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

January 29, 2020

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

RE: Assessment Report and Proposed Remediation Work Plan
WPX Energy Permian, Inc.
Ape Fee #001
Eddy County, New Mexico

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of WPX Energy Permian, Inc. (WPX), presents the following Assessment Report and Proposed Remediation Work Plan detailing soil sampling and planned remedial actions at the Ape Fee #001 (Site) in Units H and L, Sections 4 and 5, Township 23 South, Range 27 East, in Eddy County, New Mexico (Figure 1). This workplan is in response to the New Mexico Oil Conservation Division (NMOCD) email notification dated January 24, 2020, requesting additional information regarding the release and providing a deadline for a remediation work plan of January 29, 2020. The purpose of this remediation work plan is to address potential impacts to soil following an event that resulted in the release of produced water that affected the property of an adjacent landowner.

BACKGROUND

On January 21, 2020 at approx. 2:30 A.M., a split approximately 0.5 inches in diameter developed in the flowline connected to the Ape Fee #001 wellhead, causing a release of natural gas and produced water. The produced water misted onto the adjacent property. The volumes of gas and produced water released are estimated to be below 25 barrels (bbls) and 500 thousand cubic feet (MCF). Approximately 0.5 bbls of free liquids were observed at the point of the damaged flowline; however, no additional free liquids were observed. WPX responded by stopping the source by shutting in the Ape Fee #001 well and containing released materials. Remediation was initiated by collecting free liquids, applying absorbent materials to the adjacent roadway, and excavating visually impacted soil. Approximately 25 cubic yards of impacted soil were excavated and transferred to The R360 landfill located in Hobbs, New Mexico. A light misting from the release was observed affecting a portion of the ground surface, structures, and livestock on the neighboring property. With the landowner's permission, WPX handwashed the livestock with water and soap and power washed a storage trailer to remove any potential production fluids.

WPX contacted the NMOCD via a phone call to District II office and followed up with an email to District II personnel to provide courtesy notification of the incident. WPX also reported the release to the NMOCD on an initial Release Notification and Corrective Action Form C-141 (Form C-141) on January 26, 2020, and has yet to receive an Incident ID Number (Attachment 1).

SITE CHARACTERIZATION AND CLOSURE CRITERIA

LTE characterized the Site according to Table 1, *Closure Criteria for Soils Impacted by a Release*, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Depth to groundwater at the Site is estimated to be between 50 and 100 feet below ground surface (bgs) based on known aquifer properties and well log data from the nearest identified water well. The nearest permitted water well with depth to water data is United States Geological Survey (USGS) water well 322003104120301, located approximately 558 feet southwest of the Site. Water well 322003104120301 has a reported depth to water of 63 feet bgs. The closest significant watercourse to the Site is a tributary to the Pecos River located approximately 5,328 feet east of the Site. The Site is less than 300 feet from any occupied residence, school, hospital, institution, church, or wetland. The Site is less than 1,000 feet to a freshwater well or spring and is not within an unstable area, 100-year floodplain, or overlying a subsurface mine. The Site is located in a medium-potential karst area.

Based on these criteria, the following NMOCD Table 1 closure criteria apply: 10 milligrams per kilogram (mg/kg) benzene; 50 mg/kg total benzene, toluene, ethylbenzene, and total xylenes (BTEX); 100 mg/kg total petroleum hydrocarbons (TPH); and 600 mg/kg chloride.

INITIAL ASSESSMENT

On January 21, 2020, LTE personnel inspected the Site to evaluate the release extent. The release extent was mapped using a handheld Global Positioning System (GPS) unit and is depicted on Figure 2. After receiving approval from the landowner, a 3 percent (%) solution of MicroBlaze mixed in water was applied to approximately 40,000 square feet of the property to the west the release point. Additionally, excavation activities were conducted by WPX on the east side of South Thomason Road.

On January 23, 2020, eight boreholes (BH01 through BH08) were advanced on the private property located west of South Thomason Road using a hand auger. Soil boring locations were selected and agreed upon by both WPX and the landowner. Soil samples were collected from each borehole location from the ground surface (0 to 0.25 feet bgs) and 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 Xenco Laboratories (Xenco) in Midland, Texas, for analysis of BTEX following United States Environmental Protection Agency (USEPA) Method 8021B; TPH-gasoline range organics (GRO),

TPH-diesel range organics (DRO), and TPH-oil range organics (ORO) following USEPA Method 8015M/D; and chloride following USEPA Method 300.0.

ANALYTICAL RESULTS

Laboratory analytical results indicated that all soil samples were compliant with Closure Criteria. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Attachment 2.

PROPOSED CONTINUED ASSESSMENT AND REMEDIATION WORK PLAN

Remediation has temporarily been suspended at the request of an NMOCD letter dated January 24, 2020. Free liquids have been collected, and visually impacted soil was removed and transported to an NMOCD-approved facility on the date of the incident. MicroBlaze, a non-toxic product designed to aid in the dispersal of any hydrocarbons, was applied with landowner consent to the affected area on January 21, 2020. Soil samples collected on January 23, 2020 from the adjacent landowner's property indicate compliance with Closure Criteria. In addition, and at the request of the landowner, a radiological field screening was performed by a third-party contractor on January 23, 2020 and indicative of background radiological conditions for the area.

WPX proposes to continue soil sampling activities to confirm the presence or absence of impacted soil in the release footprint and fully delineate any identified elevated concentrations of hydrocarbons or chloride. Surface soil samples will be collected from the release area to laterally delineate impacts. In areas where impacts are identified at the surface, boreholes will be advanced and soil samples will be collected to vertically delineate the identified impacts. Up to two soil samples will be collected from each borehole location. A geologist will inspect and categorize the soil from each borehole, field screening soil samples for volatile aromatic hydrocarbons using a photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. The soil samples will be shipped at or below 4 °C under strict COC procedures to Xenco in Midland, Texas, for analysis of BTEX following USEPA Method 8021B; TPH-GRO, TPH-DRO, and TPH-ORO following USEPA Method 8015M/D; and chloride following USEPA Method 300.0. If no impacts are identified during these assessment activities, a Closure Request will be submitted to the NMOCD.

Following the delineation activities, excavation of identified impacts will be conducted should any samples contain concentrations of BTEX, TPH, or chloride exceeding Closure Criteria. Excavation activities will be directed by field screening soil samples for volatile aromatic hydrocarbons using a PID and chloride using Hach® chloride QuanTab® test strips. Following completion of excavation activities, 5-point composite confirmation soil samples will be collected from the floor and sidewalls of the excavation area. Each soil sample will represent at most 200 square feet. All soil samples will be collected, handed, and analyzed as previously described.

These activities will be scheduled and conducted immediately following approval of this remediation work plan, and a summary report requesting closure will be submitted the NMOCD following receipt of analytical results.

If you have any questions or comments, please do not hesitate to contact Mr. Chris McKisson at (970) 285-9985 or cmckisson@ltenv.com.

Sincerely,

LT ENVIRONMENTAL, INC.

