0		4.888		82.4	80	120	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: LTE MIDLAND Work Order Number: 1804853 RcptNo: 1

Received By: Erin Melendrez 4/17/2018 9:05:00 AM

Completed By: Isaiah Ortiz 4/17/2018 10:29:53 AM

Reviewed By: 4/17/18

MW 4/17/18

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: 4/17/18 (<2 or >12 unless noted)
Adjusted? MW
Checked by:

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.5	Good	Yes			

Released to Imaging: 3/20/2023 9:22:43 AM
Received by OCD: 3/20/2023 9:14:54 AM

Chain-of-Custody Record

Client: LTE/Midland
XTO Energy
Mailing Address: 3300 N. A Service Bldg 1, #103
Midland, Tx
Phone #: 432-894-5641
email or Fax#: abaker@ltenv.com
QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other
☒ EDD (Type) PDF

Turn-Around Time: 5 day
☒ Standard ☐ Rush
Project Name: PLU 69
Project #: 30-015-27787 (2RP-3566)
Project Manager: Adrian Baker
Sampler: Eric Carroll
On Ice: ☒ Yes ☐ No
Sample Temperature: 4.2+0.3(CF)=4.5

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1804853	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Chloride				Air Bubbles (Y or N)
4/9/18	1230	S	SS1A	1402	cooler	001	X		X									X				
	1235	S	SS1B			002	X		X									X				
	1240	S	SS1C			003	X		X									X				
	1245	S	SS1D			004	X		X									X				

Date: 4/14 Time: 0630 Relinquished by:
Received by: Date 4/16/18 Time 1900
Date: 4/16/18 Time 1900 Relinquished by:
Received by: Courir Date 4/17/18 Time 0905

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Analytical Report 636297

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU 89 (2RP-3566)

012918094

10-SEP-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)

10-SEP-19

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

Reference: XENCO Report No(s): **636297**
PLU 89 (2RP-3566)
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) 636297. 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. 636297 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

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Sample Cross Reference 636297

LT Environmental, Inc., Arvada, CO

PLU 89 (2RP-3566)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH01	S	09-06-19 14:50	2 ft	636297-001
PH01A	S	09-06-19 14:55	4 ft	636297-002
PH02	S	09-06-19 15:10	2 ft	636297-003
PH02A	S	09-06-19 15:15	4 ft	636297-004
PH03	S	09-06-19 15:20	2 ft	636297-005
PH03A	S	09-06-19 15:25	4 ft	636297-006

Version: 1.%

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 89 (2RP-3566)

Project ID: *012918094*
Work Order Number(s): *636297*

Report Date: *10-SEP-19*
Date Received: *09/09/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3100920 Chloride by EPA 300
Lab Sample ID 636297-006 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: 636297-001, -002, -003, -004, -005, -006.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3100944 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3100946 TPH by SW8015 Mod
Surrogate 1-Chlorooctane recovered above QC limits. Matrix interferences is suspected.
Samples affected are: 636274-001 S,636274-001 SD,636297-001.

Certificate of Analysis Summary 636297

LT Environmental, Inc., Arvada, CO

Project Name: PLU 89 (2RP-3566)

Project Id: 012918094
Contact: Dan Moir
Project Location:

Date Received in Lab: Mon Sep-09-19 09:00 am
Report Date: 10-SEP-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	636297-001		636297-002		636297-003		636297-004		636297-005		636297-006	
	Field Id:	PH01		PH01A		PH02		PH02A		PH03		PH03A	
	Depth:	2- ft		4- ft		2- ft		4- ft		2- ft		4- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Sep-06-19 14:50		Sep-06-19 14:55		Sep-06-19 15:10		Sep-06-19 15:15		Sep-06-19 15:20		Sep-06-19 15:25	
BTEX by EPA 8021B	***Extracted:***	Sep-09-19 11:00		Sep-09-19 11:00		Sep-09-19 11:00		Sep-09-19 11:00		Sep-09-19 11:00		Sep-09-19 11:00	
	Analyzed:	Sep-09-19 17:46		Sep-09-19 18:06		Sep-09-19 18:26		Sep-09-19 18:46		Sep-09-19 19:05		Sep-09-19 19:25	
	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	<0.00101	0.00101	<0.00101	0.00101	<0.00100	0.00100	<0.00100	0.00100	<0.00100	0.00100
Toluene		<0.00101	0.00101	<0.00101	0.00101	<0.00101	0.00101	<0.00100	0.00100	<0.00100	0.00100	<0.00100	0.00100
Ethylbenzene		<0.00101	0.00101	<0.00101	0.00101	<0.00101	0.00101	<0.00100	0.00100	<0.00100	0.00100	<0.00100	0.00100
m,p-Xylenes		<0.00202	0.00202	<0.00202	0.00202	<0.00202	0.00202	<0.00201	0.00201	<0.00201	0.00201	<0.00201	0.00201
o-Xylene		<0.00101	0.00101	<0.00101	0.00101	<0.00101	0.00101	<0.00100	0.00100	<0.00100	0.00100	<0.00100	0.00100
Total Xylenes		<0.00101	0.00101	<0.00101	0.00101	<0.00101	0.00101	<0.00100	0.00100	<0.00100	0.00100	<0.00100	0.00100
Total BTEX		<0.00101	0.00101	<0.00101	0.00101	<0.00101	0.00101	<0.00100	0.00100	<0.00100	0.00100	<0.00100	0.00100
Chloride by EPA 300	***Extracted:***	Sep-09-19 10:20		Sep-09-19 10:20		Sep-09-19 10:20		Sep-09-19 10:20		Sep-09-19 10:20		Sep-09-19 10:20	
	Analyzed:	Sep-09-19 14:39		Sep-09-19 14:46		Sep-09-19 14:52		Sep-09-19 15:12		Sep-09-19 15:18		Sep-09-19 15:25	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		22.9	9.84	37.0	9.88	76.5	9.98	86.1	9.98	222	10.1	350	19.8
TPH by SW8015 Mod	***Extracted:***	Sep-09-19 10:45		Sep-09-19 10:45		Sep-09-19 10:45		Sep-09-19 10:45		Sep-09-19 10:45		Sep-09-19 10:45	
	Analyzed:	Sep-09-19 16:44		Sep-09-19 17:05		Sep-09-19 17:26		Sep-09-19 17:46		Sep-09-19 18:07		Sep-09-19 18:27	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<25.0	25.0	<25.0	25.0	<25.1	25.1	<24.9	24.9	<25.0	25.0	<25.1	25.1
Diesel Range Organics (DRO)		<25.0	25.0	<25.0	25.0	<25.1	25.1	<24.9	24.9	<25.0	25.0	<25.1	25.1
Motor Oil Range Hydrocarbons (MRO)		<25.0	25.0	<25.0	25.0	<25.1	25.1	<24.9	24.9	<25.0	25.0	<25.1	25.1
Total GRO-DRO		<25.0	25.0	<25.0	25.0	<25.1	25.1	<24.9	24.9	<25.0	25.0	<25.1	25.1
Total TPH		<25.0	25.0	<25.0	25.0	<25.1	25.1	<24.9	24.9	<25.0	25.0	<25.1	25.1

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The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
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Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analytical Results 636297

LT Environmental, Inc., Arvada, CO

PLU 89 (2RP-3566)

Sample Id:	**PH01**	Matrix:	Soil	Date Received:	09.09.19 09.00
Lab Sample Id:	636297-001	Date Collected:	09.06.19 14.50	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.09.19 10.20	Basis:	Wet Weight
Seq Number:	3100920				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**22.9**	9.84	mg/kg	09.09.19 14.39		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.09.19 10.45	Basis:	Wet Weight
Seq Number:	3100946				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	09.09.19 16.44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	09.09.19 16.44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	09.09.19 16.44	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	09.09.19 16.44	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	09.09.19 16.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	138	%	70-135	09.09.19 16.44	**
o-Terphenyl	84-15-1	117	%	70-135	09.09.19 16.44	

Certificate of Analytical Results 636297

LT Environmental, Inc., Arvada, CO

PLU 89 (2RP-3566)

Sample Id:	**PH01**	Matrix:	Soil	Date Received:	09.09.19 09.00
Lab Sample Id:	636297-001	Date Collected:	09.06.19 14.50	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.09.19 11.00	Basis:	Wet Weight
Seq Number:	3100944				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	09.09.19 17.46	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	09.09.19 17.46	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	09.09.19 17.46	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	09.09.19 17.46	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	09.09.19 17.46	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	09.09.19 17.46	U	1
Total BTEX		<0.00101	0.00101	mg/kg	09.09.19 17.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	112	%	70-130	09.09.19 17.46	
1,4-Difluorobenzene	540-36-3	103	%	70-130	09.09.19 17.46	

Certificate of Analytical Results 636297

LT Environmental, Inc., Arvada, CO

PLU 89 (2RP-3566)

Sample Id:	**PH01A**	Matrix:	Soil	Date Received:	09.09.19 09.00
Lab Sample Id:	636297-002	Date Collected:	09.06.19 14.55	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.09.19 10.20	Basis:	Wet Weight
Seq Number:	3100920				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**37.0**	9.88	mg/kg	09.09.19 14.46		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.09.19 10.45	Basis:	Wet Weight
Seq Number:	3100946				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	09.09.19 17.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	09.09.19 17.05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	09.09.19 17.05	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	09.09.19 17.05	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	09.09.19 17.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	125	%	70-135	09.09.19 17.05	
o-Terphenyl	84-15-1	105	%	70-135	09.09.19 17.05	

Certificate of Analytical Results 636297

LT Environmental, Inc., Arvada, CO

PLU 89 (2RP-3566)

Sample Id:	**PH01A**	Matrix:	Soil	Date Received:	09.09.19 09.00
Lab Sample Id:	636297-002	Date Collected:	09.06.19 14.55	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.09.19 11.00	Basis:	Wet Weight
Seq Number:	3100944				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	09.09.19 18.06	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	09.09.19 18.06	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	09.09.19 18.06	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	09.09.19 18.06	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	09.09.19 18.06	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	09.09.19 18.06	U	1
Total BTEX		<0.00101	0.00101	mg/kg	09.09.19 18.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	70-130	09.09.19 18.06	
1,4-Difluorobenzene	540-36-3	105	%	70-130	09.09.19 18.06	

Certificate of Analytical Results 636297

LT Environmental, Inc., Arvada, CO

PLU 89 (2RP-3566)

Sample Id:	**PH02**	Matrix:	Soil	Date Received:	09.09.19 09.00
Lab Sample Id:	636297-003	Date Collected:	09.06.19 15.10	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.09.19 10.20	Basis:	Wet Weight
Seq Number:	3100920				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**76.5**	9.98	mg/kg	09.09.19 14.52		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.09.19 10.45	Basis:	Wet Weight
Seq Number:	3100946				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.1	25.1	mg/kg	09.09.19 17.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.1	25.1	mg/kg	09.09.19 17.26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.1	25.1	mg/kg	09.09.19 17.26	U	1
Total GRO-DRO	PHC628	<25.1	25.1	mg/kg	09.09.19 17.26	U	1
Total TPH	PHC635	<25.1	25.1	mg/kg	09.09.19 17.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	121	%	70-135	09.09.19 17.26	
o-Terphenyl	84-15-1	103	%	70-135	09.09.19 17.26	

Certificate of Analytical Results 636297

LT Environmental, Inc., Arvada, CO

PLU 89 (2RP-3566)

Sample Id:	**PH02**	Matrix:	Soil	Date Received:	09.09.19 09.00
Lab Sample Id:	636297-003	Date Collected:	09.06.19 15.10	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.09.19 11.00	Basis:	Wet Weight
Seq Number:	3100944				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	09.09.19 18.26	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	09.09.19 18.26	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	09.09.19 18.26	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	09.09.19 18.26	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	09.09.19 18.26	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	09.09.19 18.26	U	1
Total BTEX		<0.00101	0.00101	mg/kg	09.09.19 18.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	09.09.19 18.26	
4-Bromofluorobenzene	460-00-4	118	%	70-130	09.09.19 18.26	

Certificate of Analytical Results 636297

LT Environmental, Inc., Arvada, CO

PLU 89 (2RP-3566)

Sample Id:	**PH02A**	Matrix:	Soil	Date Received:	09.09.19 09.00
Lab Sample Id:	636297-004	Date Collected:	09.06.19 15.15	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.09.19 10.20	Basis:	Wet Weight
Seq Number:	3100920				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**86.1**	9.98	mg/kg	09.09.19 15.12		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.09.19 10.45	Basis:	Wet Weight
Seq Number:	3100946				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	09.09.19 17.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	09.09.19 17.46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	09.09.19 17.46	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	09.09.19 17.46	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	09.09.19 17.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	122	%	70-135	09.09.19 17.46	
o-Terphenyl	84-15-1	103	%	70-135	09.09.19 17.46	

Certificate of Analytical Results 636297

LT Environmental, Inc., Arvada, CO

PLU 89 (2RP-3566)

Sample Id:	**PH02A**	Matrix:	Soil	Date Received:	09.09.19 09.00
Lab Sample Id:	636297-004	Date Collected:	09.06.19 15.15	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.09.19 11.00	Basis:	Wet Weight
Seq Number:	3100944				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	09.09.19 18.46	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	09.09.19 18.46	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	09.09.19 18.46	U	1
m,p-Xylenes	179601-23-1	<0.00201	0.00201	mg/kg	09.09.19 18.46	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	09.09.19 18.46	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	09.09.19 18.46	U	1
Total BTEX		<0.00100	0.00100	mg/kg	09.09.19 18.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	09.09.19 18.46	
4-Bromofluorobenzene	460-00-4	102	%	70-130	09.09.19 18.46	

Certificate of Analytical Results 636297

LT Environmental, Inc., Arvada, CO

PLU 89 (2RP-3566)

Sample Id:	**PH03**	Matrix:	Soil	Date Received:	09.09.19 09.00
Lab Sample Id:	636297-005	Date Collected:	09.06.19 15.20	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.09.19 10.20	Basis:	Wet Weight
Seq Number:	3100920				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**222**	10.1	mg/kg	09.09.19 15.18		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.09.19 10.45	Basis:	Wet Weight
Seq Number:	3100946				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	09.09.19 18.07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	09.09.19 18.07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	09.09.19 18.07	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	09.09.19 18.07	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	09.09.19 18.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	125	%	70-135	09.09.19 18.07	
o-Terphenyl	84-15-1	105	%	70-135	09.09.19 18.07	

Certificate of Analytical Results 636297

LT Environmental, Inc., Arvada, CO

PLU 89 (2RP-3566)

Sample Id:	**PH03**	Matrix:	Soil	Date Received:	09.09.19 09.00
Lab Sample Id:	636297-005	Date Collected:	09.06.19 15.20	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.09.19 11.00	Basis:	Wet Weight
Seq Number:	3100944				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	09.09.19 19.05	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	09.09.19 19.05	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	09.09.19 19.05	U	1
m,p-Xylenes	179601-23-1	<0.00201	0.00201	mg/kg	09.09.19 19.05	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	09.09.19 19.05	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	09.09.19 19.05	U	1
Total BTEX		<0.00100	0.00100	mg/kg	09.09.19 19.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	108	%	70-130	09.09.19 19.05	
1,4-Difluorobenzene	540-36-3	102	%	70-130	09.09.19 19.05	

Certificate of Analytical Results 636297

LT Environmental, Inc., Arvada, CO

PLU 89 (2RP-3566)

Sample Id: **PH03A** Matrix: Soil Date Received:09.09.19 09.00

Lab Sample Id: 636297-006 Date Collected: 09.06.19 15.25 Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 09.09.19 10.20 Basis: Wet Weight

Seq Number: 3100920

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**350**	19.8	mg/kg	09.09.19 15.25		2

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 09.09.19 10.45 Basis: Wet Weight

Seq Number: 3100946

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.1	25.1	mg/kg	09.09.19 18.27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.1	25.1	mg/kg	09.09.19 18.27	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.1	25.1	mg/kg	09.09.19 18.27	U	1
Total GRO-DRO	PHC628	<25.1	25.1	mg/kg	09.09.19 18.27	U	1
Total TPH	PHC635	<25.1	25.1	mg/kg	09.09.19 18.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	118	%	70-135	09.09.19 18.27	
o-Terphenyl	84-15-1	99	%	70-135	09.09.19 18.27	

Certificate of Analytical Results 636297

LT Environmental, Inc., Arvada, CO

PLU 89 (2RP-3566)

Sample Id:	**PH03A**	Matrix:	Soil	Date Received:	09.09.19 09.00
Lab Sample Id:	636297-006	Date Collected:	09.06.19 15.25	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.09.19 11.00	Basis:	Wet Weight
Seq Number:	3100944				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	09.09.19 19.25	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	09.09.19 19.25	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	09.09.19 19.25	U	1
m,p-Xylenes	179601-23-1	<0.00201	0.00201	mg/kg	09.09.19 19.25	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	09.09.19 19.25	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	09.09.19 19.25	U	1
Total BTEX		<0.00100	0.00100	mg/kg	09.09.19 19.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	97	%	70-130	09.09.19 19.25	
4-Bromofluorobenzene	460-00-4	109	%	70-130	09.09.19 19.25	

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 636297

LT Environmental, Inc.