Chris McKisson
Project Environmental Scientist

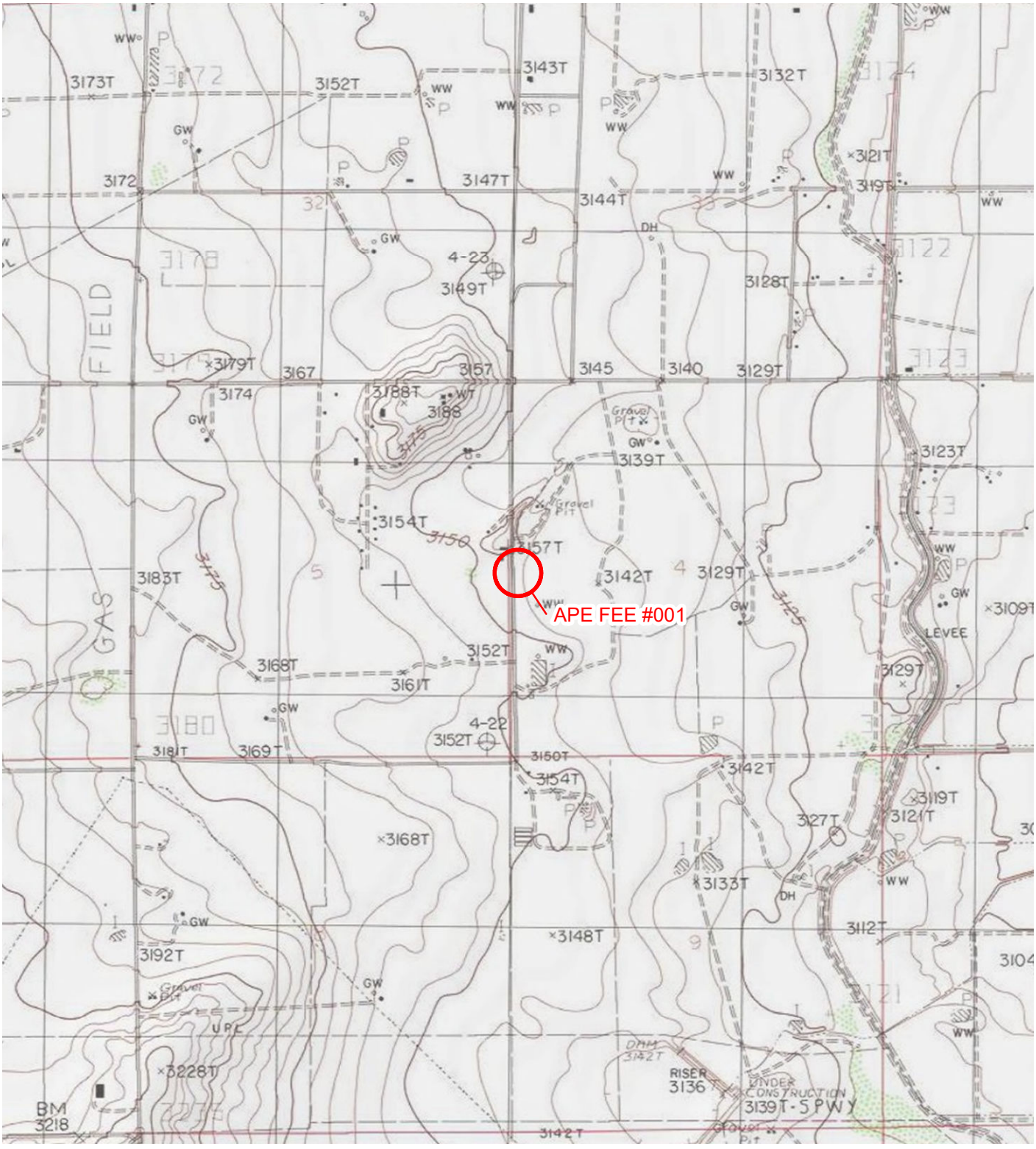
Ashley L. Ager, M.S., P.G.
Senior Geologist

cc: Jim Raley, WPX

Robert Hamlet, NMOCD
Victoria Venegas, NMOCD
Jim Amos, BLM

Attachments:

Figure 1	Site Location Map
Figure 2	Delineation Soil Sample Locations
Table 1	Soil Analytical Results
Attachment 1	Form C-141
Attachment 2	Laboratory Analytical Reports



LEGEND

SITE LOCATION

0 2,000 4,000

Feet

N

NEW MEXICO

FIGURE 1
SITE LOCATION MAP
APE FEE #001
UNIT H & L SEC 4 & 5 T23S R27E
EDDY COUNTY, NEW MEXICO
WPX ENERGY PERMIAN, LLC.

P:\WPX\GIS\MXD\034820008_APE FEE #001\034820008_FIG01_SL_2020.mxd

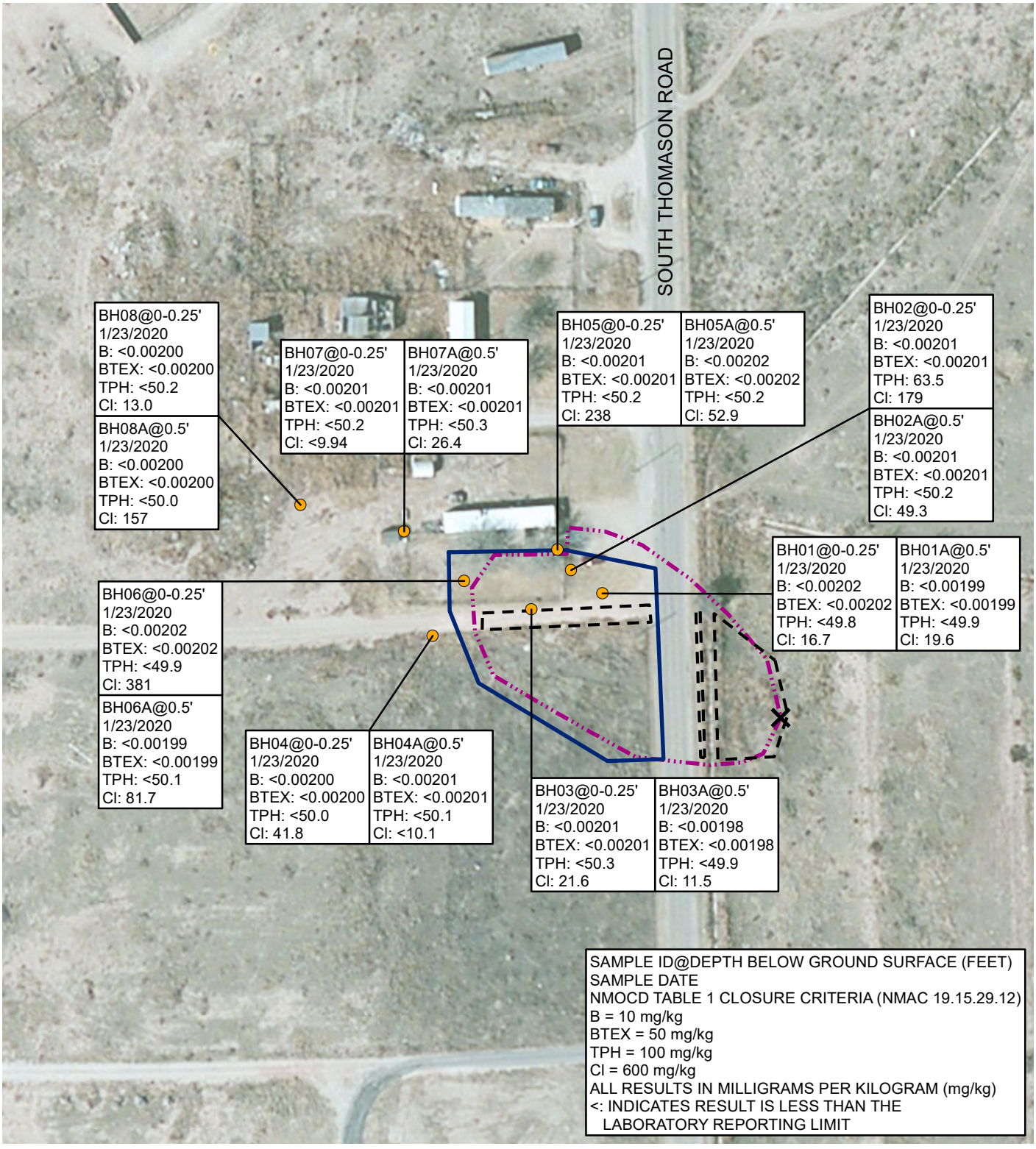


IMAGE COURTESY OF ESRI

LEGEND

- RELEASE LOCATION
- SOIL SAMPLE
- EXCAVATION EXTENT
- RELEASE EXTENT (24,465 SQUARE FEET)
- MICRO-BLAZE EMERGENCY LIQUID SPILL CONTROL

0 100 200
Feet

N

FIGURE 2
DELINEATION SOIL SAMPLE LOCATIONS
APE FEE #001
UNIT H & L SEC 4 & 5 T23S R27E
EDDY COUNTY, NEW MEXICO
WPX ENERGY PERMIAN, LLC.

P:\WPX\GIS\MXD\034820008_APE FEE #001\034820008_FIG02_DELINEATION_2020_012920.mxd

TABLE 1
SOIL ANALYTICAL RESULTS

APE FEE #001H
EDDY COUNTY, NEW MEXICO
WPX ENERGY PERMIAN, 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)	MRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
BH01	0 - 0.25	1/23/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.8	<49.8	<49.8	<49.8	16.7
BH01A	0.5	1/23/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	19.6
BH02	0 - 0.25	1/23/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<49.9	63.5	<49.9	63.5	179
BH02A	0.5	1/23/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.2	<50.2	<50.2	<50.2	49.3
BH03	0 - 0.25	1/23/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.3	<50.3	<50.3	<50.3	21.6
BH03A	0.5	1/23/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	11.5
BH04	0 - 0.25	1/23/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	41.8
BH04A	0.5	1/23/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.1	<50.1	<50.1	<50.1	<10.1
BH05	0 - 0.25	1/23/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.2	<50.2	<50.2	<50.2	238
BH05A	0.5	1/23/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.2	<50.2	<50.2	<50.2	52.9
BH06	0 - 0.25	1/23/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.9	<49.9	<49.9	<49.9	381
BH06A	0.5	1/23/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.1	<50.1	<50.1	<50.1	81.7
BH07	0 - 0.25	1/23/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.2	<50.2	<50.2	<50.2	<9.94
BH07A	0.5	1/23/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.3	<50.3	<50.3	<50.3	26.4
BH08	0 - 0.25	1/23/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	13.0
BH08A	0.5	1/23/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	157
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	**2,500**	**10,000**

Notes:

bgs - below ground surface
BTEX - benzene, toluene, ethylbenzene, and total xylenes
mg/kg - milligrams per kilogram
NE - not established
NMOCD - New Mexico Oil Conservation Division
DRO - diesel range organics
GRO - gasoline range organics
MRO - motor oil range organics
TPH - total petroleum hydrocarbons
< - indicates result is below laboratory reporting limits
Bold- indicates result exceeds the applicable regulatory standard

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

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: WPX Energy Permian, LLC.	OGRID: 246289
Contact Name: Robert Raup	Contact Telephone: 701-310-5194
Contact email: Bob.Raup@wpxenergy.com	Incident # *(assigned by OCD)*
Contact mailing address: One Williams Center – MD 25, Tulsa, OK 74172	

Location of Release Source

Latitude 32.333864 Longitude -104.203312

(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Ape Fee #1	Site Type: Well Pad Facility Produced Water Flowline
Date Release Discovered: January 21, 2020	API# *(if applicable)* 30-015-42101

Unit Letter	Section	Township	Range	County
	4	23S	27E	Eddy

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private (*Name:* George Carl A & Vira / Charles & Peggy Augustus)

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls)	Volume Recovered (bbls) To Be Determined
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No To Be Determined
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☒ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf) To Be Determined
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units): Impacted soil was recovered; volume/weight to be determined

Cause of Release

At approximately 2:30 a.m. on 1/21/2020, a hole approximately 1-inch in diameter developed in the flowline connected to the Ape Fee No. 1 well (API 30-015-42101), causing a misting of natural gas and produced water to occur. The estimated volume of gas and produced water released is still being determined; however, the total volumes released are estimated to be well below the 25 BBL. and 500 Mcf thresholds in 19.15.29.7.A NMAC.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

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

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
YES, immediate notice was provided by WPX Energy Permian, LLC to NMOCD via phone call and email to the District 2 Field Office. A phone message was left for Mr. Mike Bratcher on January 21st at approximately 10:15 AM. A follow up email was sent to Mike Bratcher, Victoria Venegas, and Robert Hamlet at 10:19 on January 21st.

Initial Response

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

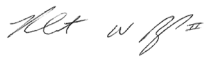
☒ The source of the release has been stopped.
☒ The impacted area has been secured to protect human health and the environment.
☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
☒ All free liquids and recoverable materials have been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

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

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

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

Printed Name: Robert W. Raup II Title: HSE Supervisor

Signature:  Date: January 26th, 2019

email: Bob.Raup@wpxenergy.com Telephone: 701-310-5194

OCD Only

Received by: _____ Date: _____

ATTACHMENT 2: LABORATORY ANALYTICAL REPORTS

Analytical Report 650125

for

LT Environmental, Inc.

Project Manager: Chris McKisson

APE Fee #001H

24-JAN-20

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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

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

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

24-JAN-20

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

Reference: XENCO Report No(s): **650125**
APE Fee #001H
Project Address:

Chris McKisson:

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) 650125. 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. 650125 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Sample Cross Reference 650125

LT Environmental, Inc., Arvada, CO

APE Fee #001H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH01	S	01-23-20 12:50	0 - .25 ft	650125-001
BH02	S	01-23-20 12:55	0 - .25 ft	650125-002
BH03	S	01-23-20 13:05	0 - .25 ft	650125-003
BH04	S	01-23-20 13:10	0 - .25 ft	650125-004
BH05	S	01-23-20 13:15	0 - .25 ft	650125-005
BH06	S	01-23-20 13:20	0 - .25 ft	650125-006
BH07	S	01-23-20 13:25	0 - .25 ft	650125-007
BH08	S	01-23-20 13:30	0 - .25 ft	650125-008

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3114284 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 650125

LT Environmental, Inc., Arvada, CO

Project Name: APE Fee #001H

Project Id:

Contact: Chris McKisson

Project Location:

Date Received in Lab: Thu Jan-23-20 11:45 am

Report Date: 24-JAN-20

Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	650125-001		650125-002		650125-003		650125-004		650125-005		650125-006	
	Field Id:	BH01		BH02		BH03		BH04		BH05		BH06	
	Depth:	0-.25 ft		0-.25 ft		0-.25 ft		0-.25 ft		0-.25 ft		0-.25 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-23-20 12:50		Jan-23-20 12:55		Jan-23-20 13:05		Jan-23-20 13:10		Jan-23-20 13:15		Jan-23-20 13:20	
BTEX by EPA 8021B	***Extracted:***	Jan-23-20 18:00		Jan-23-20 18:00		Jan-23-20 18:00		Jan-23-20 18:00		Jan-23-20 18:00		Jan-23-20 18:00	
	Analyzed:	Jan-24-20 02:38		Jan-24-20 02:18		Jan-24-20 02:58		Jan-24-20 03:19		Jan-24-20 03:39		Jan-24-20 03:59	
	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	<0.00201	0.00201	<0.00201	0.00201	<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202
Toluene		<0.00202	0.00202	<0.00201	0.00201	<0.00201	0.00201	<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202
Ethylbenzene		<0.00202	0.00202	<0.00201	0.00201	<0.00201	0.00201	<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202
m,p-Xylenes		<0.00403	0.00403	<0.00402	0.00402	<0.00402	0.00402	<0.00400	0.00400	<0.00402	0.00402	<0.00403	0.00403
o-Xylene		<0.00202	0.00202	<0.00201	0.00201	<0.00201	0.00201	<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202
Xylenes, Total		<0.00202	0.00202	<0.00201	0.00201	<0.00201	0.00201	<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202
Total BTEX		<0.00202	0.00202	<0.00201	0.00201	<0.00201	0.00201	<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202
Chloride by EPA 300	***Extracted:***	Jan-23-20 17:30		Jan-23-20 17:30		Jan-23-20 17:30		Jan-23-20 17:30		Jan-23-20 17:30		Jan-23-20 17:30	
	Analyzed:	Jan-23-20 21:32		Jan-23-20 21:37		Jan-23-20 21:43		Jan-23-20 21:48		Jan-23-20 21:54		Jan-23-20 21:59	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		16.7	10.0	179	10.1	21.6	10.0	41.8	10.0	238	19.8	381	20.0
TPH by SW8015 Mod	***Extracted:***	Jan-23-20 17:30		Jan-23-20 17:30		Jan-23-20 17:30		Jan-23-20 17:30		Jan-23-20 17:30		Jan-23-20 17:30	
	Analyzed:	Jan-23-20 23:45		Jan-23-20 23:45		Jan-24-20 00:05		Jan-24-20 00:05		Jan-24-20 00:24		Jan-24-20 00:44	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<49.8	49.8	<49.9	49.9	<50.3	50.3	<50.0	50.0	<50.2	50.2	<49.9	49.9
Diesel Range Organics (DRO)		<49.8	49.8	63.5	49.9	<50.3	50.3	<50.0	50.0	<50.2	50.2	<49.9	49.9
Motor Oil Range Hydrocarbons (MRO)		<49.8	49.8	<49.9	49.9	<50.3	50.3	<50.0	50.0	<50.2	50.2	<49.9	49.9
Total GRO-DRO		<49.8	49.8	63.5	49.9	<50.3	50.3	<50.0	50.0	<50.2	50.2	<49.9	49.9
Total TPH		<49.8	49.8	63.5	49.9	<50.3	50.3	<50.0	50.0	<50.2	50.2	<49.9	49.9

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 650125

LT Environmental, Inc., Arvada, CO

Project Name: APE Fee #001H

Project Id:
Contact: Chris McKisson
Project Location:

Date Received in Lab: Thu Jan-23-20 11:45 am
Report Date: 24-JAN-20
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	650125-007		650125-008					
	Field Id:	BH07		BH08					
	Depth:	0-.25 ft		0-.25 ft					
	Matrix:	SOIL		SOIL					
	Sampled:	Jan-23-20 13:25		Jan-23-20 13:30					
BTEX by EPA 8021B	***Extracted:***	Jan-23-20 18:00		Jan-23-20 18:00					
	Analyzed:	Jan-24-20 04:20		Jan-24-20 04:40					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00201	0.00201	<0.00200	0.00200				
Toluene		<0.00201	0.00201	<0.00200	0.00200				
Ethylbenzene		<0.00201	0.00201	<0.00200	0.00200				
m,p-Xylenes		<0.00402	0.00402	<0.00400	0.00400				
o-Xylene		<0.00201	0.00201	<0.00200	0.00200				
Xylenes, Total		<0.00201	0.00201	<0.00200	0.00200				
Total BTEX		<0.00201	0.00201	<0.00200	0.00200				
Chloride by EPA 300	***Extracted:***	Jan-23-20 17:30		Jan-23-20 17:30					
	Analyzed:	Jan-23-20 22:05		Jan-23-20 22:38					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		<9.94	9.94	13.0	9.98				
TPH by SW8015 Mod	***Extracted:***	Jan-23-20 17:30		Jan-23-20 17:30					
	Analyzed:	Jan-24-20 00:44		Jan-24-20 01:04					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<50.2	50.2	<50.2	50.2				
Diesel Range Organics (DRO)		<50.2	50.2	<50.2	50.2				
Motor Oil Range Hydrocarbons (MRO)		<50.2	50.2	<50.2	50.2				
Total GRO-DRO		<50.2	50.2	<50.2	50.2				
Total TPH		<50.2	50.2	<50.2	50.2				

Jessica Kramer
Project Assistant

Certificate of Analytical Results 650125

LT Environmental, Inc., Arvada, CO

APE Fee #001H

Sample Id:	**BH01**	Matrix:	Soil	Date Received:	01.23.20 11.45
Lab Sample Id:	650125-001	Date Collected:	01.23.20 12.50	Sample Depth:	0 - .25 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.23.20 17.30	Basis:	Wet Weight
Seq Number:	3114263				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**16.7**	10.0	mg/kg	01.23.20 21.32		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.23.20 17.30	Basis:	Wet Weight
Seq Number:	3114260				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	01.23.20 23.45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	01.23.20 23.45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	01.23.20 23.45	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	01.23.20 23.45	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	01.23.20 23.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	01.23.20 23.45	
o-Terphenyl	84-15-1	93	%	70-135	01.23.20 23.45	

Certificate of Analytical Results 650125

LT Environmental, Inc., Arvada, CO

APE Fee #001H

Sample Id:	**BH01**	Matrix:	Soil	Date Received:	01.23.20 11.45
Lab Sample Id:	650125-001	Date Collected:	01.23.20 12.50	Sample Depth:	0 - .25 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.23.20 18.00	Basis:	Wet Weight
Seq Number:	3114284				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.24.20 02.38	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.24.20 02.38	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.24.20 02.38	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	01.24.20 02.38	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.24.20 02.38	U	1
Xylenes, Total	1330-20-7	<0.00202	0.00202	mg/kg	01.24.20 02.38	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.24.20 02.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	92	%	70-130	01.24.20 02.38	
1,4-Difluorobenzene	540-36-3	105	%	70-130	01.24.20 02.38	

Certificate of Analytical Results 650125

LT Environmental, Inc., Arvada, CO

APE Fee #001H

Sample Id:	**BH02**	Matrix:	Soil	Date Received:	01.23.20 11.45
Lab Sample Id:	650125-002	Date Collected:	01.23.20 12.55	Sample Depth:	0 - .25 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.23.20 17.30	Basis:	Wet Weight
Seq Number:	3114263				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**179**	10.1	mg/kg	01.23.20 21.37		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.23.20 17.30	Basis:	Wet Weight
Seq Number:	3114260				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	01.23.20 23.45	U	1
Diesel Range Organics (DRO)	C10C28DRO	**63.5**	49.9	mg/kg	01.23.20 23.45		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.23.20 23.45	U	1
Total GRO-DRO	PHC628	**63.5**	49.9	mg/kg	01.23.20 23.45		1
Total TPH	PHC635	**63.5**	49.9	mg/kg	01.23.20 23.45		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	01.23.20 23.45	
o-Terphenyl	84-15-1	102	%	70-135	01.23.20 23.45	

Certificate of Analytical Results 650125

LT Environmental, Inc., Arvada, CO

APE Fee #001H

Sample Id:	**BH02**	Matrix:	Soil	Date Received:	01.23.20 11.45
Lab Sample Id:	650125-002	Date Collected:	01.23.20 12.55	Sample Depth:	0 - .25 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.23.20 18.00	Basis:	Wet Weight
Seq Number:	3114284				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.24.20 02.18	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.24.20 02.18	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.24.20 02.18	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.24.20 02.18	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.24.20 02.18	U	1
Xylenes, Total	1330-20-7	<0.00201	0.00201	mg/kg	01.24.20 02.18	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.24.20 02.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	110	%	70-130	01.24.20 02.18	
4-Bromofluorobenzene	460-00-4	90	%	70-130	01.24.20 02.18	