PLU 89 (2RP-3566)

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3100920 Matrix: Solid Date Prep: 09.09.19
MB Sample Id: 7685769-1-BLK LCS Sample Id: 7685769-1-BKS LCSD Sample Id: 7685769-1-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	261	104	262	105	80-120	0	20	mg/kg	09.09.19 12:44	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3100920 Matrix: Soil Date Prep: 09.09.19
Parent Sample Id: 636274-001 MS Sample Id: 636274-001 S MSD Sample Id: 636274-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	28.2	200	246	109	250	111	80-120	2	20	mg/kg	09.09.19 13:03	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3100920 Matrix: Solid Date Prep: 09.09.19
Parent Sample Id: 636297-006 MS Sample Id: 636297-006 S MSD Sample Id: 636297-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	350	398	863	129	862	128	80-120	0	20	mg/kg	09.09.19 15:31	X

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3100946 Matrix: Solid Date Prep: 09.09.19
MB Sample Id: 7685792-1-BLK LCS Sample Id: 7685792-1-BKS LCSD Sample Id: 7685792-1-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)	<25.0	1000	930	93	910	91	70-135	2	35	mg/kg	09.09.19 10:54	
Diesel Range Organics (DRO)	<25.0	1000	881	88	846	85	70-135	4	35	mg/kg	09.09.19 10:54	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	119		130		133		70-135	%	09.09.19 10:54
o-Terphenyl	99		118		116		70-135	%	09.09.19 10:54

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 636297

LT Environmental, Inc.

PLU 89 (2RP-3566)

Analytical Method: TPH by SW8015 Mod | Prep Method: SW8015P
Seq Number: 3100946 | Matrix: Soil | Date Prep: 09.09.19
Parent Sample Id: 636274-001 | MS Sample Id: 636274-001 S | MSD Sample Id: 636274-001 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)	<25.1	1010	909	90	981	98	70-135	8	35	mg/kg	09.09.19 11:55	
Diesel Range Organics (DRO)	<25.1	1010	839	83	912	91	70-135	8	35	mg/kg	09.09.19 11:55	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	138	**	143	**	70-135	%	09.09.19 11:55
o-Terphenyl	117		120		70-135	%	09.09.19 11:55

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3100944 | Matrix: Solid | Date Prep: 09.09.19
MB Sample Id: 7685859-1-BLK | LCS Sample Id: 7685859-1-BKS | LCSD Sample Id: 7685859-1-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	0.0873	87	0.0876	88	70-130	0	35	mg/kg	09.09.19 10:50	
Toluene	<0.00100	0.100	0.0895	90	0.0913	91	70-130	2	35	mg/kg	09.09.19 10:50	
Ethylbenzene	<0.00100	0.100	0.110	110	0.113	113	71-129	3	35	mg/kg	09.09.19 10:50	
m,p-Xylenes	<0.00200	0.200	0.228	114	0.233	117	70-135	2	35	mg/kg	09.09.19 10:50	
o-Xylene	<0.00100	0.100	0.115	115	0.118	118	71-133	3	35	mg/kg	09.09.19 10:50	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		107		102		70-130	%	09.09.19 10:50
4-Bromofluorobenzene	111		125		121		70-130	%	09.09.19 10:50

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3100944 | Matrix: Solid | Date Prep: 09.09.19
Parent Sample Id: 636274-001 | MS Sample Id: 636274-001 S | MSD Sample Id: 636274-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.100	0.0845	85	0.0892	89	70-130	5	35	mg/kg	09.09.19 13:08	
Toluene	<0.00100	0.100	0.0854	85	0.0870	87	70-130	2	35	mg/kg	09.09.19 13:08	
Ethylbenzene	<0.00100	0.100	0.0936	94	0.107	107	71-129	13	35	mg/kg	09.09.19 13:08	
m,p-Xylenes	<0.00200	0.200	0.194	97	0.222	111	70-135	13	35	mg/kg	09.09.19 13:08	
o-Xylene	<0.00100	0.100	0.100	100	0.114	114	71-133	13	35	mg/kg	09.09.19 13:08	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	110		113		70-130	%	09.09.19 13:08
4-Bromofluorobenzene	124		130		70-130	%	09.09.19 13:08

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

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

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Chain of Custody

Work Order No: 636297

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 E Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.236.3849	Email:	bbelill@ltenv.com

Work Order Comments

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

Project Name:	PLU 89 (2RP-3566)	Turn Around	
Project Number:	012918094	Routine	☒
P.O. Number:		Rush:	
Sampler's Name:	Benjamin Belill	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	5.8	Thermometer ID	T-NM-007
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	6

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
PH01	S	9/6/19	1450	2'	1	X	X	X
PH01A			1455	4'		X	X	X
PH02			1510	2'		X	X	X
PH02A			1515	4'		X	X	X
PH03			1520	2'		X	X	X
PH03A	↓	↓	1525	4'	↓	X	X	X

BCB 9/6/19

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	BCB		9/9/19 0930	2			
3				4			
5				6			

Revised Date 051418 Rev. 2018.1

Received by OCD: 3/20/2023 9:14:54 AM
Final 1.000
Page 21 of 22
Released to Imaging: 3/20/2023 9:22:43 AM

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 09/09/2019 09:00:00 AM

Work Order #: 636297

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)?	5.8
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**No**
#5 Custody Seals intact on sample bottles?	**No**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**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: 09/09/2019

Checklist reviewed by: Jessica Kramer Date: 09/09/2019

Jessica Kramer

Analytical Report 636396

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU 89

012918094

13-SEP-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

13-SEP-19

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

Reference: XENCO Report No(s): **636396**
PLU 89
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) 636396. 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. 636396 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 636396

LT Environmental, Inc., Arvada, CO

PLU 89

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH01	S	09-09-19 14:20	1 ft	636396-001
BH01A	S	09-09-19 14:35	4 ft	636396-002
BH02	S	09-09-19 15:00	1 ft	636396-003
BH02A	S	09-09-19 15:10	4 ft	636396-004
BH03	S	09-09-19 15:35	1 ft	636396-005
BH03A	S	09-09-19 15:45	4 ft	636396-006
BH04	S	09-09-19 16:10	1 ft	636396-007
BH04A	S	09-09-19 16:30	4 ft	636396-008

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 89

Project ID: *012918094*
Work Order Number(s): *636396*

Report Date: *13-SEP-19*
Date Received: *09/10/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3101274 BTEX by EPA 8021B

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

Certificate of Analysis Summary 636396

LT Environmental, Inc., Arvada, CO

Project Name: PLU 89

Project Id: 012918094
Contact: Dan Moir
Project Location:

Date Received in Lab: Tue Sep-10-19 08:10 am
Report Date: 13-SEP-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	636396-001		636396-002		636396-003		636396-004		636396-005		636396-006	
	Field Id:	BH01		BH01A		BH02		BH02A		BH03		BH03A	
	Depth:	1- ft		4- ft		1- ft		4- ft		1- ft		4- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Sep-09-19 14:20		Sep-09-19 14:35		Sep-09-19 15:00		Sep-09-19 15:10		Sep-09-19 15:35		Sep-09-19 15:45	
BTEX by EPA 8021B SUB: T104704400-18-16	*Extracted:*	Sep-11-19 12:30		Sep-11-19 12:30		Sep-11-19 12:30		Sep-11-19 12:30		Sep-11-19 12:30		Sep-11-19 12:30	
	Analyzed:	Sep-12-19 01:46		Sep-12-19 02:06		Sep-12-19 02:27		Sep-12-19 02:47		Sep-12-19 03:07		Sep-12-19 04:30	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00199	0.00199	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198
Toluene		<0.00199	0.00199	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198
Ethylbenzene		<0.00199	0.00199	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198
m,p-Xylenes		<0.00398	0.00398	<0.00398	0.00398	<0.00397	0.00397	<0.00399	0.00399	<0.00401	0.00401	<0.00397	0.00397
o-Xylene		<0.00199	0.00199	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198
Total Xylenes		<0.00199	0.00199	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198
Total BTEX		<0.00199	0.00199	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198
Chloride by EPA 300 SUB: T104704400-18-16	*Extracted:*	Sep-12-19 12:50		Sep-12-19 12:50		Sep-12-19 12:50		Sep-12-19 13:10		Sep-12-19 13:10		Sep-12-19 13:10	
	Analyzed:	Sep-12-19 15:58		Sep-12-19 16:05		Sep-12-19 16:11		Sep-12-19 13:36		Sep-12-19 14:49		Sep-12-19 14:56	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		12.3	5.01	<4.96	4.96	533	50.0	67.3	4.97	30.3	5.00	121	5.00
TPH by SW8015 Mod SUB: T104704400-18-16	*Extracted:*	Sep-10-19 15:30		Sep-10-19 15:30		Sep-10-19 15:30		Sep-10-19 15:30		Sep-10-19 15:30		Sep-10-19 15:30	
	Analyzed:	Sep-11-19 22:38		Sep-11-19 22:57		Sep-11-19 23:16		Sep-11-19 23:35		Sep-11-19 23:54		Sep-12-19 00:13	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<25.0	25.0	<24.9	24.9	<25.0	25.0	<24.9	24.9	<25.0	25.0	<24.9	24.9
Diesel Range Organics (DRO)		<25.0	25.0	<24.9	24.9	<25.0	25.0	122	24.9	63.0	25.0	589	24.9
Motor Oil Range Hydrocarbons (MRO)		<25.0	25.0	<24.9	24.9	<25.0	25.0	<24.9	24.9	<25.0	25.0	113	24.9
Total GRO-DRO		<25.0	25.0	<24.9	24.9	<25.0	25.0	122	24.9	63.0	25.0	589	24.9
Total TPH		<25.0	25.0	<24.9	24.9	<25.0	25.0	122	24.9	63.0	25.0	702	24.9

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

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analysis Summary 636396

LT Environmental, Inc., Arvada, CO

Project Name: PLU 89

Project Id: 012918094
Contact: Dan Moir
Project Location:

Date Received in Lab: Tue Sep-10-19 08:10 am
Report Date: 13-SEP-19
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	636396-007		636396-008					
	Field Id:	BH04		BH04A					
	Depth:	1- ft		4- ft					
	Matrix:	SOIL		SOIL					
	Sampled:	Sep-09-19 16:10		Sep-09-19 16:30					
BTEX by EPA 8021B SUB: T104704400-18-16	***Extracted:***	Sep-11-19 12:30		Sep-11-19 12:30					
	Analyzed:	Sep-12-19 04:50		Sep-12-19 05:10					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00199	0.00199	<0.00198	0.00198				
Toluene		<0.00199	0.00199	<0.00198	0.00198				
Ethylbenzene		<0.00199	0.00199	<0.00198	0.00198				
m,p-Xylenes		<0.00398	0.00398	<0.00396	0.00396				
o-Xylene		<0.00199	0.00199	<0.00198	0.00198				
Total Xylenes		<0.00199	0.00199	<0.00198	0.00198				
Total BTEX		<0.00199	0.00199	<0.00198	0.00198				
Chloride by EPA 300 SUB: T104704400-18-16	***Extracted:***	Sep-12-19 13:10		Sep-12-19 13:10					
	Analyzed:	Sep-12-19 15:02		Sep-12-19 15:08					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		8.57	5.00	51.3	5.00				
TPH by SW8015 Mod SUB: T104704400-18-16	***Extracted:***	Sep-10-19 15:30		Sep-10-19 15:30					
	Analyzed:	Sep-12-19 00:32		Sep-12-19 00:51					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<25.0	25.0	<25.0	25.0				
Diesel Range Organics (DRO)		<25.0	25.0	<25.0	25.0				
Motor Oil Range Hydrocarbons (MRO)		<25.0	25.0	<25.0	25.0				
Total GRO-DRO		<25.0	25.0	<25.0	25.0				
Total TPH		<25.0	25.0	<25.0	25.0				

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

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analytical Results 636396

LT Environmental, Inc., Arvada, CO

PLU 89

Sample Id: **BH01** Matrix: Soil Date Received:09.10.19 08.10

Lab Sample Id: 636396-001 Date Collected: 09.09.19 14.20 Sample Depth:1 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 09.12.19 12.50 Basis: Wet Weight

Seq Number: 3101312 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**12.3**	5.01	mg/kg	09.12.19 15.58		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 09.10.19 15.30 Basis: Wet Weight

Seq Number: 3101187 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	09.11.19 22.38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	09.11.19 22.38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	09.11.19 22.38	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	09.11.19 22.38	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	09.11.19 22.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	09.11.19 22.38	
o-Terphenyl	84-15-1	81	%	70-135	09.11.19 22.38	

Certificate of Analytical Results 636396

LT Environmental, Inc., Arvada, CO

PLU 89

Sample Id:	**BH01**	Matrix:	Soil	Date Received:	09.10.19 08.10
Lab Sample Id:	636396-001	Date Collected:	09.09.19 14.20	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	09.11.19 12.30	Basis:	Wet Weight
Seq Number:	3101274			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	09.12.19 01.46	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	09.12.19 01.46	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	09.12.19 01.46	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	09.12.19 01.46	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	09.12.19 01.46	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	09.12.19 01.46	U	1
Total BTEX		<0.00199	0.00199	mg/kg	09.12.19 01.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	09.12.19 01.46	
4-Bromofluorobenzene	460-00-4	108	%	70-130	09.12.19 01.46	