Certificate of Analytical Results 650125

LT Environmental, Inc., Arvada, CO

APE Fee #001H

Sample Id:	**BH03**	Matrix:	Soil	Date Received:	01.23.20 11.45
Lab Sample Id:	650125-003	Date Collected:	01.23.20 13.05	Sample Depth:	0 - .25 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.23.20 17.30	Basis:	Wet Weight
Seq Number:	3114263				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**21.6**	10.0	mg/kg	01.23.20 21.43		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.23.20 17.30	Basis:	Wet Weight
Seq Number:	3114260				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	01.24.20 00.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	01.24.20 00.05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	01.24.20 00.05	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	01.24.20 00.05	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	01.24.20 00.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	01.24.20 00.05	
o-Terphenyl	84-15-1	96	%	70-135	01.24.20 00.05	

Certificate of Analytical Results 650125

LT Environmental, Inc., Arvada, CO

APE Fee #001H

Sample Id:	**BH03**	Matrix:	Soil	Date Received:	01.23.20 11.45
Lab Sample Id:	650125-003	Date Collected:	01.23.20 13.05	Sample Depth:	0 - .25 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.23.20 18.00	Basis:	Wet Weight
Seq Number:	3114284				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.24.20 02.58	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.24.20 02.58	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.24.20 02.58	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.24.20 02.58	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.24.20 02.58	U	1
Xylenes, Total	1330-20-7	<0.00201	0.00201	mg/kg	01.24.20 02.58	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.24.20 02.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	01.24.20 02.58	
4-Bromofluorobenzene	460-00-4	90	%	70-130	01.24.20 02.58	

Certificate of Analytical Results 650125

LT Environmental, Inc., Arvada, CO

APE Fee #001H

Sample Id:	**BH04**	Matrix:	Soil	Date Received:	01.23.20 11.45
Lab Sample Id:	650125-004	Date Collected:	01.23.20 13.10	Sample Depth:	0 - .25 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.23.20 17.30	Basis:	Wet Weight
Seq Number:	3114263				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**41.8**	10.0	mg/kg	01.23.20 21.48		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.23.20 17.30	Basis:	Wet Weight
Seq Number:	3114260				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	01.24.20 00.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	01.24.20 00.05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.24.20 00.05	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	01.24.20 00.05	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.24.20 00.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	01.24.20 00.05	
o-Terphenyl	84-15-1	99	%	70-135	01.24.20 00.05	

Certificate of Analytical Results 650125

LT Environmental, Inc., Arvada, CO

APE Fee #001H

Sample Id:	**BH04**	Matrix:	Soil	Date Received:	01.23.20 11.45
Lab Sample Id:	650125-004	Date Collected:	01.23.20 13.10	Sample Depth:	0 - .25 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.23.20 18.00	Basis:	Wet Weight
Seq Number:	3114284				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.24.20 03.19	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.24.20 03.19	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.24.20 03.19	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.24.20 03.19	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.24.20 03.19	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	01.24.20 03.19	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.24.20 03.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	108	%	70-130	01.24.20 03.19	
4-Bromofluorobenzene	460-00-4	95	%	70-130	01.24.20 03.19	

Certificate of Analytical Results 650125

LT Environmental, Inc., Arvada, CO

APE Fee #001H

Sample Id:	**BH05**	Matrix:	Soil	Date Received:	01.23.20 11.45
Lab Sample Id:	650125-005	Date Collected:	01.23.20 13.15	Sample Depth:	0 - .25 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.23.20 17.30	Basis:	Wet Weight
Seq Number:	3114263				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**238**	19.8	mg/kg	01.23.20 21.54		2

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.23.20 17.30	Basis:	Wet Weight
Seq Number:	3114260				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	01.24.20 00.24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	01.24.20 00.24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	01.24.20 00.24	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	01.24.20 00.24	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	01.24.20 00.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	01.24.20 00.24	
o-Terphenyl	84-15-1	97	%	70-135	01.24.20 00.24	

Certificate of Analytical Results 650125

LT Environmental, Inc., Arvada, CO

APE Fee #001H

Sample Id:	**BH05**	Matrix:	Soil	Date Received:	01.23.20 11.45
Lab Sample Id:	650125-005	Date Collected:	01.23.20 13.15	Sample Depth:	0 - .25 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.23.20 18.00	Basis:	Wet Weight
Seq Number:	3114284				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.24.20 03.39	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.24.20 03.39	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.24.20 03.39	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.24.20 03.39	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.24.20 03.39	U	1
Xylenes, Total	1330-20-7	<0.00201	0.00201	mg/kg	01.24.20 03.39	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.24.20 03.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	109	%	70-130	01.24.20 03.39	
4-Bromofluorobenzene	460-00-4	93	%	70-130	01.24.20 03.39	

Certificate of Analytical Results 650125

LT Environmental, Inc., Arvada, CO

APE Fee #001H

Sample Id:	**BH06**	Matrix:	Soil	Date Received:	01.23.20 11.45
Lab Sample Id:	650125-006	Date Collected:	01.23.20 13.20	Sample Depth:	0 - .25 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.23.20 17.30	Basis:	Wet Weight
Seq Number:	3114263				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**381**	20.0	mg/kg	01.23.20 21.59		2

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.23.20 17.30	Basis:	Wet Weight
Seq Number:	3114260				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	01.24.20 00.44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	01.24.20 00.44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.24.20 00.44	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	01.24.20 00.44	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	01.24.20 00.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	01.24.20 00.44	
o-Terphenyl	84-15-1	97	%	70-135	01.24.20 00.44	

Certificate of Analytical Results 650125

LT Environmental, Inc., Arvada, CO

APE Fee #001H

Sample Id:	**BH06**	Matrix:	Soil	Date Received:	01.23.20 11.45
Lab Sample Id:	650125-006	Date Collected:	01.23.20 13.20	Sample Depth:	0 - .25 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.23.20 18.00	Basis:	Wet Weight
Seq Number:	3114284				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.24.20 03.59	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.24.20 03.59	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.24.20 03.59	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	01.24.20 03.59	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.24.20 03.59	U	1
Xylenes, Total	1330-20-7	<0.00202	0.00202	mg/kg	01.24.20 03.59	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.24.20 03.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	89	%	70-130	01.24.20 03.59	
1,4-Difluorobenzene	540-36-3	109	%	70-130	01.24.20 03.59	

Certificate of Analytical Results 650125

LT Environmental, Inc., Arvada, CO

APE Fee #001H

Sample Id:	**BH07**	Matrix:	Soil	Date Received:	01.23.20 11.45
Lab Sample Id:	650125-007	Date Collected:	01.23.20 13.25	Sample Depth:	0 - .25 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.23.20 17.30	Basis:	Wet Weight
Seq Number:	3114263				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.94	9.94	mg/kg	01.23.20 22.05	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.23.20 17.30	Basis:	Wet Weight
Seq Number:	3114260				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	01.24.20 00.44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	01.24.20 00.44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	01.24.20 00.44	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	01.24.20 00.44	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	01.24.20 00.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	01.24.20 00.44	
o-Terphenyl	84-15-1	101	%	70-135	01.24.20 00.44	

Certificate of Analytical Results 650125

LT Environmental, Inc., Arvada, CO

APE Fee #001H

Sample Id:	**BH07**	Matrix:	Soil	Date Received:	01.23.20 11.45
Lab Sample Id:	650125-007	Date Collected:	01.23.20 13.25	Sample Depth:	0 - .25 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.23.20 18.00	Basis:	Wet Weight
Seq Number:	3114284				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.24.20 04.20	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.24.20 04.20	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.24.20 04.20	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.24.20 04.20	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.24.20 04.20	U	1
Xylenes, Total	1330-20-7	<0.00201	0.00201	mg/kg	01.24.20 04.20	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.24.20 04.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	95	%	70-130	01.24.20 04.20	
1,4-Difluorobenzene	540-36-3	109	%	70-130	01.24.20 04.20	

Certificate of Analytical Results 650125

LT Environmental, Inc., Arvada, CO

APE Fee #001H

Sample Id:	**BH08**	Matrix:	Soil	Date Received:	01.23.20 11.45
Lab Sample Id:	650125-008	Date Collected:	01.23.20 13.30	Sample Depth:	0 - .25 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.23.20 17.30	Basis:	Wet Weight
Seq Number:	3114266				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**13.0**	9.98	mg/kg	01.23.20 22.38		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.23.20 17.30	Basis:	Wet Weight
Seq Number:	3114260				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	01.24.20 01.04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	01.24.20 01.04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	01.24.20 01.04	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	01.24.20 01.04	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	01.24.20 01.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	01.24.20 01.04	
o-Terphenyl	84-15-1	99	%	70-135	01.24.20 01.04	

Certificate of Analytical Results 650125

LT Environmental, Inc., Arvada, CO

APE Fee #001H

Sample Id:	**BH08**	Matrix:	Soil	Date Received:	01.23.20 11.45
Lab Sample Id:	650125-008	Date Collected:	01.23.20 13.30	Sample Depth:	0 - .25 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.23.20 18.00	Basis:	Wet Weight
Seq Number:	3114284				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.24.20 04.40	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.24.20 04.40	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.24.20 04.40	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.24.20 04.40	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.24.20 04.40	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	01.24.20 04.40	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.24.20 04.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	89	%	70-130	01.24.20 04.40	
1,4-Difluorobenzene	540-36-3	106	%	70-130	01.24.20 04.40	

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 650125

LT Environmental, Inc.

APE Fee #001H

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3114263 Matrix: Solid Date Prep: 01.23.20
MB Sample Id: 7695075-1-BLK LCS Sample Id: 7695075-1-BKS LCSD Sample Id: 7695075-1-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	245	98	246	98	90-110	0	20	mg/kg	01.23.20 19:35	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3114266 Matrix: Solid Date Prep: 01.23.20
MB Sample Id: 7695076-1-BLK LCS Sample Id: 7695076-1-BKS LCSD Sample Id: 7695076-1-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	246	98	247	99	90-110	0	20	mg/kg	01.23.20 22:27	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3114263 Matrix: Soil Date Prep: 01.23.20
Parent Sample Id: 650111-008 MS Sample Id: 650111-008 S MSD Sample Id: 650111-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	279	198	497	110	497	111	90-110	0	20	mg/kg	01.23.20 21:10	X

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3114263 Matrix: Soil Date Prep: 01.23.20
Parent Sample Id: 650121-004 MS Sample Id: 650121-004 S MSD Sample Id: 650121-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	202	200	399	99	401	100	90-110	1	20	mg/kg	01.23.20 19:52	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3114266 Matrix: Soil Date Prep: 01.23.20
Parent Sample Id: 650114-010 MS Sample Id: 650114-010 S MSD Sample Id: 650114-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	204	200	405	101	406	101	90-110	0	20	mg/kg	01.23.20 23:59	

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

QC Summary 650125

LT Environmental, Inc.

APE Fee #001H

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3114266 Matrix: Soil Date Prep: 01.23.20
Parent Sample Id: 650125-008 MS Sample Id: 650125-008 S MSD Sample Id: 650125-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	13.0	200	211	99	212	100	90-110	0	20	mg/kg	01.23.20 22:44	

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3114260 Matrix: Solid Date Prep: 01.23.20
MB Sample Id: 7695067-1-BLK LCS Sample Id: 7695067-1-BKS LCSD Sample Id: 7695067-1-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	1270	127	1210	121	70-135	5	35	mg/kg	01.23.20 22:06	
Diesel Range Organics (DRO)	<50.0	1000	1270	127	1120	112	70-135	13	35	mg/kg	01.23.20 22:06	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	93		124		120		70-135	%	01.23.20 22:06
o-Terphenyl	98		117		100		70-135	%	01.23.20 22:06

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3114260 Matrix: Solid Date Prep: 01.23.20
MB Sample Id: 7695067-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	01.23.20 22:06	

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3114260 Matrix: Soil Date Prep: 01.23.20
Parent Sample Id: 650114-006 MS Sample Id: 650114-006 S MSD Sample Id: 650114-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.2	1000	1210	121	1220	122	70-135	1	35	mg/kg	01.23.20 22:46	
Diesel Range Organics (DRO)	<50.2	1000	1360	136	1260	126	70-135	8	35	mg/kg	01.23.20 22:46	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	130		133		70-135	%	01.23.20 22:46
o-Terphenyl	116		123		70-135	%	01.23.20 22:46

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 650125

LT Environmental, Inc.

APE Fee #001H

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

Seq Number: 3114284 Matrix: Solid Date Prep: 01.23.20

MB Sample Id: 7695071-1-BLK LCS Sample Id: 7695071-1-BKS LCSD Sample Id: 7695071-1-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	0.0883	88	0.0944	94	70-130	7	35	mg/kg	01.24.20 00:36	
Toluene	<0.00200	0.100	0.0760	76	0.0865	87	70-130	13	35	mg/kg	01.24.20 00:36	
Ethylbenzene	<0.00200	0.100	0.0868	87	0.0836	84	71-129	4	35	mg/kg	01.24.20 00:36	
m,p-Xylenes	<0.00400	0.200	0.182	91	0.164	82	70-135	10	35	mg/kg	01.24.20 00:36	
o-Xylene	<0.00200	0.100	0.0870	87	0.0835	84	71-133	4	35	mg/kg	01.24.20 00:36	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		105		105		70-130	%	01.24.20 00:36
4-Bromofluorobenzene	89		88		88		70-130	%	01.24.20 00:36

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

Seq Number: 3114284 Matrix: Soil Date Prep: 01.23.20

Parent Sample Id: 650125-002 MS Sample Id: 650125-002 S MSD Sample Id: 650125-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.101	0.0825	82	0.0875	87	70-130	6	35	mg/kg	01.24.20 01:16	
Toluene	<0.00201	0.101	0.0805	80	0.0835	83	70-130	4	35	mg/kg	01.24.20 01:16	
Ethylbenzene	<0.00201	0.101	0.0855	85	0.0905	90	71-129	6	35	mg/kg	01.24.20 01:16	
m,p-Xylenes	<0.00402	0.201	0.187	93	0.178	89	70-135	5	35	mg/kg	01.24.20 01:16	
o-Xylene	<0.00201	0.101	0.0734	73	0.0755	75	71-133	3	35	mg/kg	01.24.20 01:16	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		107		70-130	%	01.24.20 01:16
4-Bromofluorobenzene	94		86		70-130	%	01.24.20 01:16

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

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

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

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

Chain of Custody

Work Order No: 650125

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:	Chris McKisson	Bill to: (if different)	
Company Name:	LT Environmental, Inc., Permian office	Company Name:	Same
Address:	820 Megan Ave Unit B	Address:	11
City, State ZIP:	Rifle, CO 81650	City, State ZIP:	11
Phone:	432.704.5178	Email:	ggreen@ltenv.com ; cmckisson@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:	APE Fee #001H	Turn Around	
Project Number:		Routine ☐	
P.O. Number:	01/21/2020	Rush: 24Hr	
Sampler's Name:	Garrett Green	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No	
Temperature (°C):	2.2	Thermometer ID		
Received Intact:	(Yes) No	T-NM-007		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes (No) N/A	Total Containers:	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	01/23/20	1250	0'-.25'	1	X	X	X
BH02			1255		1			
BH03			1305		1			
BH04			1310		1			
BH05			1315		1			
BH06			1320		1			
BH07			1325		1			
BH08	↓	↓	1330	↓	1	↓	↓	↓

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Garrett Green		1/23/20 15:45	2		
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 01.23.2020 01.45.00 PM

Work Order #: 650125

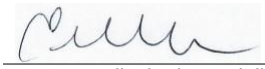
Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

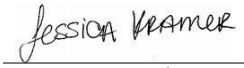
Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	2.2
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**
#5 Custody Seals intact on sample bottles?	**Yes**
#6*Custody Seals Signed and dated?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

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

Analyst: PH Device/Lot#:

Checklist completed by:  Date: 01.23.2020

Elizabeth McClellan

Checklist reviewed by:  Date: 01.24.2020

Jessica Kramer

Analytical Report 650133

for

LT Environmental, Inc.