Certificate of Analytical Results 636396

LT Environmental, Inc., Arvada, CO

PLU 89

Sample Id: **BH01A** Matrix: Soil Date Received:09.10.19 08.10

Lab Sample Id: 636396-002 Date Collected: 09.09.19 14.35 Sample Depth:4 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 09.12.19 12.50 Basis: Wet Weight

Seq Number: 3101312 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	09.12.19 16.05	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 09.10.19 15.30 Basis: Wet Weight

Seq Number: 3101187 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	09.11.19 22.57	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	09.11.19 22.57	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	09.11.19 22.57	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	09.11.19 22.57	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	09.11.19 22.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	09.11.19 22.57	
o-Terphenyl	84-15-1	83	%	70-135	09.11.19 22.57	

Certificate of Analytical Results 636396

LT Environmental, Inc., Arvada, CO

PLU 89

Sample Id:	**BH01A**	Matrix:	Soil	Date Received:	09.10.19 08.10
Lab Sample Id:	636396-002	Date Collected:	09.09.19 14.35	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	09.11.19 12.30	Basis:	Wet Weight
Seq Number:	3101274			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	09.12.19 02.06	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	09.12.19 02.06	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	09.12.19 02.06	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	09.12.19 02.06	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	09.12.19 02.06	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	09.12.19 02.06	U	1
Total BTEX		<0.00199	0.00199	mg/kg	09.12.19 02.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	115	%	70-130	09.12.19 02.06	
1,4-Difluorobenzene	540-36-3	107	%	70-130	09.12.19 02.06	

Certificate of Analytical Results 636396

LT Environmental, Inc., Arvada, CO

PLU 89

Sample Id: **BH02** Matrix: Soil Date Received:09.10.19 08.10

Lab Sample Id: 636396-003 Date Collected: 09.09.19 15.00 Sample Depth:1 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 09.12.19 12.50 Basis: Wet Weight

Seq Number: 3101312 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**533**	50.0	mg/kg	09.12.19 16.11		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 09.10.19 15.30 Basis: Wet Weight

Seq Number: 3101187 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	09.11.19 23.16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	09.11.19 23.16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	09.11.19 23.16	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	09.11.19 23.16	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	09.11.19 23.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	09.11.19 23.16	
o-Terphenyl	84-15-1	87	%	70-135	09.11.19 23.16	

Certificate of Analytical Results 636396

LT Environmental, Inc., Arvada, CO

PLU 89

Sample Id:	**BH02**	Matrix:	Soil	Date Received:	09.10.19 08.10
Lab Sample Id:	636396-003	Date Collected:	09.09.19 15.00	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	09.11.19 12.30	Basis:	Wet Weight
Seq Number:	3101274			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	09.12.19 02.27	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	09.12.19 02.27	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	09.12.19 02.27	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	09.12.19 02.27	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	09.12.19 02.27	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	09.12.19 02.27	U	1
Total BTEX		<0.00198	0.00198	mg/kg	09.12.19 02.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	09.12.19 02.27	
4-Bromofluorobenzene	460-00-4	111	%	70-130	09.12.19 02.27	

Certificate of Analytical Results 636396

LT Environmental, Inc., Arvada, CO

PLU 89

Sample Id: **BH02A** Matrix: Soil Date Received:09.10.19 08.10

Lab Sample Id: 636396-004 Date Collected: 09.09.19 15.10 Sample Depth:4 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 09.12.19 13.10 Basis: Wet Weight

Seq Number: 3101313 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**67.3**	4.97	mg/kg	09.12.19 13.36		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 09.10.19 15.30 Basis: Wet Weight

Seq Number: 3101187 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	09.11.19 23.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	**122**	24.9	mg/kg	09.11.19 23.35		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	09.11.19 23.35	U	1
Total GRO-DRO	PHC628	**122**	24.9	mg/kg	09.11.19 23.35		1
Total TPH	PHC635	**122**	24.9	mg/kg	09.11.19 23.35		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	09.11.19 23.35	
o-Terphenyl	84-15-1	86	%	70-135	09.11.19 23.35	

Certificate of Analytical Results 636396

LT Environmental, Inc., Arvada, CO

PLU 89

Sample Id:	**BH02A**	Matrix:	Soil	Date Received:	09.10.19 08.10
Lab Sample Id:	636396-004	Date Collected:	09.09.19 15.10	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	09.11.19 12.30	Basis:	Wet Weight
Seq Number:	3101274			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.12.19 02.47	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.12.19 02.47	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.12.19 02.47	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	09.12.19 02.47	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.12.19 02.47	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.12.19 02.47	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.12.19 02.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	09.12.19 02.47	
4-Bromofluorobenzene	460-00-4	113	%	70-130	09.12.19 02.47	

Certificate of Analytical Results 636396

LT Environmental, Inc., Arvada, CO

PLU 89

Sample Id: **BH03** Matrix: Soil Date Received:09.10.19 08.10

Lab Sample Id: 636396-005 Date Collected: 09.09.19 15.35 Sample Depth:1 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 09.12.19 13.10 Basis: Wet Weight

Seq Number: 3101313 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**30.3**	5.00	mg/kg	09.12.19 14.49		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 09.10.19 15.30 Basis: Wet Weight

Seq Number: 3101187 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	09.11.19 23.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	**63.0**	25.0	mg/kg	09.11.19 23.54		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	09.11.19 23.54	U	1
Total GRO-DRO	PHC628	**63.0**	25.0	mg/kg	09.11.19 23.54		1
Total TPH	PHC635	**63.0**	25.0	mg/kg	09.11.19 23.54		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	09.11.19 23.54	
o-Terphenyl	84-15-1	83	%	70-135	09.11.19 23.54	

Certificate of Analytical Results 636396

LT Environmental, Inc., Arvada, CO

PLU 89

Sample Id:	**BH03**	Matrix:	Soil	Date Received:	09.10.19 08.10
Lab Sample Id:	636396-005	Date Collected:	09.09.19 15.35	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	09.11.19 12.30	Basis:	Wet Weight
Seq Number:	3101274			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.12.19 03.07	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.12.19 03.07	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.12.19 03.07	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	09.12.19 03.07	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.12.19 03.07	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.12.19 03.07	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.12.19 03.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	123	%	70-130	09.12.19 03.07	
1,4-Difluorobenzene	540-36-3	106	%	70-130	09.12.19 03.07	

Certificate of Analytical Results 636396

LT Environmental, Inc., Arvada, CO

PLU 89

Sample Id: **BH03A** Matrix: Soil Date Received:09.10.19 08.10

Lab Sample Id: 636396-006 Date Collected: 09.09.19 15.45 Sample Depth:4 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 09.12.19 13.10 Basis: Wet Weight

Seq Number: 3101313 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**121**	5.00	mg/kg	09.12.19 14.56		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 09.10.19 15.30 Basis: Wet Weight

Seq Number: 3101187 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	09.12.19 00.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	**589**	24.9	mg/kg	09.12.19 00.13		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**113**	24.9	mg/kg	09.12.19 00.13		1
Total GRO-DRO	PHC628	**589**	24.9	mg/kg	09.12.19 00.13		1
Total TPH	PHC635	**702**	24.9	mg/kg	09.12.19 00.13		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	09.12.19 00.13	
o-Terphenyl	84-15-1	101	%	70-135	09.12.19 00.13	

Certificate of Analytical Results 636396

LT Environmental, Inc., Arvada, CO

PLU 89

Sample Id:	**BH03A**	Matrix:	Soil	Date Received:	09.10.19 08.10
Lab Sample Id:	636396-006	Date Collected:	09.09.19 15.45	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	09.11.19 12.30	Basis:	Wet Weight
Seq Number:	3101274			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	09.12.19 04.30	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	09.12.19 04.30	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	09.12.19 04.30	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	09.12.19 04.30	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	09.12.19 04.30	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	09.12.19 04.30	U	1
Total BTEX		<0.00198	0.00198	mg/kg	09.12.19 04.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	119	%	70-130	09.12.19 04.30	
1,4-Difluorobenzene	540-36-3	100	%	70-130	09.12.19 04.30	

Certificate of Analytical Results 636396

LT Environmental, Inc., Arvada, CO

PLU 89

Sample Id: **BH04** Matrix: Soil Date Received:09.10.19 08.10

Lab Sample Id: 636396-007 Date Collected: 09.09.19 16.10 Sample Depth:1 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 09.12.19 13.10 Basis: Wet Weight

Seq Number: 3101313 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8.57**	5.00	mg/kg	09.12.19 15.02		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 09.10.19 15.30 Basis: Wet Weight

Seq Number: 3101187 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	09.12.19 00.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	09.12.19 00.32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	09.12.19 00.32	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	09.12.19 00.32	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	09.12.19 00.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	09.12.19 00.32	
o-Terphenyl	84-15-1	86	%	70-135	09.12.19 00.32	

Certificate of Analytical Results 636396

LT Environmental, Inc., Arvada, CO

PLU 89

Sample Id:	**BH04**	Matrix:	Soil	Date Received:	09.10.19 08.10
Lab Sample Id:	636396-007	Date Collected:	09.09.19 16.10	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	09.11.19 12.30	Basis:	Wet Weight
Seq Number:	3101274			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	09.12.19 04.50	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	09.12.19 04.50	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	09.12.19 04.50	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	09.12.19 04.50	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	09.12.19 04.50	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	09.12.19 04.50	U	1
Total BTEX		<0.00199	0.00199	mg/kg	09.12.19 04.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	114	%	70-130	09.12.19 04.50	
1,4-Difluorobenzene	540-36-3	108	%	70-130	09.12.19 04.50	

Certificate of Analytical Results 636396

LT Environmental, Inc., Arvada, CO

PLU 89

Sample Id: **BH04A** Matrix: Soil Date Received:09.10.19 08.10

Lab Sample Id: 636396-008 Date Collected: 09.09.19 16.30 Sample Depth:4 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 09.12.19 13.10 Basis: Wet Weight

Seq Number: 3101313 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**51.3**	5.00	mg/kg	09.12.19 15.08		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 09.10.19 15.30 Basis: Wet Weight

Seq Number: 3101187 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	09.12.19 00.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	09.12.19 00.51	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	09.12.19 00.51	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	09.12.19 00.51	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	09.12.19 00.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	09.12.19 00.51	
o-Terphenyl	84-15-1	84	%	70-135	09.12.19 00.51	

Certificate of Analytical Results 636396

LT Environmental, Inc., Arvada, CO

PLU 89

Sample Id:	**BH04A**	Matrix:	Soil	Date Received:	09.10.19 08.10
Lab Sample Id:	636396-008	Date Collected:	09.09.19 16.30	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	09.11.19 12.30	Basis:	Wet Weight
Seq Number:	3101274			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	09.12.19 05.10	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	09.12.19 05.10	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	09.12.19 05.10	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	09.12.19 05.10	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	09.12.19 05.10	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	09.12.19 05.10	U	1
Total BTEX		<0.00198	0.00198	mg/kg	09.12.19 05.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	09.12.19 05.10	
4-Bromofluorobenzene	460-00-4	112	%	70-130	09.12.19 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 636396

LT Environmental, Inc.

PLU 89

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3101312 — Matrix: Solid — Date Prep: 09.12.19
MB Sample Id: 7686080-1-BLK — LCS Sample Id: 7686080-1-BKS — LCSD Sample Id: 7686080-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	264	106	263	105	90-110	0	20	mg/kg	09.12.19 13:04	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3101313 — Matrix: Solid — Date Prep: 09.12.19
MB Sample Id: 7686081-1-BLK — LCS Sample Id: 7686081-1-BKS — LCSD Sample Id: 7686081-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	254	102	254	102	90-110	0	20	mg/kg	09.12.19 13:23	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3101312 — Matrix: Soil — Date Prep: 09.12.19
Parent Sample Id: 636442-006 — MS Sample Id: 636442-006 S — MSD Sample Id: 636442-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1.64	250	266	106	266	106	90-110	0	20	mg/kg	09.12.19 13:23	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3101312 — Matrix: Soil — Date Prep: 09.12.19
Parent Sample Id: 636453-001 — MS Sample Id: 636453-001 S — MSD Sample Id: 636453-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	3.95	250	265	104	265	104	90-110	0	20	mg/kg	09.12.19 14:54	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3101313 — Matrix: Soil — Date Prep: 09.12.19
Parent Sample Id: 636396-004 — MS Sample Id: 636396-004 S — MSD Sample Id: 636396-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	67.3	249	309	97	308	97	90-110	0	20	mg/kg	09.12.19 13:42	

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 636396

LT Environmental, Inc.

PLU 89

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3101313 Matrix: Soil Date Prep: 09.12.19
Parent Sample Id: 636396-008 MS Sample Id: 636396-008 S MSD Sample Id: 636396-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	51.3	250	298	99	297	98	90-110	0	20	mg/kg	09.12.19 15:15	

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3101187 Matrix: Solid Date Prep: 09.10.19
MB Sample Id: 7685904-1-BLK LCS Sample Id: 7685904-1-BKS LCSD Sample Id: 7685904-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	1000	100	1020	102	70-135	2	20	mg/kg	09.11.19 17:14	
Diesel Range Organics (DRO)	<15.0	1000	944	94	949	95	70-135	1	20	mg/kg	09.11.19 17:14	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	97		116		114		70-135	%	09.11.19 17:14
o-Terphenyl	96		96		102		70-135	%	09.11.19 17:14

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3101187 Matrix: Soil Date Prep: 09.10.19
Parent Sample Id: 636383-132 MS Sample Id: 636383-132 S MSD Sample Id: 636383-132 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)	16.8	996	1010	100	1020	100	70-135	1	20	mg/kg	09.11.19 18:11	
Diesel Range Organics (DRO)	<14.9	996	959	96	958	96	70-135	0	20	mg/kg	09.11.19 18:11	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	114		114		70-135	%	09.11.19 18:11
o-Terphenyl	95		95		70-135	%	09.11.19 18:11

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 636396

LT Environmental, Inc.

PLU 89

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3101274 — Matrix: Solid — Date Prep: 09.11.19
MB Sample Id: 7685959-1-BLK — LCS Sample Id: 7685959-1-BKS — LCSD Sample Id: 7685959-1-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	0.0974	97	0.0989	99	70-130	2	35	mg/kg	09.12.19 10:05	
Toluene	<0.00200	0.100	0.0988	99	0.100	100	70-130	1	35	mg/kg	09.12.19 10:05	
Ethylbenzene	<0.00200	0.100	0.120	120	0.121	121	70-130	1	35	mg/kg	09.12.19 10:05	
m,p-Xylenes	<0.00400	0.200	0.245	123	0.249	125	70-130	2	35	mg/kg	09.12.19 10:05	
o-Xylene	<0.00200	0.100	0.116	116	0.121	121	70-130	4	35	mg/kg	09.12.19 10:05	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		98		102		70-130	%	09.12.19 10:05
4-Bromofluorobenzene	103		115		125		70-130	%	09.12.19 10:05

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3101274 — Matrix: Soil — Date Prep: 09.11.19
Parent Sample Id: 636393-001 — MS Sample Id: 636393-001 S — MSD Sample Id: 636393-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	0.00708	0.0992	0.0557	49	0.0612	54	70-130	9	35	mg/kg	09.12.19 10:45	X
Toluene	0.00640	0.0992	0.0539	48	0.0637	57	70-130	17	35	mg/kg	09.12.19 10:45	X
Ethylbenzene	<0.00198	0.0992	0.0493	50	0.0595	60	70-130	19	35	mg/kg	09.12.19 10:45	X
m,p-Xylenes	<0.00397	0.198	0.103	52	0.120	60	70-130	15	35	mg/kg	09.12.19 10:45	X
o-Xylene	<0.00198	0.0992	0.0503	51	0.0570	57	70-130	12	35	mg/kg	09.12.19 10:45	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		103		70-130	%	09.12.19 10:45
4-Bromofluorobenzene	116		116		70-130	%	09.12.19 10:45

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

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Chain of Custody

Work Order No: 630 396

XENCO LABORATORIES

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

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Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.236.3849	Email:	bbelill@ltenv.com

Work Order Comments

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

Project Name:	PLU 89 (2RP-3566)	Turn Around	
Project Number:	012918094	Routine	☒
P.O. Number:		Rush:	
Sampler's Name:	Benjamin Belill	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	4.8	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:	8

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
BH01	S	9/9/19	1420	1'	1	X	X	X
BH01A			1435	4'	1	X	X	X
BH02			1500	1'	1	X	X	X
BH02A			1510	4'	1	X	X	X
BH03			1535	1'	1	X	X	X
BH03A			1545	4'	1	X	X	X
BH04			1610	1'	1	X	X	X
BH04A	↓	↓	1630	4'	↓	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

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
		9.10.19	2		9/10/19 0810
			4		

Revised 051418 Rev. 2018.1

Received by OCD: 3/20/2023 9:14:54 AM
Final 1.000
Page 27 of 31
Released to Imaging: 3/20/2023 9:22:43 AM

Inter-Office Shipment

IOS Number **47705**

Date/Time: 09/10/19 10:25
Created by: Elizabeth Mcclellan
Please send report to: Jessica Kramer

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

Lab# To: **Midland**
Air Bill No.: 776204785540
E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
636396-001	S	BH01	09/09/19 14:20	SW8015MOD_NM	TPH by SW8015 Mod	09/16/19	09/23/19	JKR	GRO-DRO PHCC10C28 PI	
636396-001	S	BH01	09/09/19 14:20	E300_CL	Chloride by EPA 300	09/16/19	03/07/20	JKR	CL	
636396-001	S	BH01	09/09/19 14:20	SW8021B	BTEX by EPA 8021B	09/16/19	09/23/19	JKR	BR4FBZ BZ BZME EBZ X	
636396-002	S	BH01A	09/09/19 14:35	SW8015MOD_NM	TPH by SW8015 Mod	09/16/19	09/23/19	JKR	GRO-DRO PHCC10C28 PI	
636396-002	S	BH01A	09/09/19 14:35	SW8021B	BTEX by EPA 8021B	09/16/19	09/23/19	JKR	BR4FBZ BZ BZME EBZ X	
636396-002	S	BH01A	09/09/19 14:35	E300_CL	Chloride by EPA 300	09/16/19	03/07/20	JKR	CL	
636396-003	S	BH02	09/09/19 15:00	SW8021B	BTEX by EPA 8021B	09/16/19	09/23/19	JKR	BR4FBZ BZ BZME EBZ X	
636396-003	S	BH02	09/09/19 15:00	SW8015MOD_NM	TPH by SW8015 Mod	09/16/19	09/23/19	JKR	GRO-DRO PHCC10C28 PI	
636396-003	S	BH02	09/09/19 15:00	E300_CL	Chloride by EPA 300	09/16/19	03/07/20	JKR	CL	
636396-004	S	BH02A	09/09/19 15:10	SW8021B	BTEX by EPA 8021B	09/16/19	09/23/19	JKR	BR4FBZ BZ BZME EBZ X	
636396-004	S	BH02A	09/09/19 15:10	SW8015MOD_NM	TPH by SW8015 Mod	09/16/19	09/23/19	JKR	GRO-DRO PHCC10C28 PI	
636396-004	S	BH02A	09/09/19 15:10	E300_CL	Chloride by EPA 300	09/16/19	03/07/20	JKR	CL	
636396-005	S	BH03	09/09/19 15:35	SW8021B	BTEX by EPA 8021B	09/16/19	09/23/19	JKR	BR4FBZ BZ BZME EBZ X	
636396-005	S	BH03	09/09/19 15:35	SW8015MOD_NM	TPH by SW8015 Mod	09/16/19	09/23/19	JKR	GRO-DRO PHCC10C28 PI	
636396-005	S	BH03	09/09/19 15:35	E300_CL	Chloride by EPA 300	09/16/19	03/07/20	JKR	CL	
636396-006	S	BH03A	09/09/19 15:45	SW8015MOD_NM	TPH by SW8015 Mod	09/16/19	09/23/19	JKR	GRO-DRO PHCC10C28 PI	
636396-006	S	BH03A	09/09/19 15:45	SW8021B	BTEX by EPA 8021B	09/16/19	09/23/19	JKR	BR4FBZ BZ BZME EBZ X	
636396-006	S	BH03A	09/09/19 15:45	E300_CL	Chloride by EPA 300	09/16/19	03/07/20	JKR	CL	
636396-007	S	BH04	09/09/19 16:10	E300_CL	Chloride by EPA 300	09/16/19	03/07/20	JKR	CL	
636396-007	S	BH04	09/09/19 16:10	SW8021B	BTEX by EPA 8021B	09/16/19	09/23/19	JKR	BR4FBZ BZ BZME EBZ X	
636396-007	S	BH04	09/09/19 16:10	SW8015MOD_NM	TPH by SW8015 Mod	09/16/19	09/23/19	JKR	GRO-DRO PHCC10C28 PI	
636396-008	S	BH04A	09/09/19 16:30	SW8021B	BTEX by EPA 8021B	09/16/19	09/23/19	JKR	BR4FBZ BZ BZME EBZ X	
636396-008	S	BH04A	09/09/19 16:30	E300_CL	Chloride by EPA 300	09/16/19	03/07/20	JKR	CL	
636396-008	S	BH04A	09/09/19 16:30	SW8015MOD_NM	TPH by SW8015 Mod	09/16/19	09/23/19	JKR	GRO-DRO PHCC10C28 PI	

Inter-Office Shipment

IOS Number **47705**

Date/Time: 09/10/19 10:25
Lab# From: **Carlsbad**
Lab# To: **Midland**

Created by: Elizabeth Mcclellan
Delivery Priority:
Air Bill No.: 776204785540

Please send report to: Jessica Kramer
Address: 1089 N Canal Street
E-Mail: jessica.kramer@xenco.com

Inter Office Shipment or Sample Comments:

Relinquished By: Elizabeth McClellan

Date Relinquished: 09/10/2019

Received By: Brianna Teel

Date Received: 09/11/2019 12:55

Cooler Temperature: 2.3

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 47705

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

Sent By: Elizabeth McClellan **Date Sent:** 09/10/2019 10:25 AM

Received By: Brianna Teel **Date Received:** 09/11/2019 12:55 PM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	2.3	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received with appropriate temperature?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**	
#5 *Custody Seals Signed and dated for Containers/coolers	**Yes**	
#6 *IOS present?	**Yes**	
#7 Any missing/extra samples?	**No**	
#8 IOS agrees with sample label(s)/matrix?	**Yes**	
#9 Sample matrix/ properties agree with IOS?	**Yes**	
#10 Samples in proper container/ bottle?	**Yes**	
#11 Samples properly preserved?	**Yes**	
#12 Sample container(s) intact?	**Yes**	
#13 Sufficient sample amount for indicated test(s)?	**Yes**	
#14 All samples received within hold time?	**Yes**	

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ **Contacted by :** _____ **Date:** _____

Checklist reviewed by: Brianna Teel Date: 09/11/2019

Brianna Teel

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 09/10/2019 08:10:00 AM

Work Order #: 636396

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

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	4.8	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**No**	
#5 Custody Seals intact on sample bottles?	**No**	
#6*Custody Seals Signed and dated?	**N/A**	
#7 *Chain of Custody present?	**Yes**	
#8 Any missing/extra samples?	**No**	
#9 Chain of Custody signed when relinquished/ received?	**Yes**	
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**	
#11 Container label(s) legible and intact?	**Yes**	
#12 Samples in proper container/ bottle?	**Yes**	
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**Yes**	Subbed to Xenco Midland
#18 Water VOC samples have zero headspace?	**N/A**	

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 09/10/2019

Checklist reviewed by: Jessica Kramer Date: 09/10/2019

Jessica Kramer

Xenco Laboratories (Xenco) in Midland, Texas,

Analytical Report 636969

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU 89(2RP-3566)

012918094

19-SEP-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

19-SEP-19

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

Reference: XENCO Report No(s): **636969**
PLU 89(2RP-3566)
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) 636969. 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. 636969 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 636969

LT Environmental, Inc., Arvada, CO

PLU 89(2RP-3566)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	09-12-19 15:00	2 ft	636969-001
FS02	S	09-12-19 15:10	2 ft	636969-002
SW01	S	09-12-19 15:20	0 - 2 ft	636969-003
SW02	S	09-12-19 15:25	0 - 3 ft	636969-004
SW03	S	09-12-19 15:30	0 - 3 ft	636969-005
FS03	S	09-12-19 15:40	1.5 ft	636969-006
FS04	S	09-12-19 15:45	3 ft	636969-007

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 89(2RP-3566)

Project ID: *012918094*
Work Order Number(s): *636969*

Report Date: *19-SEP-19*
Date Received: *09/16/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3101780 BTEX by EPA 8021B

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

Certificate of Analysis Summary 636969

LT Environmental, Inc., Arvada, CO

Project Name: PLU 89(2RP-3566)

Project Id: 012918094
Contact: Dan Moir
Project Location:

Date Received in Lab: Mon Sep-16-19 12:20 pm
Report Date: 19-SEP-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	636969-001		636969-002		636969-003		636969-004		636969-005		636969-006	
	Field Id:	FS01		FS02		SW01		SW02		SW03		FS03	
	Depth:	2- ft		2- ft		0-2 ft		0-3 ft		0-3 ft		1.5- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Sep-12-19 15:00		Sep-12-19 15:10		Sep-12-19 15:20		Sep-12-19 15:25		Sep-12-19 15:30		Sep-12-19 15:40	
BTEX by EPA 8021B SUB: T104704400-18-16	***Extracted:***	Sep-17-19 11:45		Sep-17-19 11:45		Sep-17-19 11:45		Sep-17-19 11:45		Sep-17-19 11:45		Sep-17-19 11:45	
	Analyzed:	Sep-18-19 01:40		Sep-18-19 02:00		Sep-18-19 02:20		Sep-18-19 02:40		Sep-18-19 03:00		Sep-18-19 03:20	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00202	0.00202	<0.00199	0.00199	<0.00198	0.00198	<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200
Toluene		<0.00202	0.00202	<0.00199	0.00199	<0.00198	0.00198	<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200
Ethylbenzene		<0.00202	0.00202	<0.00199	0.00199	<0.00198	0.00198	<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200
m,p-Xylenes		<0.00404	0.00404	<0.00398	0.00398	<0.00397	0.00397	<0.00397	0.00397	<0.00399	0.00399	<0.00400	0.00400
o-Xylene		<0.00202	0.00202	<0.00199	0.00199	<0.00198	0.00198	<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200
Total Xylenes		<0.00202	0.00202	<0.00199	0.00199	<0.00198	0.00198	<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200
Total BTEX		<0.00202	0.00202	<0.00199	0.00199	<0.00198	0.00198	<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200
Chloride by EPA 300 SUB: T104704400-18-16	***Extracted:***	Sep-17-19 13:20		Sep-17-19 13:20		Sep-17-19 13:20		Sep-17-19 13:20		Sep-17-19 13:20		Sep-17-19 13:20	
	Analyzed:	Sep-17-19 15:13		Sep-17-19 15:25		Sep-17-19 15:32		Sep-17-19 15:57		Sep-17-19 16:03		Sep-17-19 16:41	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		99.3	5.04	248	5.04	249	4.97	57.6	5.01	266	5.00	70.8	5.02
TPH by SW8015 Mod SUB: T104704400-18-16	***Extracted:***	Sep-17-19 11:02		Sep-17-19 11:02		Sep-17-19 11:02		Sep-17-19 11:02		Sep-17-19 11:02		Sep-17-19 11:02	
	Analyzed:	Sep-17-19 20:15		Sep-17-19 20:37		Sep-17-19 20:59		Sep-17-19 21:20		Sep-17-19 21:42		Sep-17-19 22:04	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<49.9	49.9	<50.0	50.0	<50.0	50.0	<49.9	49.9	<50.0	50.0	<49.9	49.9
Diesel Range Organics (DRO)		<49.9	49.9	69.6	50.0	107	50.0	149	49.9	183	50.0	247	49.9
Motor Oil Range Hydrocarbons (MRO)		<49.9	49.9	<50.0	50.0	<50.0	50.0	50.1	49.9	69.9	50.0	56.1	49.9
Total GRO-DRO		<49.9	49.9	69.6	50.0	107	50.0	149	49.9	183	50.0	247	49.9
Total TPH		<49.9	49.9	69.6	50.0	107	50.0	199	49.9	253	50.0	303	49.9

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

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

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analysis Summary 636969

LT Environmental, Inc., Arvada, CO

Project Name: PLU 89(2RP-3566)

Project Id: 012918094
Contact: Dan Moir
Project Location:

Date Received in Lab: Mon Sep-16-19 12:20 pm
Report Date: 19-SEP-19
Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	636969-007					
	Field Id:	FS04					
	Depth:	3- ft					
	Matrix:	SOIL					
	Sampled:	Sep-12-19 15:45					
BTEX by EPA 8021B SUB: T104704400-18-16	***Extracted:***	Sep-17-19 11:45					
	Analyzed:	Sep-18-19 03:40					
	Units/RL:	mg/kg	RL				
Benzene		<0.00201	0.00201				
Toluene		<0.00201	0.00201				
Ethylbenzene		<0.00201	0.00201				
m,p-Xylenes		<0.00402	0.00402				
o-Xylene		<0.00201	0.00201				
Total Xylenes		<0.00201	0.00201				
Total BTEX		<0.00201	0.00201				
Chloride by EPA 300 SUB: T104704400-18-16	***Extracted:***	Sep-17-19 13:20					
	Analyzed:	Sep-17-19 16:47					
	Units/RL:	mg/kg	RL				
Chloride		568	5.05				
TPH by SW8015 Mod SUB: T104704400-18-16	***Extracted:***	Sep-17-19 11:02					
	Analyzed:	Sep-17-19 22:25					
	Units/RL:	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<49.8	49.8				
Diesel Range Organics (DRO)		62.4	49.8				
Motor Oil Range Hydrocarbons (MRO)		<49.8	49.8				
Total GRO-DRO		62.4	49.8				
Total TPH		62.4	49.8				

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The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.
Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analytical Results 636969

LT Environmental, Inc., Arvada, CO

PLU 89(2RP-3566)