Project Manager: Chris McKisson

Ape Fee #001H

27-JAN-20

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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

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

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

27-JAN-20

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

Reference: XENCO Report No(s): **650133**
Ape Fee #001H
Project Address:

Chris McKisson:

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) 650133. 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. 650133 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Sample Cross Reference 650133

LT Environmental, Inc., Arvada, CO

Ape Fee #001H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH01A	S	01-23-20 12:50	0.5 ft	650133-001
BH02A	S	01-23-20 12:55	0.5 ft	650133-002
BH03A	S	01-23-20 13:05	0.5 ft	650133-003
BH04A	S	01-23-20 13:10	0.5 ft	650133-004
BH05A	S	01-23-20 13:15	0.5 ft	650133-005
BH06A	S	01-23-20 13:20	0.5 ft	650133-006
BH07A	S	01-23-20 13:25	0.5 ft	650133-007
BH08A	S	01-23-20 13:30	0.5 ft	650133-008

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3114285 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3114404 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 650133

LT Environmental, Inc., Arvada, CO

Project Name: Ape Fee #001H

Project Id:
Contact: Chris McKisson
Project Location:

Date Received in Lab: Thu Jan-23-20 03:45 pm
Report Date: 27-JAN-20
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	650133-001		650133-002		650133-003		650133-004		650133-005		650133-006	
	Field Id:	BH01A		BH02A		BH03A		BH04A		BH05A		BH06A	
	Depth:	0.5- ft		0.5- ft		0.5- ft		0.5- ft		0.5- ft		0.5- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-23-20 12:50		Jan-23-20 12:55		Jan-23-20 13:05		Jan-23-20 13:10		Jan-23-20 13:15		Jan-23-20 13:20	
BTEX by EPA 8021B	***Extracted:***	Jan-23-20 18:00		Jan-23-20 18:00		Jan-23-20 18:00		Jan-23-20 18:00		Jan-23-20 18:00		Jan-23-20 18:00	
	Analyzed:	Jan-24-20 07:51		Jan-24-20 08:11		Jan-24-20 08:32		Jan-24-20 08:52		Jan-24-20 09:12		Jan-24-20 09:33	
	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	<0.00201	0.00201	<0.00198	0.00198	<0.00201	0.00201	<0.00202	0.00202	<0.00199	0.00199
Toluene		<0.00199	0.00199	<0.00201	0.00201	<0.00198	0.00198	<0.00201	0.00201	<0.00202	0.00202	<0.00199	0.00199
Ethylbenzene		<0.00199	0.00199	<0.00201	0.00201	<0.00198	0.00198	<0.00201	0.00201	<0.00202	0.00202	<0.00199	0.00199
m,p-Xylenes		<0.00398	0.00398	<0.00402	0.00402	<0.00397	0.00397	<0.00402	0.00402	<0.00404	0.00404	<0.00398	0.00398
o-Xylene		<0.00199	0.00199	<0.00201	0.00201	<0.00198	0.00198	<0.00201	0.00201	<0.00202	0.00202	<0.00199	0.00199
Xylenes, Total		<0.00199	0.00199	<0.00201	0.00201	<0.00198	0.00198	<0.00201	0.00201	<0.00202	0.00202	<0.00199	0.00199
Total BTEX		<0.00199	0.00199	<0.00201	0.00201	<0.00198	0.00198	<0.00201	0.00201	<0.00202	0.00202	<0.00199	0.00199
Chloride by EPA 300	***Extracted:***	Jan-23-20 20:28		Jan-23-20 20:28		Jan-23-20 20:28		Jan-23-20 20:28		Jan-23-20 20:28		Jan-23-20 20:28	
	Analyzed:	Jan-24-20 10:00		Jan-24-20 10:05		Jan-24-20 10:10		Jan-24-20 10:15		Jan-24-20 10:20		Jan-24-20 10:25	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		19.6	9.96	49.3	9.98	11.5	10.0	<10.1	10.1	52.9	9.96	81.7	9.98
TPH by SW8015 Mod	***Extracted:***	Jan-24-20 10:27		Jan-24-20 10:27		Jan-24-20 10:27		Jan-24-20 10:27		Jan-24-20 10:27		Jan-24-20 10:27	
	Analyzed:	Jan-24-20 14:46		Jan-24-20 15:26		Jan-24-20 15:26		Jan-24-20 15:46		Jan-24-20 15:46		Jan-24-20 16:06	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<49.9	49.9	<50.2	50.2	<49.9	49.9	<50.1	50.1	<50.2	50.2	<50.1	50.1
Diesel Range Organics (DRO)		<49.9	49.9	<50.2	50.2	<49.9	49.9	<50.1	50.1	<50.2	50.2	<50.1	50.1
Motor Oil Range Hydrocarbons (MRO)		<49.9	49.9	<50.2	50.2	<49.9	49.9	<50.1	50.1	<50.2	50.2	<50.1	50.1
Total GRO-DRO		<49.9	49.9	<50.2	50.2	<49.9	49.9	<50.1	50.1	<50.2	50.2	<50.1	50.1
Total TPH		<49.9	49.9	<50.2	50.2	<49.9	49.9	<50.1	50.1	<50.2	50.2	<50.1	50.1

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 650133

LT Environmental, Inc., Arvada, CO

Project Name: Ape Fee #001H

Project Id:
Contact: Chris McKisson
Project Location:

Date Received in Lab: Thu Jan-23-20 03:45 pm
Report Date: 27-JAN-20
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	650133-007		650133-008					
	Field Id:	BH07A		BH08A					
	Depth:	0.5- ft		0.5- ft					
	Matrix:	SOIL		SOIL					
	Sampled:	Jan-23-20 13:25		Jan-23-20 13:30					
BTEX by EPA 8021B	***Extracted:***	Jan-24-20 07:14		Jan-24-20 07:14					
	Analyzed:	Jan-24-20 13:56		Jan-24-20 14:16					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00201	0.00201	<0.00200	0.00200				
Toluene		<0.00201	0.00201	<0.00200	0.00200				
Ethylbenzene		<0.00201	0.00201	<0.00200	0.00200				
m,p-Xylenes		<0.00402	0.00402	<0.00401	0.00401				
o-Xylene		<0.00201	0.00201	<0.00200	0.00200				
Xylenes, Total		<0.00201	0.00201	<0.00200	0.00200				
Total BTEX		<0.00201	0.00201	<0.00200	0.00200				
Chloride by EPA 300	***Extracted:***	Jan-23-20 20:28		Jan-23-20 20:28					
	Analyzed:	Jan-24-20 10:31		Jan-24-20 10:36					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		26.4	9.98	157	9.92				
TPH by SW8015 Mod	***Extracted:***	Jan-24-20 10:27		Jan-24-20 10:27					
	Analyzed:	Jan-24-20 16:06		Jan-24-20 16:26					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<50.3	50.3	<50.0	50.0				
Diesel Range Organics (DRO)		<50.3	50.3	<50.0	50.0				
Motor Oil Range Hydrocarbons (MRO)		<50.3	50.3	<50.0	50.0				
Total GRO-DRO		<50.3	50.3	<50.0	50.0				
Total TPH		<50.3	50.3	<50.0	50.0				