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	09.16.19 12.20
Lab Sample Id:	636969-001	Date Collected:	09.12.19 15.00	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	09.17.19 13.20	Basis:	Wet Weight
Seq Number:	3101737			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**99.3**	5.04	mg/kg	09.17.19 15.13		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	09.17.19 11.02	Basis:	Wet Weight
Seq Number:	3101746			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	09.17.19 20.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	09.17.19 20.15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	09.17.19 20.15	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	09.17.19 20.15	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	09.17.19 20.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	09.17.19 20.15	
o-Terphenyl	84-15-1	105	%	70-135	09.17.19 20.15	

Certificate of Analytical Results 636969

LT Environmental, Inc., Arvada, CO

PLU 89(2RP-3566)

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	09.16.19 12.20
Lab Sample Id:	636969-001	Date Collected:	09.12.19 15.00	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	09.17.19 11.45	Basis:	Wet Weight
Seq Number:	3101780			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	09.18.19 01.40	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	09.18.19 01.40	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	09.18.19 01.40	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	09.18.19 01.40	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	09.18.19 01.40	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	09.18.19 01.40	U	1
Total BTEX		<0.00202	0.00202	mg/kg	09.18.19 01.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	107	%	70-130	09.18.19 01.40	
1,4-Difluorobenzene	540-36-3	97	%	70-130	09.18.19 01.40	

Certificate of Analytical Results 636969

LT Environmental, Inc., Arvada, CO

PLU 89(2RP-3566)

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	09.16.19 12.20
Lab Sample Id:	636969-002	Date Collected:	09.12.19 15.10	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	09.17.19 13.20	Basis:	Wet Weight
Seq Number:	3101737			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**248**	5.04	mg/kg	09.17.19 15.25		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	09.17.19 11.02	Basis:	Wet Weight
Seq Number:	3101746			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	09.17.19 20.37	U	1
Diesel Range Organics (DRO)	C10C28DRO	**69.6**	50.0	mg/kg	09.17.19 20.37		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.17.19 20.37	U	1
Total GRO-DRO	PHC628	**69.6**	50.0	mg/kg	09.17.19 20.37		1
Total TPH	PHC635	**69.6**	50.0	mg/kg	09.17.19 20.37		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	09.17.19 20.37	
o-Terphenyl	84-15-1	100	%	70-135	09.17.19 20.37	

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LT Environmental, Inc., Arvada, CO

PLU 89(2RP-3566)

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	09.16.19 12.20
Lab Sample Id:	636969-002	Date Collected:	09.12.19 15.10	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	09.17.19 11.45	Basis:	Wet Weight
Seq Number:	3101780			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	09.18.19 02.00	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	09.18.19 02.00	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	09.18.19 02.00	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	09.18.19 02.00	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	09.18.19 02.00	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	09.18.19 02.00	U	1
Total BTEX		<0.00199	0.00199	mg/kg	09.18.19 02.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	96	%	70-130	09.18.19 02.00	
4-Bromofluorobenzene	460-00-4	79	%	70-130	09.18.19 02.00	

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LT Environmental, Inc., Arvada, CO

PLU 89(2RP-3566)

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	09.16.19 12.20
Lab Sample Id:	636969-003	Date Collected:	09.12.19 15.20	Sample Depth:	0 - 2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	09.17.19 13.20	Basis:	Wet Weight
Seq Number:	3101737			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**249**	4.97	mg/kg	09.17.19 15.32		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	09.17.19 11.02	Basis:	Wet Weight
Seq Number:	3101746			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	09.17.19 20.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	**107**	50.0	mg/kg	09.17.19 20.59		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.17.19 20.59	U	1
Total GRO-DRO	PHC628	**107**	50.0	mg/kg	09.17.19 20.59		1
Total TPH	PHC635	**107**	50.0	mg/kg	09.17.19 20.59		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	09.17.19 20.59	
o-Terphenyl	84-15-1	110	%	70-135	09.17.19 20.59	

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LT Environmental, Inc., Arvada, CO

PLU 89(2RP-3566)

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	09.16.19 12.20
Lab Sample Id:	636969-003	Date Collected:	09.12.19 15.20	Sample Depth:	0 - 2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	09.17.19 11.45	Basis:	Wet Weight
Seq Number:	3101780			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	09.18.19 02.20	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	09.18.19 02.20	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	09.18.19 02.20	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	09.18.19 02.20	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	09.18.19 02.20	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	09.18.19 02.20	U	1
Total BTEX		<0.00198	0.00198	mg/kg	09.18.19 02.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	96	%	70-130	09.18.19 02.20	
4-Bromofluorobenzene	460-00-4	77	%	70-130	09.18.19 02.20	

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LT Environmental, Inc., Arvada, CO

PLU 89(2RP-3566)

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	09.16.19 12.20
Lab Sample Id:	636969-004	Date Collected:	09.12.19 15.25	Sample Depth:	0 - 3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	09.17.19 13.20	Basis:	Wet Weight
Seq Number:	3101737			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**57.6**	5.01	mg/kg	09.17.19 15.57		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	09.17.19 11.02	Basis:	Wet Weight
Seq Number:	3101746			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	09.17.19 21.20	U	1
Diesel Range Organics (DRO)	C10C28DRO	**149**	49.9	mg/kg	09.17.19 21.20		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**50.1**	49.9	mg/kg	09.17.19 21.20		1
Total GRO-DRO	PHC628	**149**	49.9	mg/kg	09.17.19 21.20		1
Total TPH	PHC635	**199**	49.9	mg/kg	09.17.19 21.20		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	121	%	70-135	09.17.19 21.20	
o-Terphenyl	84-15-1	122	%	70-135	09.17.19 21.20	

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LT Environmental, Inc., Arvada, CO

PLU 89(2RP-3566)

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	09.16.19 12.20
Lab Sample Id:	636969-004	Date Collected:	09.12.19 15.25	Sample Depth:	0 - 3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	09.17.19 11.45	Basis:	Wet Weight
Seq Number:	3101780			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	09.18.19 02.40	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	09.18.19 02.40	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	09.18.19 02.40	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	09.18.19 02.40	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	09.18.19 02.40	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	09.18.19 02.40	U	1
Total BTEX		<0.00198	0.00198	mg/kg	09.18.19 02.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	114	%	70-130	09.18.19 02.40	
1,4-Difluorobenzene	540-36-3	99	%	70-130	09.18.19 02.40	

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LT Environmental, Inc., Arvada, CO

PLU 89(2RP-3566)

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	09.16.19 12.20
Lab Sample Id:	636969-005	Date Collected:	09.12.19 15.30	Sample Depth:	0 - 3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	09.17.19 13.20	Basis:	Wet Weight
Seq Number:	3101737			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**266**	5.00	mg/kg	09.17.19 16.03		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	09.17.19 11.02	Basis:	Wet Weight
Seq Number:	3101746			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	09.17.19 21.42	U	1
Diesel Range Organics (DRO)	C10C28DRO	**183**	50.0	mg/kg	09.17.19 21.42		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**69.9**	50.0	mg/kg	09.17.19 21.42		1
Total GRO-DRO	PHC628	**183**	50.0	mg/kg	09.17.19 21.42		1
Total TPH	PHC635	**253**	50.0	mg/kg	09.17.19 21.42		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	126	%	70-135	09.17.19 21.42	
o-Terphenyl	84-15-1	119	%	70-135	09.17.19 21.42	

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LT Environmental, Inc., Arvada, CO

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Sample Id:	**SW03**	Matrix:	Soil	Date Received:	09.16.19 12.20
Lab Sample Id:	636969-005	Date Collected:	09.12.19 15.30	Sample Depth:	0 - 3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	09.17.19 11.45	Basis:	Wet Weight
Seq Number:	3101780			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.18.19 03.00	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.18.19 03.00	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.18.19 03.00	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	09.18.19 03.00	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.18.19 03.00	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.18.19 03.00	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.18.19 03.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	129	%	70-130	09.18.19 03.00	
1,4-Difluorobenzene	540-36-3	73	%	70-130	09.18.19 03.00	

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LT Environmental, Inc., Arvada, CO

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Sample Id:	**FS03**	Matrix:	Soil	Date Received:	09.16.19 12.20
Lab Sample Id:	636969-006	Date Collected:	09.12.19 15.40	Sample Depth:	1.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	09.17.19 13.20	Basis:	Wet Weight
Seq Number:	3101737			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**70.8**	5.02	mg/kg	09.17.19 16.41		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	09.17.19 11.02	Basis:	Wet Weight
Seq Number:	3101746			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	09.17.19 22.04	U	1
Diesel Range Organics (DRO)	C10C28DRO	**247**	49.9	mg/kg	09.17.19 22.04		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**56.1**	49.9	mg/kg	09.17.19 22.04		1
Total GRO-DRO	PHC628	**247**	49.9	mg/kg	09.17.19 22.04		1
Total TPH	PHC635	**303**	49.9	mg/kg	09.17.19 22.04		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-135	09.17.19 22.04	
o-Terphenyl	84-15-1	122	%	70-135	09.17.19 22.04	

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LT Environmental, Inc., Arvada, CO

PLU 89(2RP-3566)

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	09.16.19 12.20
Lab Sample Id:	636969-006	Date Collected:	09.12.19 15.40	Sample Depth:	1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	09.17.19 11.45	Basis:	Wet Weight
Seq Number:	3101780			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.18.19 03.20	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.18.19 03.20	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.18.19 03.20	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	09.18.19 03.20	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.18.19 03.20	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.18.19 03.20	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.18.19 03.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	116	%	70-130	09.18.19 03.20	
1,4-Difluorobenzene	540-36-3	78	%	70-130	09.18.19 03.20	

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LT Environmental, Inc., Arvada, CO

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Sample Id:	**FS04**	Matrix:	Soil	Date Received:	09.16.19 12.20
Lab Sample Id:	636969-007	Date Collected:	09.12.19 15.45	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	09.17.19 13.20	Basis:	Wet Weight
Seq Number:	3101737			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**568**	5.05	mg/kg	09.17.19 16.47		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	09.17.19 11.02	Basis:	Wet Weight
Seq Number:	3101746			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	09.17.19 22.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	**62.4**	49.8	mg/kg	09.17.19 22.25		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	09.17.19 22.25	U	1
Total GRO-DRO	PHC628	**62.4**	49.8	mg/kg	09.17.19 22.25		1
Total TPH	PHC635	**62.4**	49.8	mg/kg	09.17.19 22.25		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	119	%	70-135	09.17.19 22.25	
o-Terphenyl	84-15-1	118	%	70-135	09.17.19 22.25	

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LT Environmental, Inc., Arvada, CO

PLU 89(2RP-3566)

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	09.16.19 12.20
Lab Sample Id:	636969-007	Date Collected:	09.12.19 15.45	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	09.17.19 11.45	Basis:	Wet Weight
Seq Number:	3101780			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	09.18.19 03.40	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	09.18.19 03.40	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	09.18.19 03.40	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	09.18.19 03.40	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	09.18.19 03.40	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	09.18.19 03.40	U	1
Total BTEX		<0.00201	0.00201	mg/kg	09.18.19 03.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	70-130	09.18.19 03.40	
4-Bromofluorobenzene	460-00-4	117	%	70-130	09.18.19 03.40	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 636969

LT Environmental, Inc.

PLU 89(2RP-3566)

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3101737 — Matrix: Solid — Date Prep: 09.17.19
MB Sample Id: 7686340-1-BLK — LCS Sample Id: 7686340-1-BKS — LCSD Sample Id: 7686340-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	237	95	245	98	90-110	3	20	mg/kg	09.17.19 13:34	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3101737 — Matrix: Soil — Date Prep: 09.17.19
Parent Sample Id: 636969-003 — MS Sample Id: 636969-003 S — MSD Sample Id: 636969-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	249	249	481	93	491	97	90-110	2	20	mg/kg	09.17.19 16:28	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3101737 — Matrix: Soil — Date Prep: 09.17.19
Parent Sample Id: 637059-009 — MS Sample Id: 637059-009 S — MSD Sample Id: 637059-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	39.5	248	245	83	256	87	90-110	4	20	mg/kg	09.17.19 13:53	X

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3101746 — Matrix: Solid — Date Prep: 09.17.19
MB Sample Id: 7686310-1-BLK — LCS Sample Id: 7686310-1-BKS — LCSD Sample Id: 7686310-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	1020	102	1050	105	70-135	3	20	mg/kg	09.17.19 11:48	
Diesel Range Organics (DRO)	<15.0	1000	973	97	1020	102	70-135	5	20	mg/kg	09.17.19 11:48	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	108		118		123		70-135	%	09.17.19 11:48
o-Terphenyl	103		112		118		70-135	%	09.17.19 11:48

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

QC Summary 636969

LT Environmental, Inc.

PLU 89(2RP-3566)

Analytical Method: TPH by SW8015 Mod | Prep Method: SW8015P
Seq Number: 3101746 | Matrix: Soil | Date Prep: 09.17.19
Parent Sample Id: 636970-001 | MS Sample Id: 636970-001 S | MSD Sample Id: 636970-001 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)	40.0	999	1080	104	1020	98	70-135	6	20	mg/kg	09.17.19 12:52	
Diesel Range Organics (DRO)	1070	999	2020	95	2010	94	70-135	0	20	mg/kg	09.17.19 12:52	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	122		122		70-135	%	09.17.19 12:52
o-Terphenyl	102		102		70-135	%	09.17.19 12:52

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3101780 | Matrix: Solid | Date Prep: 09.17.19
MB Sample Id: 7686307-1-BLK | LCS Sample Id: 7686307-1-BKS | LCSD Sample Id: 7686307-1-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	0.101	101	0.0940	94	70-130	7	35	mg/kg	09.17.19 22:40	
Toluene	<0.00200	0.100	0.102	102	0.0941	94	70-130	8	35	mg/kg	09.17.19 22:40	
Ethylbenzene	<0.00200	0.100	0.109	109	0.100	100	70-130	9	35	mg/kg	09.17.19 22:40	
m,p-Xylenes	<0.00400	0.200	0.213	107	0.195	98	70-130	9	35	mg/kg	09.17.19 22:40	
o-Xylene	<0.00200	0.100	0.110	110	0.101	101	70-130	9	35	mg/kg	09.17.19 22:40	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	96		97		97		70-130	%	09.17.19 22:40
4-Bromofluorobenzene	103		111		108		70-130	%	09.17.19 22:40

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3101780 | Matrix: Soil | Date Prep: 09.17.19
Parent Sample Id: 636953-001 | MS Sample Id: 636953-001 S | MSD Sample Id: 636953-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00198	0.0992	0.0523	53	0.0689	69	70-130	27	35	mg/kg	09.17.19 23:20	X
Toluene	<0.00198	0.0992	0.0443	45	0.0608	61	70-130	31	35	mg/kg	09.17.19 23:20	X
Ethylbenzene	<0.00198	0.0992	0.0353	36	0.0515	52	70-130	37	35	mg/kg	09.17.19 23:20	XF
m,p-Xylenes	<0.00397	0.198	0.0655	33	0.0965	48	70-130	38	35	mg/kg	09.17.19 23:20	XF
o-Xylene	<0.00198	0.0992	0.0356	36	0.0521	52	70-130	38	35	mg/kg	09.17.19 23:20	XF

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		101		70-130	%	09.17.19 23:20
4-Bromofluorobenzene	115		117		70-130	%	09.17.19 23:20

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

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

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Chain of Custody

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

Work Order No: 636969

Page 1 of 1

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.236.3849	Email:	bbelill@ltenv.com

Work Order Comments

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

Project Name:	PLU 89 (2RP-3566)	Turn Around	
Project Number:	01291809 4	Routine	☒
P.O. Number:		Rush:	
Sampler's Name:	Benjamin Belill	Due Date:	

SAMPLE RECEIPT			
Temperature (°C):	3.8	Temp Blank:	(Yes) No
Received Intact:	(Yes) No	Thermometer ID	TNM007
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	7
		Wet Ice:	(Yes) No

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	9/12/19	1500	2'	1	X	X	X
FS02			1510	2'		X	X	X
SW01			1520	0-2'		X	X	X
SW02			1525	0-3'		X	X	X
SW03			1530	0-3'		X	X	X
FS03			1540	1.5'		X	X	X
FS04			1545	3'		X	X	X
				BGO		9/12/19		

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		Robert Murphy	09/16/19 0220	2		9/16/19 12:40
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

Received by OCD: 3/20/2023 9:14:54 AM
Final 1.000
Page 24 of 28
Released to Imaging: 3/20/2023 9:22:43 AM

Inter-Office Shipment

IOS Number **48047**

Date/Time: 09/16/19 14:45
Lab# From: **Carlsbad**
Lab# To: **Midland**

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

Please send report to: Jessica Kramer
Address: 1089 N Canal Street
E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
636969-001	S	FS01	09/12/19 15:00	SW8021B	BTEX by EPA 8021B	09/20/19	09/26/19	JKR	BR4FBZ BZ BZME EBZ X	
636969-001	S	FS01	09/12/19 15:00	E300_CL	Chloride by EPA 300	09/20/19	03/10/20	JKR	CL	
636969-001	S	FS01	09/12/19 15:00	SW8015MOD_NM	TPH by SW8015 Mod	09/20/19	09/26/19	JKR	GRO-DRO PHCC10C28 PI	
636969-002	S	FS02	09/12/19 15:10	SW8015MOD_NM	TPH by SW8015 Mod	09/20/19	09/26/19	JKR	GRO-DRO PHCC10C28 PI	
636969-002	S	FS02	09/12/19 15:10	SW8021B	BTEX by EPA 8021B	09/20/19	09/26/19	JKR	BR4FBZ BZ BZME EBZ X	
636969-002	S	FS02	09/12/19 15:10	E300_CL	Chloride by EPA 300	09/20/19	03/10/20	JKR	CL	
636969-003	S	SW01	09/12/19 15:20	SW8015MOD_NM	TPH by SW8015 Mod	09/20/19	09/26/19	JKR	GRO-DRO PHCC10C28 PI	
636969-003	S	SW01	09/12/19 15:20	SW8021B	BTEX by EPA 8021B	09/20/19	09/26/19	JKR	BR4FBZ BZ BZME EBZ X	
636969-003	S	SW01	09/12/19 15:20	E300_CL	Chloride by EPA 300	09/20/19	03/10/20	JKR	CL	
636969-004	S	SW02	09/12/19 15:25	SW8015MOD_NM	TPH by SW8015 Mod	09/20/19	09/26/19	JKR	GRO-DRO PHCC10C28 PI	
636969-004	S	SW02	09/12/19 15:25	SW8021B	BTEX by EPA 8021B	09/20/19	09/26/19	JKR	BR4FBZ BZ BZME EBZ X	
636969-004	S	SW02	09/12/19 15:25	E300_CL	Chloride by EPA 300	09/20/19	03/10/20	JKR	CL	
636969-005	S	SW03	09/12/19 15:30	SW8015MOD_NM	TPH by SW8015 Mod	09/20/19	09/26/19	JKR	GRO-DRO PHCC10C28 PI	
636969-005	S	SW03	09/12/19 15:30	SW8021B	BTEX by EPA 8021B	09/20/19	09/26/19	JKR	BR4FBZ BZ BZME EBZ X	
636969-005	S	SW03	09/12/19 15:30	E300_CL	Chloride by EPA 300	09/20/19	03/10/20	JKR	CL	
636969-006	S	FS03	09/12/19 15:40	SW8015MOD_NM	TPH by SW8015 Mod	09/20/19	09/26/19	JKR	GRO-DRO PHCC10C28 PI	
636969-006	S	FS03	09/12/19 15:40	E300_CL	Chloride by EPA 300	09/20/19	03/10/20	JKR	CL	
636969-006	S	FS03	09/12/19 15:40	SW8021B	BTEX by EPA 8021B	09/20/19	09/26/19	JKR	BR4FBZ BZ BZME EBZ X	
636969-007	S	FS04	09/12/19 15:45	E300_CL	Chloride by EPA 300	09/20/19	03/10/20	JKR	CL	
636969-007	S	FS04	09/12/19 15:45	SW8015MOD_NM	TPH by SW8015 Mod	09/20/19	09/26/19	JKR	GRO-DRO PHCC10C28 PI	
636969-007	S	FS04	09/12/19 15:45	SW8021B	BTEX by EPA 8021B	09/20/19	09/26/19	JKR	BR4FBZ BZ BZME EBZ X	

Inter-Office Shipment

IOS Number **48047**

Date/Time: 09/16/19 14:45
Lab# From: **Carlsbad**
Lab# To: **Midland**

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

Please send report to: Jessica Kramer
Address: 1089 N Canal Street
E-Mail: jessica.kramer@xenco.com

Inter Office Shipment or Sample Comments:

Relinquished By: Carlos Castro

Date Relinquished: 09/16/2019

Received By:

Date Received:

Cooler Temperature:

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 48047

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

Sent By: Martha Castro **Date Sent:** 09/16/2019 02:45 PM

Received By: **Date Received:**

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?		
#2 *Shipping container in good condition?	___	
#3 *Samples received with appropriate temperature?	___	
#4 *Custody Seals intact on shipping container/ cooler?	___	
#5 *Custody Seals Signed and dated for Containers/coolers	___	
#6 *IOS present?	___	
#7 Any missing/extra samples?	___	
#8 IOS agrees with sample label(s)/matrix?	___	
#9 Sample matrix/ properties agree with IOS?	___	
#10 Samples in proper container/ bottle?	___	
#11 Samples properly preserved?	___	
#12 Sample container(s) intact?	___	
#13 Sufficient sample amount for indicated test(s)?	___	
#14 All samples received within hold time?	___	

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ **Contacted by :** _____ **Date:** _____

_____

Checklist reviewed by:

Date: _____

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 09/16/2019 12:20:00 PM

Work Order #: 636969

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)?	3.8	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**No**	
#4 *Custody Seals intact on shipping container/ cooler?	**No**	
#5 Custody Seals intact on sample bottles?	**No**	
#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**	Subbed to Xenco Midland
#18 Water VOC samples have zero headspace?	**N/A**	

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

Analyst: PH Device/Lot#:

Checklist completed by: Martha Castro Date: 09/16/2019

Checklist reviewed by: Jessica Kramer Date: 09/17/2019

Jessica Kramer

Analytical Report 637045

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU 89 (2RP-3566)

012918094

19-SEP-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

19-SEP-19

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

Reference: XENCO Report No(s): **637045**
PLU 89 (2RP-3566)
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) 637045. 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. 637045 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 637045

LT Environmental, Inc., Arvada, CO

PLU 89 (2RP-3566)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH05	S	09-16-19 10:30	1 ft	637045-001
BH05A	S	09-16-19 10:40	4 ft	637045-002
BH06	S	09-16-19 10:50	1 ft	637045-003
BH06A	S	09-16-19 11:00	4 ft	637045-004
SW04	S	09-16-19 11:20	1 ft	637045-005
SW04A	S	09-16-19 11:30	2 ft	637045-006
SW05	S	09-16-19 11:45	1 ft	637045-007
SW05A	S	09-16-19 11:50	2 ft	637045-008
SW05B	S	09-16-19 12:00	3 ft	637045-009

Version: 1.%

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 89 (2RP-3566)

Project ID: *012918094*
Work Order Number(s): *637045*

Report Date: *19-SEP-19*
Date Received: *09/17/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3101755 TPH by SW8015 Mod
Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected.
Samples affected are: 637045-007.

Batch: LBA-3101768 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3101789 Chloride by EPA 300
Lab Sample ID 637045-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 637045-001, -002, -003, -004, -005, -006, -007, -008, -009.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Received by OCD: 3/20/2023 9:14:54 AM

Certificate of Analysis Summary 637045

LT Environmental, Inc., Arvada, CO

Project Name: PLU 89 (2RP-3566)

Project Id: 012918094
Contact: Dan Moir
Project Location:

Date Received in Lab: Tue Sep-17-19 08:05 am
Report Date: 19-SEP-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	637045-001		637045-002		637045-003		637045-004		637045-005		637045-006	
	Field Id:	BH05		BH05A		BH06		BH06A		SW04		SW04A	
	Depth:	1- ft		4- ft		1- ft		4- ft		1- ft		2- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Sep-16-19 10:30		Sep-16-19 10:40		Sep-16-19 10:50		Sep-16-19 11:00		Sep-16-19 11:20		Sep-16-19 11:30	
BTEX by EPA 8021B	***Extracted:***	Sep-17-19 11:00		Sep-17-19 11:00		Sep-17-19 11:00		Sep-17-19 11:00		Sep-17-19 11:00		Sep-17-19 11:00	
	Analyzed:	Sep-17-19 18:18		Sep-17-19 18:37		Sep-17-19 19:36		Sep-17-19 19:56		Sep-17-19 21:34		Sep-17-19 20:15	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.000992	0.000992	<0.00100	0.00100	<0.00101	0.00101	<0.000998	0.000998	<0.00100	0.00100	<0.000998	0.000998
Toluene		<0.000992	0.000992	<0.00100	0.00100	<0.00101	0.00101	<0.000998	0.000998	0.00582	0.00100	<0.000998	0.000998
Ethylbenzene		<0.000992	0.000992	<0.00100	0.00100	<0.00101	0.00101	<0.000998	0.000998	0.0254	0.00100	<0.000998	0.000998
m,p-Xylenes		<0.00198	0.00198	<0.00200	0.00200	<0.00202	0.00202	<0.00200	0.00200	0.0527	0.00200	<0.00200	0.00200
o-Xylene		<0.000992	0.000992	<0.00100	0.00100	<0.00101	0.00101	<0.000998	0.000998	0.0498	0.00100	<0.000998	0.000998
Total Xylenes		<0.000992	0.000992	<0.00100	0.00100	<0.00101	0.00101	<0.000998	0.000998	0.103	0.00100	<0.000998	0.000998
Total BTEX		<0.000992	0.000992	<0.00100	0.00100	<0.00101	0.00101	<0.000998	0.000998	0.134	0.00100	<0.000998	0.000998
Chloride by EPA 300	***Extracted:***	Sep-17-19 15:00		Sep-17-19 15:00		Sep-17-19 15:00		Sep-17-19 15:00		Sep-17-19 15:00		Sep-17-19 15:00	
	Analyzed:	Sep-17-19 15:50		Sep-17-19 16:10		Sep-17-19 16:16		Sep-17-19 16:22		Sep-17-19 16:29		Sep-17-19 16:48	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		97.8	10.1	202	10.0	38.0	10.1	42.0	9.96	1070	50.5	530	10.1
TPH by SW8015 Mod	***Extracted:***	Sep-17-19 12:00		Sep-17-19 12:00		Sep-17-19 12:00		Sep-17-19 12:00		Sep-17-19 12:00		Sep-17-19 12:00	
	Analyzed:	Sep-17-19 17:28		Sep-17-19 17:49		Sep-17-19 18:10		Sep-17-19 18:31		Sep-17-19 19:12		Sep-17-19 19:33	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<25.1	25.1	<25.0	25.0	<25.1	25.1	<25.1	25.1	260	249	<24.9	24.9
Diesel Range Organics (DRO)		<25.1	25.1	<25.0	25.0	<25.1	25.1	<25.1	25.1	5490	249	82.6	24.9
Motor Oil Range Hydrocarbons (MRO)		<25.1	25.1	<25.0	25.0	<25.1	25.1	<25.1	25.1	<249	249	<24.9	24.9
Total GRO-DRO		<25.1	25.1	<25.0	25.0	<25.1	25.1	<25.1	25.1	5750	249	82.6	24.9
Total TPH		<25.1	25.1	<25.0	25.0	<25.1	25.1	<25.1	25.1	5750	249	82.6	24.9

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Version: 1.%

Jessica Kramer
Project Assistant

Released to Imaging: 3/20/2023 9:22:43 AM

Certificate of Analysis Summary 637045

LT Environmental, Inc., Arvada, CO

Project Name: PLU 89 (2RP-3566)

Project Id: 012918094
Contact: Dan Moir
Project Location:

Date Received in Lab: Tue Sep-17-19 08:05 am
Report Date: 19-SEP-19
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	637045-007		637045-008		637045-009			
	Field Id:	SW05		SW05A		SW05B			
	Depth:	1- ft		2- ft		3- ft			
	Matrix:	SOIL		SOIL		SOIL			
	Sampled:	Sep-16-19 11:45		Sep-16-19 11:50		Sep-16-19 12:00			
BTEX by EPA 8021B	***Extracted:***	Sep-17-19 11:00		Sep-17-19 11:00		Sep-17-19 11:00			
	Analyzed:	Sep-17-19 21:15		Sep-17-19 20:55		Sep-17-19 20:35			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzene		<0.00101	0.00101	<0.00100	0.00100	<0.000992	0.000992		
Toluene		0.0223	0.00101	0.00633	0.00100	<0.000992	0.000992		
Ethylbenzene		0.0818	0.00101	0.136	0.00100	<0.000992	0.000992		
m,p-Xylenes		0.193	0.00201	0.268	0.00200	<0.00198	0.00198		
o-Xylene		0.183	0.00101	0.343	0.00100	<0.000992	0.000992		
Total Xylenes		0.376	0.00101	0.611	0.00100	<0.000992	0.000992		
Total BTEX		0.480	0.00101	0.753	0.00100	<0.000992	0.000992		
Chloride by EPA 300	***Extracted:***	Sep-17-19 15:00		Sep-17-19 15:00		Sep-17-19 15:00			
	Analyzed:	Sep-17-19 16:55		Sep-17-19 17:01		Sep-17-19 18:04			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		891	50.1	238	10.0	314	10.0		
TPH by SW8015 Mod	***Extracted:***	Sep-17-19 12:00		Sep-17-19 12:00		Sep-17-19 12:00			
	Analyzed:	Sep-17-19 19:54		Sep-17-19 20:15		Sep-17-19 20:36			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)		277	125	237	25.1	<25.1	25.1		
Diesel Range Organics (DRO)		3130	125	3160	25.1	<25.1	25.1		
Motor Oil Range Hydrocarbons (MRO)		<125	125	<25.1	25.1	<25.1	25.1		
Total GRO-DRO		3410	125	3400	25.1	<25.1	25.1		
Total TPH		3410	125	3400	25.1	<25.1	25.1		

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Version: 1.%

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analytical Results 637045

LT Environmental, Inc., Arvada, CO

PLU 89 (2RP-3566)

Sample Id:	**BH05**	Matrix:	Soil	Date Received:	09.17.19 08.05
Lab Sample Id:	637045-001	Date Collected:	09.16.19 10.30	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.17.19 15.00	Basis:	Wet Weight
Seq Number:	3101789				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**97.8**	10.1	mg/kg	09.17.19 15.50		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.17.19 12.00	Basis:	Wet Weight
Seq Number:	3101755				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.1	25.1	mg/kg	09.17.19 17.28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.1	25.1	mg/kg	09.17.19 17.28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.1	25.1	mg/kg	09.17.19 17.28	U	1
Total GRO-DRO	PHC628	<25.1	25.1	mg/kg	09.17.19 17.28	U	1
Total TPH	PHC635	<25.1	25.1	mg/kg	09.17.19 17.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	120	%	70-135	09.17.19 17.28	
o-Terphenyl	84-15-1	92	%	70-135	09.17.19 17.28	

Certificate of Analytical Results 637045

LT Environmental, Inc., Arvada, CO

PLU 89 (2RP-3566)

Sample Id:	**BH05**	Matrix:	Soil	Date Received:	09.17.19 08.05
Lab Sample Id:	637045-001	Date Collected:	09.16.19 10.30	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.17.19 11.00	Basis:	Wet Weight
Seq Number:	3101768				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000992	0.000992	mg/kg	09.17.19 18.18	U	1
Toluene	108-88-3	<0.000992	0.000992	mg/kg	09.17.19 18.18	U	1
Ethylbenzene	100-41-4	<0.000992	0.000992	mg/kg	09.17.19 18.18	U	1
m,p-Xylenes	179601-23-1	<0.00198	0.00198	mg/kg	09.17.19 18.18	U	1
o-Xylene	95-47-6	<0.000992	0.000992	mg/kg	09.17.19 18.18	U	1
Total Xylenes	1330-20-7	<0.000992	0.000992	mg/kg	09.17.19 18.18	U	1
Total BTEX		<0.000992	0.000992	mg/kg	09.17.19 18.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	09.17.19 18.18	
4-Bromofluorobenzene	460-00-4	95	%	70-130	09.17.19 18.18	

Certificate of Analytical Results 637045

LT Environmental, Inc., Arvada, CO

PLU 89 (2RP-3566)

Sample Id:	**BH05A**	Matrix:	Soil	Date Received:	09.17.19 08.05
Lab Sample Id:	637045-002	Date Collected:	09.16.19 10.40	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.17.19 15.00	Basis:	Wet Weight
Seq Number:	3101789				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**202**	10.0	mg/kg	09.17.19 16.10		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.17.19 12.00	Basis:	Wet Weight
Seq Number:	3101755				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	09.17.19 17.49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	09.17.19 17.49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	09.17.19 17.49	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	09.17.19 17.49	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	09.17.19 17.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	118	%	70-135	09.17.19 17.49	
o-Terphenyl	84-15-1	91	%	70-135	09.17.19 17.49	

Certificate of Analytical Results 637045

LT Environmental, Inc., Arvada, CO

PLU 89 (2RP-3566)

Sample Id:	**BH05A**	Matrix:	Soil	Date Received:	09.17.19 08.05
Lab Sample Id:	637045-002	Date Collected:	09.16.19 10.40	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.17.19 11.00	Basis:	Wet Weight
Seq Number:	3101768				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	09.17.19 18.37	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	09.17.19 18.37	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	09.17.19 18.37	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	09.17.19 18.37	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	09.17.19 18.37	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	09.17.19 18.37	U	1
Total BTEX		<0.00100	0.00100	mg/kg	09.17.19 18.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	09.17.19 18.37	
4-Bromofluorobenzene	460-00-4	100	%	70-130	09.17.19 18.37	

Certificate of Analytical Results 637045

LT Environmental, Inc., Arvada, CO

PLU 89 (2RP-3566)

Sample Id:	**BH06**	Matrix:	Soil	Date Received:	09.17.19 08.05
Lab Sample Id:	637045-003	Date Collected:	09.16.19 10.50	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.17.19 15.00	Basis:	Wet Weight
Seq Number:	3101789				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**38.0**	10.1	mg/kg	09.17.19 16.16		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.17.19 12.00	Basis:	Wet Weight
Seq Number:	3101755				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.1	25.1	mg/kg	09.17.19 18.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.1	25.1	mg/kg	09.17.19 18.10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.1	25.1	mg/kg	09.17.19 18.10	U	1
Total GRO-DRO	PHC628	<25.1	25.1	mg/kg	09.17.19 18.10	U	1
Total TPH	PHC635	<25.1	25.1	mg/kg	09.17.19 18.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	134	%	70-135	09.17.19 18.10	
o-Terphenyl	84-15-1	119	%	70-135	09.17.19 18.10	

Certificate of Analytical Results 637045

LT Environmental, Inc., Arvada, CO

PLU 89 (2RP-3566)

Sample Id:	**BH06**	Matrix:	Soil	Date Received:	09.17.19 08.05
Lab Sample Id:	637045-003	Date Collected:	09.16.19 10.50	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.17.19 11.00	Basis:	Wet Weight
Seq Number:	3101768				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	09.17.19 19.36	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	09.17.19 19.36	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	09.17.19 19.36	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	09.17.19 19.36	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	09.17.19 19.36	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	09.17.19 19.36	U	1
Total BTEX		<0.00101	0.00101	mg/kg	09.17.19 19.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	09.17.19 19.36	
4-Bromofluorobenzene	460-00-4	97	%	70-130	09.17.19 19.36	

Certificate of Analytical Results 637045

LT Environmental, Inc., Arvada, CO

PLU 89 (2RP-3566)

Sample Id:	**BH06A**	Matrix:	Soil	Date Received:	09.17.19 08.05
Lab Sample Id:	637045-004	Date Collected:	09.16.19 11.00	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.17.19 15.00	Basis:	Wet Weight
Seq Number:	3101789				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**42.0**	9.96	mg/kg	09.17.19 16.22		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.17.19 12.00	Basis:	Wet Weight
Seq Number:	3101755				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.1	25.1	mg/kg	09.17.19 18.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.1	25.1	mg/kg	09.17.19 18.31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.1	25.1	mg/kg	09.17.19 18.31	U	1
Total GRO-DRO	PHC628	<25.1	25.1	mg/kg	09.17.19 18.31	U	1
Total TPH	PHC635	<25.1	25.1	mg/kg	09.17.19 18.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	118	%	70-135	09.17.19 18.31	
o-Terphenyl	84-15-1	99	%	70-135	09.17.19 18.31	

Certificate of Analytical Results 637045

LT Environmental, Inc., Arvada, CO

PLU 89 (2RP-3566)

Sample Id:	**BH06A**	Matrix:	Soil	Date Received:	09.17.19 08.05
Lab Sample Id:	637045-004	Date Collected:	09.16.19 11.00	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.17.19 11.00	Basis:	Wet Weight
Seq Number:	3101768				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000998	0.000998	mg/kg	09.17.19 19.56	U	1
Toluene	108-88-3	<0.000998	0.000998	mg/kg	09.17.19 19.56	U	1
Ethylbenzene	100-41-4	<0.000998	0.000998	mg/kg	09.17.19 19.56	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	09.17.19 19.56	U	1
o-Xylene	95-47-6	<0.000998	0.000998	mg/kg	09.17.19 19.56	U	1
Total Xylenes	1330-20-7	<0.000998	0.000998	mg/kg	09.17.19 19.56	U	1
Total BTEX		<0.000998	0.000998	mg/kg	09.17.19 19.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	110	%	70-130	09.17.19 19.56	
4-Bromofluorobenzene	460-00-4	107	%	70-130	09.17.19 19.56	

Certificate of Analytical Results 637045

LT Environmental, Inc., Arvada, CO

PLU 89 (2RP-3566)

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	09.17.19 08.05
Lab Sample Id:	637045-005	Date Collected:	09.16.19 11.20	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.17.19 15.00	Basis:	Wet Weight
Seq Number:	3101789				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1070**	50.5	mg/kg	09.17.19 16.29		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.17.19 12.00	Basis:	Wet Weight
Seq Number:	3101755				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**260**	249	mg/kg	09.17.19 19.12		10
Diesel Range Organics (DRO)	C10C28DRO	**5490**	249	mg/kg	09.17.19 19.12		10
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<249	249	mg/kg	09.17.19 19.12	U	10
Total GRO-DRO	PHC628	**5750**	249	mg/kg	09.17.19 19.12		10
Total TPH	PHC635	**5750**	249	mg/kg	09.17.19 19.12		10

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	09.17.19 19.12	
o-Terphenyl	84-15-1	122	%	70-135	09.17.19 19.12	

Certificate of Analytical Results 637045

LT Environmental, Inc., Arvada, CO

PLU 89 (2RP-3566)

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	09.17.19 08.05
Lab Sample Id:	637045-005	Date Collected:	09.16.19 11.20	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.17.19 11.00	Basis:	Wet Weight
Seq Number:	3101768				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	09.17.19 21.34	U	1
Toluene	108-88-3	**0.00582**	0.00100	mg/kg	09.17.19 21.34		1
Ethylbenzene	100-41-4	**0.0254**	0.00100	mg/kg	09.17.19 21.34		1
m,p-Xylenes	179601-23-1	**0.0527**	0.00200	mg/kg	09.17.19 21.34		1
o-Xylene	95-47-6	**0.0498**	0.00100	mg/kg	09.17.19 21.34		1
Total Xylenes	1330-20-7	**0.103**	0.00100	mg/kg	09.17.19 21.34		1
Total BTEX		**0.134**	0.00100	mg/kg	09.17.19 21.34		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	119	%	70-130	09.17.19 21.34	
4-Bromofluorobenzene	460-00-4	118	%	70-130	09.17.19 21.34	

Certificate of Analytical Results 637045

LT Environmental, Inc., Arvada, CO

PLU 89 (2RP-3566)

Sample Id:	**SW04A**	Matrix:	Soil	Date Received:	09.17.19 08.05
Lab Sample Id:	637045-006	Date Collected:	09.16.19 11.30	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.17.19 15.00	Basis:	Wet Weight
Seq Number:	3101789				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**530**	10.1	mg/kg	09.17.19 16.48		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.17.19 12.00	Basis:	Wet Weight
Seq Number:	3101755				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	09.17.19 19.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	**82.6**	24.9	mg/kg	09.17.19 19.33		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	09.17.19 19.33	U	1
Total GRO-DRO	PHC628	**82.6**	24.9	mg/kg	09.17.19 19.33		1
Total TPH	PHC635	**82.6**	24.9	mg/kg	09.17.19 19.33		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	120	%	70-135	09.17.19 19.33	
o-Terphenyl	84-15-1	106	%	70-135	09.17.19 19.33	

Certificate of Analytical Results 637045

LT Environmental, Inc., Arvada, CO

PLU 89 (2RP-3566)

Sample Id:	**SW04A**	Matrix:	Soil	Date Received:	09.17.19 08.05
Lab Sample Id:	637045-006	Date Collected:	09.16.19 11.30	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.17.19 11.00	Basis:	Wet Weight
Seq Number:	3101768				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000998	0.000998	mg/kg	09.17.19 20.15	U	1
Toluene	108-88-3	<0.000998	0.000998	mg/kg	09.17.19 20.15	U	1
Ethylbenzene	100-41-4	<0.000998	0.000998	mg/kg	09.17.19 20.15	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	09.17.19 20.15	U	1
o-Xylene	95-47-6	<0.000998	0.000998	mg/kg	09.17.19 20.15	U	1
Total Xylenes	1330-20-7	<0.000998	0.000998	mg/kg	09.17.19 20.15	U	1
Total BTEX		<0.000998	0.000998	mg/kg	09.17.19 20.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	93	%	70-130	09.17.19 20.15	
1,4-Difluorobenzene	540-36-3	100	%	70-130	09.17.19 20.15	

Certificate of Analytical Results 637045

LT Environmental, Inc., Arvada, CO

PLU 89 (2RP-3566)

Sample Id:	**SW05**	Matrix:	Soil	Date Received:	09.17.19 08.05
Lab Sample Id:	637045-007	Date Collected:	09.16.19 11.45	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.17.19 15.00	Basis:	Wet Weight
Seq Number:	3101789				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**891**	50.1	mg/kg	09.17.19 16.55		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.17.19 12.00	Basis:	Wet Weight
Seq Number:	3101755				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**277**	125	mg/kg	09.17.19 19.54		5
Diesel Range Organics (DRO)	C10C28DRO	**3130**	125	mg/kg	09.17.19 19.54		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<125	125	mg/kg	09.17.19 19.54	U	5
Total GRO-DRO	PHC628	**3410**	125	mg/kg	09.17.19 19.54		5
Total TPH	PHC635	**3410**	125	mg/kg	09.17.19 19.54		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	128	%	70-135	09.17.19 19.54	
o-Terphenyl	84-15-1	142	%	70-135	09.17.19 19.54	**

Certificate of Analytical Results 637045

LT Environmental, Inc., Arvada, CO

PLU 89 (2RP-3566)

Sample Id:	**SW05**	Matrix:	Soil	Date Received:	09.17.19 08.05
Lab Sample Id:	637045-007	Date Collected:	09.16.19 11.45	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.17.19 11.00	Basis:	Wet Weight
Seq Number:	3101768				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	09.17.19 21.15	U	1
Toluene	108-88-3	**0.0223**	0.00101	mg/kg	09.17.19 21.15		1
Ethylbenzene	100-41-4	**0.0818**	0.00101	mg/kg	09.17.19 21.15		1
m,p-Xylenes	179601-23-1	**0.193**	0.00201	mg/kg	09.17.19 21.15		1
o-Xylene	95-47-6	**0.183**	0.00101	mg/kg	09.17.19 21.15		1
Total Xylenes	1330-20-7	**0.376**	0.00101	mg/kg	09.17.19 21.15		1
Total BTEX		**0.480**	0.00101	mg/kg	09.17.19 21.15		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	09.17.19 21.15	
4-Bromofluorobenzene	460-00-4	122	%	70-130	09.17.19 21.15	

Certificate of Analytical Results 637045

LT Environmental, Inc., Arvada, CO

PLU 89 (2RP-3566)

Sample Id:	**SW05A**	Matrix:	Soil	Date Received:	09.17.19 08.05
Lab Sample Id:	637045-008	Date Collected:	09.16.19 11.50	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.17.19 15.00	Basis:	Wet Weight
Seq Number:	3101789				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**238**	10.0	mg/kg	09.17.19 17.01		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.17.19 12.00	Basis:	Wet Weight
Seq Number:	3101755				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**237**	25.1	mg/kg	09.17.19 20.15		1
Diesel Range Organics (DRO)	C10C28DRO	**3160**	25.1	mg/kg	09.17.19 20.15		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.1	25.1	mg/kg	09.17.19 20.15	U	1
Total GRO-DRO	PHC628	**3400**	25.1	mg/kg	09.17.19 20.15		1
Total TPH	PHC635	**3400**	25.1	mg/kg	09.17.19 20.15		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	09.17.19 20.15	
o-Terphenyl	84-15-1	121	%	70-135	09.17.19 20.15	

Certificate of Analytical Results 637045

LT Environmental, Inc., Arvada, CO

PLU 89 (2RP-3566)

Sample Id:	**SW05A**	Matrix:	Soil	Date Received:	09.17.19 08.05
Lab Sample Id:	637045-008	Date Collected:	09.16.19 11.50	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.17.19 11.00	Basis:	Wet Weight
Seq Number:	3101768				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	09.17.19 20.55	U	1
Toluene	108-88-3	**0.00633**	0.00100	mg/kg	09.17.19 20.55		1
Ethylbenzene	100-41-4	**0.136**	0.00100	mg/kg	09.17.19 20.55		1
m,p-Xylenes	179601-23-1	**0.268**	0.00200	mg/kg	09.17.19 20.55		1
o-Xylene	95-47-6	**0.343**	0.00100	mg/kg	09.17.19 20.55		1
Total Xylenes	1330-20-7	**0.611**	0.00100	mg/kg	09.17.19 20.55		1
Total BTEX		**0.753**	0.00100	mg/kg	09.17.19 20.55		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	121	%	70-130	09.17.19 20.55	
4-Bromofluorobenzene	460-00-4	125	%	70-130	09.17.19 20.55	

Certificate of Analytical Results 637045

LT Environmental, Inc., Arvada, CO

PLU 89 (2RP-3566)

Sample Id:	**SW05B**	Matrix:	Soil	Date Received:	09.17.19 08.05
Lab Sample Id:	637045-009	Date Collected:	09.16.19 12.00	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.17.19 15.00	Basis:	Wet Weight
Seq Number:	3101789				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**314**	10.0	mg/kg	09.17.19 18.04		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.17.19 12.00	Basis:	Wet Weight
Seq Number:	3101755				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.1	25.1	mg/kg	09.17.19 20.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.1	25.1	mg/kg	09.17.19 20.36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.1	25.1	mg/kg	09.17.19 20.36	U	1
Total GRO-DRO	PHC628	<25.1	25.1	mg/kg	09.17.19 20.36	U	1
Total TPH	PHC635	<25.1	25.1	mg/kg	09.17.19 20.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	119	%	70-135	09.17.19 20.36	
o-Terphenyl	84-15-1	96	%	70-135	09.17.19 20.36	

Certificate of Analytical Results 637045

LT Environmental, Inc., Arvada, CO

PLU 89 (2RP-3566)

Sample Id:	**SW05B**	Matrix:	Soil	Date Received:	09.17.19 08.05
Lab Sample Id:	637045-009	Date Collected:	09.16.19 12.00	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.17.19 11.00	Basis:	Wet Weight
Seq Number:	3101768				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000992	0.000992	mg/kg	09.17.19 20.35	U	1
Toluene	108-88-3	<0.000992	0.000992	mg/kg	09.17.19 20.35	U	1
Ethylbenzene	100-41-4	<0.000992	0.000992	mg/kg	09.17.19 20.35	U	1
m,p-Xylenes	179601-23-1	<0.00198	0.00198	mg/kg	09.17.19 20.35	U	1
o-Xylene	95-47-6	<0.000992	0.000992	mg/kg	09.17.19 20.35	U	1
Total Xylenes	1330-20-7	<0.000992	0.000992	mg/kg	09.17.19 20.35	U	1
Total BTEX		<0.000992	0.000992	mg/kg	09.17.19 20.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	09.17.19 20.35	
4-Bromofluorobenzene	460-00-4	100	%	70-130	09.17.19 20.35	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 637045

LT Environmental, Inc.

PLU 89 (2RP-3566)

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3101789 — Matrix: Solid — Date Prep: 09.17.19
MB Sample Id: 7686388-1-BLK — LCS Sample Id: 7686388-1-BKS — LCSD Sample Id: 7686388-1-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	232	93	243	97	90-110	5	20	mg/kg	09.18.19 09:53	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3101789 — Matrix: Solid — Date Prep: 09.17.19
Parent Sample Id: 637040-003 — MS Sample Id: 637040-003 S — MSD Sample Id: 637040-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	264	2000	2500	112	2490	112	90-110	0	20	mg/kg	09.17.19 18:44	X

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3101789 — Matrix: Soil — Date Prep: 09.17.19
Parent Sample Id: 637045-001 — MS Sample Id: 637045-001 S — MSD Sample Id: 637045-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	97.8	201	334	118	352	127	90-110	5	20	mg/kg	09.17.19 15:57	X

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3101755 — Matrix: Solid — Date Prep: 09.17.19
MB Sample Id: 7686378-1-BLK — LCS Sample Id: 7686378-1-BKS — LCSD Sample Id: 7686378-1-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	848	85	887	89	70-135	4	35	mg/kg	09.17.19 14:31	
Diesel Range Organics (DRO)	<50.0	1000	709	71	812	81	70-135	14	35	mg/kg	09.17.19 14:31	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	115		122		126		70-135	%	09.17.19 14:31
o-Terphenyl	89		104		99		70-135	%	09.17.19 14:31

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

QC Summary 637045

LT Environmental, Inc.

PLU 89 (2RP-3566)

Analytical Method: TPH by SW8015 Mod | Prep Method: SW8015P
Seq Number: 3101755 | Matrix: Soil | Date Prep: 09.17.19
Parent Sample Id: 637040-001 | MS Sample Id: 637040-001 S | MSD Sample Id: 637040-001 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)	<50.3	1010	889	88	905	91	70-135	2	35	mg/kg	09.17.19 15:44	
Diesel Range Organics (DRO)	<50.3	1010	844	84	708	71	70-135	18	35	mg/kg	09.17.19 15:44	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	125		128		70-135	%	09.17.19 15:44
o-Terphenyl	109		111		70-135	%	09.17.19 15:44

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3101768 | Matrix: Solid | Date Prep: 09.17.19
MB Sample Id: 7686400-1-BLK | LCS Sample Id: 7686400-1-BKS | LCSD Sample Id: 7686400-1-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	0.0975	98	0.0952	95	70-130	2	35	mg/kg	09.17.19 13:40	
Toluene	<0.00100	0.100	0.107	107	0.104	104	70-130	3	35	mg/kg	09.17.19 13:40	
Ethylbenzene	<0.00100	0.100	0.118	118	0.114	114	71-129	3	35	mg/kg	09.17.19 13:40	
m,p-Xylenes	<0.00200	0.200	0.240	120	0.232	116	70-135	3	35	mg/kg	09.17.19 13:40	
o-Xylene	<0.00100	0.100	0.117	117	0.112	112	71-133	4	35	mg/kg	09.17.19 13:40	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		102		100		70-130	%	09.17.19 13:40
4-Bromofluorobenzene	106		118		108		70-130	%	09.17.19 13:40

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3101768 | Matrix: Soil | Date Prep: 09.17.19
Parent Sample Id: 637040-001 | MS Sample Id: 637040-001 S | MSD Sample Id: 637040-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.100	0.0920	92	0.0955	95	70-130	4	35	mg/kg	09.17.19 14:59	
Toluene	<0.00100	0.100	0.0926	93	0.0950	94	70-130	3	35	mg/kg	09.17.19 14:59	
Ethylbenzene	<0.00100	0.100	0.112	112	0.117	116	71-129	4	35	mg/kg	09.17.19 14:59	
m,p-Xylenes	<0.00201	0.201	0.228	113	0.237	117	70-135	4	35	mg/kg	09.17.19 14:59	
o-Xylene	<0.00100	0.100	0.116	116	0.121	120	71-133	4	35	mg/kg	09.17.19 14:59	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		105		70-130	%	09.17.19 14:59
4-Bromofluorobenzene	117		113		70-130	%	09.17.19 14:59

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

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Chain of Custody

Work Order No: 037 045

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 E Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.236.3849	Email:	bbelill@ltenv.com

Work Order Comments

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

Project Name:	PLU 89 (ZRP-3566)	Turn Around	
Project Number:	012918094	Routine	☒
P.O. Number:		Rush:	
Sampler's Name:	Benjamin Belill	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	4.2	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:	9

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
BH05	S	9/16/19	1030	1'	1	X	X	X
BH05A			1040	4'		X	X	X
BH06			1050	1'		X	X	X
BH06A			1100	4'		X	X	X
SW04			1120	1'		X	X	X
SW04A			1130	2'		X	X	X
SW05			1145	1'		X	X	X
SW05A			1150	2'		X	X	X
SW05B			1200	3'		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

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
	Cooper	9/17/19 08:05	2		
			4		
			6		

Revised Date 051418 Rev. 2018.1

Received by OCD: 3/20/2023 9:14:54 AM
Final 1.000
Page 28 of 31
Released to Imaging: 3/20/2023 9:22:43 AM

Inter-Office Shipment

IOS Number : 48123

Date/Time:	09.17.2019	Created by:	Elizabeth Mcclellan	Please send report to:	Jessica Kramer
Lab# From:	**Carlsbad**	Delivery Priority:		Address:	1089 N Canal Street
Lab# To:	**Midland**	Air Bill No.:		E-Mail:	jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
637045-001	S	BH05	09.16.2019 10:30	E300_CL	Chloride by EPA 300	09.23.2019	03.14.2020	JKR	CL	
637045-001	S	BH05	09.16.2019 10:30	SW8015MOD_NM	TPH by SW8015 Mod	09.23.2019	09.30.2019	JKR	GRO-DRO PHCC10C28	
637045-001	S	BH05	09.16.2019 10:30	SW8021B	BTEX by EPA 8021B	09.23.2019	09.30.2019	JKR	BR4FBZ BZ BZME EBZ	
637045-002	S	BH05A	09.16.2019 10:40	E300_CL	Chloride by EPA 300	09.23.2019	03.14.2020	JKR	CL	
637045-002	S	BH05A	09.16.2019 10:40	SW8015MOD_NM	TPH by SW8015 Mod	09.23.2019	09.30.2019	JKR	GRO-DRO PHCC10C28	
637045-002	S	BH05A	09.16.2019 10:40	SW8021B	BTEX by EPA 8021B	09.23.2019	09.30.2019	JKR	BR4FBZ BZ BZME EBZ	
637045-003	S	BH06	09.16.2019 10:50	SW8021B	BTEX by EPA 8021B	09.23.2019	09.30.2019	JKR	BR4FBZ BZ BZME EBZ	
637045-003	S	BH06	09.16.2019 10:50	SW8015MOD_NM	TPH by SW8015 Mod	09.23.2019	09.30.2019	JKR	GRO-DRO PHCC10C28	
637045-003	S	BH06	09.16.2019 10:50	E300_CL	Chloride by EPA 300	09.23.2019	03.14.2020	JKR	CL	
637045-004	S	BH06A	09.16.2019 11:00	SW8015MOD_NM	TPH by SW8015 Mod	09.23.2019	09.30.2019	JKR	GRO-DRO PHCC10C28	
637045-004	S	BH06A	09.16.2019 11:00	SW8021B	BTEX by EPA 8021B	09.23.2019	09.30.2019	JKR	BR4FBZ BZ BZME EBZ	
637045-004	S	BH06A	09.16.2019 11:00	E300_CL	Chloride by EPA 300	09.23.2019	03.14.2020	JKR	CL	
637045-005	S	SW04	09.16.2019 11:20	SW8015MOD_NM	TPH by SW8015 Mod	09.23.2019	09.30.2019	JKR	GRO-DRO PHCC10C28	
637045-005	S	SW04	09.16.2019 11:20	SW8021B	BTEX by EPA 8021B	09.23.2019	09.30.2019	JKR	BR4FBZ BZ BZME EBZ	
637045-005	S	SW04	09.16.2019 11:20	E300_CL	Chloride by EPA 300	09.23.2019	03.14.2020	JKR	CL	
637045-006	S	SW04A	09.16.2019 11:30	SW8021B	BTEX by EPA 8021B	09.23.2019	09.30.2019	JKR	BR4FBZ BZ BZME EBZ	
637045-006	S	SW04A	09.16.2019 11:30	SW8015MOD_NM	TPH by SW8015 Mod	09.23.2019	09.30.2019	JKR	GRO-DRO PHCC10C28	
637045-006	S	SW04A	09.16.2019 11:30	E300_CL	Chloride by EPA 300	09.23.2019	03.14.2020	JKR	CL	
637045-007	S	SW05	09.16.2019 11:45	SW8015MOD_NM	TPH by SW8015 Mod	09.23.2019	09.30.2019	JKR	GRO-DRO PHCC10C28	
637045-007	S	SW05	09.16.2019 11:45	SW8021B	BTEX by EPA 8021B	09.23.2019	09.30.2019	JKR	BR4FBZ BZ BZME EBZ	
637045-007	S	SW05	09.16.2019 11:45	E300_CL	Chloride by EPA 300	09.23.2019	03.14.2020	JKR	CL	
637045-008	S	SW05A	09.16.2019 11:50	E300_CL	Chloride by EPA 300	09.23.2019	03.14.2020	JKR	CL	
637045-008	S	SW05A	09.16.2019 11:50	SW8021B	BTEX by EPA 8021B	09.23.2019	09.30.2019	JKR	BR4FBZ BZ BZME EBZ	
637045-008	S	SW05A	09.16.2019 11:50	SW8015MOD_NM	TPH by SW8015 Mod	09.23.2019	09.30.2019	JKR	GRO-DRO PHCC10C28	
637045-009	S	SW05B	09.16.2019 12:00	SW8015MOD_NM	TPH by SW8015 Mod	09.23.2019	09.30.2019	JKR	GRO-DRO PHCC10C28	

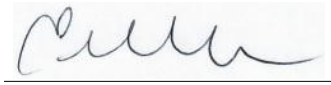
Inter-Office Shipment

IOS Number : 48123

Date/Time:	09.17.2019	Created by:	Elizabeth Mcclellan	Please send report to:	Jessica Kramer
Lab# From:	**Carlsbad**	Delivery Priority:		Address:	1089 N Canal Street
Lab# To:	**Midland**	Air Bill No.:		E-Mail:	jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
637045-009	S	SW05B	09.16.2019 12:00	SW8021B	BTEX by EPA 8021B	09.23.2019	09.30.2019	JKR	BR4FBZ BZ BZME EBZ	
637045-009	S	SW05B	09.16.2019 12:00	E300_CL	Chloride by EPA 300	09.23.2019	03.14.2020	JKR	CL	

Inter Office Shipment or Sample Comments:

Relinquished By: 

Elizabeth McClellan

Date Relinquished: 09.17.2019

Received By: _____

Date Received: _____

Cooler Temperature: _____

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 09/17/2019 08:05:00 AM

Work Order #: 637045

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

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	4.2
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**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: 09/17/2019

Checklist reviewed by: Jessica Kramer Date: 09/18/2019

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

Action 198674

CONDITIONS

Operator: XTO PERMIAN OPERATING LLC. 6401 HOLIDAY HILL ROAD MIDLAND, TX 79707	OGRID: 373075
	Action Number: 198674
	Action Type: [IM-SD] Incident File Support Doc (ENV) (IM-BNF)

CONDITIONS

Created By	Condition	Condition Date
bhall	Deferral approved until any future major construction/alteration or plugging and abandonment, whichever occurs first. The site will need to meet the requirements of 19.15.29.13 NMAC and 19.15.29.13 NMAC.	3/20/2023
bhall	Incident number will remain in "Closure not approved" status until a complete closure report is submitted and approved by the OCD. 2RP-3566 closed. Refer to incident #NAB1605729044 in all future communication.	3/20/2023