Jessica Kramer
Project Assistant

Certificate of Analytical Results 650133

LT Environmental, Inc., Arvada, CO

Ape Fee #001H

Sample Id:	**BH01A**	Matrix:	Soil	Date Received:	01.23.20 15.45
Lab Sample Id:	650133-001	Date Collected:	01.23.20 12.50	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.23.20 20.28	Basis:	Wet Weight
Seq Number:	3114325				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**19.6**	9.96	mg/kg	01.24.20 10.00		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.24.20 10.27	Basis:	Wet Weight
Seq Number:	3114448				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	01.24.20 14.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	01.24.20 14.46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.24.20 14.46	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	01.24.20 14.46	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	01.24.20 14.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	01.24.20 14.46	
o-Terphenyl	84-15-1	101	%	70-135	01.24.20 14.46	

Certificate of Analytical Results 650133

LT Environmental, Inc., Arvada, CO

Ape Fee #001H

Sample Id:	**BH01A**	Matrix:	Soil	Date Received:	01.23.20 15.45
Lab Sample Id:	650133-001	Date Collected:	01.23.20 12.50	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.23.20 18.00	Basis:	Wet Weight
Seq Number:	3114285				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.24.20 07.51	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.24.20 07.51	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.24.20 07.51	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.24.20 07.51	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.24.20 07.51	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	01.24.20 07.51	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.24.20 07.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	70-130	01.24.20 07.51	
1,4-Difluorobenzene	540-36-3	101	%	70-130	01.24.20 07.51	

Certificate of Analytical Results 650133

LT Environmental, Inc., Arvada, CO

Ape Fee #001H

Sample Id:	**BH02A**	Matrix:	Soil	Date Received:	01.23.20 15.45
Lab Sample Id:	650133-002	Date Collected:	01.23.20 12.55	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.23.20 20.28	Basis:	Wet Weight
Seq Number:	3114325				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**49.3**	9.98	mg/kg	01.24.20 10.05		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.24.20 10.27	Basis:	Wet Weight
Seq Number:	3114448				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	01.24.20 15.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	01.24.20 15.26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	01.24.20 15.26	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	01.24.20 15.26	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	01.24.20 15.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	01.24.20 15.26	
o-Terphenyl	84-15-1	91	%	70-135	01.24.20 15.26	

Certificate of Analytical Results 650133

LT Environmental, Inc., Arvada, CO

Ape Fee #001H

Sample Id:	**BH02A**	Matrix:	Soil	Date Received:	01.23.20 15.45
Lab Sample Id:	650133-002	Date Collected:	01.23.20 12.55	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.23.20 18.00	Basis:	Wet Weight
Seq Number:	3114285				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.24.20 08.11	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.24.20 08.11	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.24.20 08.11	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.24.20 08.11	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.24.20 08.11	U	1
Xylenes, Total	1330-20-7	<0.00201	0.00201	mg/kg	01.24.20 08.11	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.24.20 08.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	70-130	01.24.20 08.11	
1,4-Difluorobenzene	540-36-3	103	%	70-130	01.24.20 08.11	

Certificate of Analytical Results 650133

LT Environmental, Inc., Arvada, CO

Ape Fee #001H

Sample Id:	**BH03A**	Matrix:	Soil	Date Received:	01.23.20 15.45
Lab Sample Id:	650133-003	Date Collected:	01.23.20 13.05	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.23.20 20.28	Basis:	Wet Weight
Seq Number:	3114325				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**11.5**	10.0	mg/kg	01.24.20 10.10		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.24.20 10.27	Basis:	Wet Weight
Seq Number:	3114448				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	01.24.20 15.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	01.24.20 15.26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.24.20 15.26	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	01.24.20 15.26	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	01.24.20 15.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	01.24.20 15.26	
o-Terphenyl	84-15-1	103	%	70-135	01.24.20 15.26	

Certificate of Analytical Results 650133

LT Environmental, Inc., Arvada, CO

Ape Fee #001H

Sample Id:	**BH03A**	Matrix:	Soil	Date Received:	01.23.20 15.45
Lab Sample Id:	650133-003	Date Collected:	01.23.20 13.05	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.23.20 18.00	Basis:	Wet Weight
Seq Number:	3114285				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	01.24.20 08.32	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	01.24.20 08.32	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	01.24.20 08.32	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	01.24.20 08.32	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	01.24.20 08.32	U	1
Xylenes, Total	1330-20-7	<0.00198	0.00198	mg/kg	01.24.20 08.32	U	1
Total BTEX		<0.00198	0.00198	mg/kg	01.24.20 08.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	01.24.20 08.32	
4-Bromofluorobenzene	460-00-4	98	%	70-130	01.24.20 08.32	

Certificate of Analytical Results 650133

LT Environmental, Inc., Arvada, CO

Ape Fee #001H

Sample Id:	**BH04A**	Matrix:	Soil	Date Received:	01.23.20 15.45
Lab Sample Id:	650133-004	Date Collected:	01.23.20 13.10	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.23.20 20.28	Basis:	Wet Weight
Seq Number:	3114325				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<10.1	10.1	mg/kg	01.24.20 10.15	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.24.20 10.27	Basis:	Wet Weight
Seq Number:	3114448				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	01.24.20 15.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	01.24.20 15.46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	01.24.20 15.46	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	01.24.20 15.46	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	01.24.20 15.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	01.24.20 15.46	
o-Terphenyl	84-15-1	97	%	70-135	01.24.20 15.46	

Certificate of Analytical Results 650133

LT Environmental, Inc., Arvada, CO

Ape Fee #001H

Sample Id:	**BH04A**	Matrix:	Soil	Date Received:	01.23.20 15.45
Lab Sample Id:	650133-004	Date Collected:	01.23.20 13.10	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.23.20 18.00	Basis:	Wet Weight
Seq Number:	3114285				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.24.20 08.52	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.24.20 08.52	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.24.20 08.52	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.24.20 08.52	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.24.20 08.52	U	1
Xylenes, Total	1330-20-7	<0.00201	0.00201	mg/kg	01.24.20 08.52	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.24.20 08.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	01.24.20 08.52	
4-Bromofluorobenzene	460-00-4	96	%	70-130	01.24.20 08.52	

Certificate of Analytical Results 650133

LT Environmental, Inc., Arvada, CO

Ape Fee #001H

Sample Id:	**BH05A**	Matrix:	Soil	Date Received:	01.23.20 15.45
Lab Sample Id:	650133-005	Date Collected:	01.23.20 13.15	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.23.20 20.28	Basis:	Wet Weight
Seq Number:	3114325				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**52.9**	9.96	mg/kg	01.24.20 10.20		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.24.20 10.27	Basis:	Wet Weight
Seq Number:	3114448				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	01.24.20 15.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	01.24.20 15.46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	01.24.20 15.46	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	01.24.20 15.46	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	01.24.20 15.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	01.24.20 15.46	
o-Terphenyl	84-15-1	102	%	70-135	01.24.20 15.46	

Certificate of Analytical Results 650133

LT Environmental, Inc., Arvada, CO

Ape Fee #001H

Sample Id:	**BH05A**	Matrix:	Soil	Date Received:	01.23.20 15.45
Lab Sample Id:	650133-005	Date Collected:	01.23.20 13.15	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.23.20 18.00	Basis:	Wet Weight
Seq Number:	3114285				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.24.20 09.12	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.24.20 09.12	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.24.20 09.12	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	01.24.20 09.12	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.24.20 09.12	U	1
Xylenes, Total	1330-20-7	<0.00202	0.00202	mg/kg	01.24.20 09.12	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.24.20 09.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	70-130	01.24.20 09.12	
1,4-Difluorobenzene	540-36-3	103	%	70-130	01.24.20 09.12	

Certificate of Analytical Results 650133

LT Environmental, Inc., Arvada, CO

Ape Fee #001H

Sample Id:	**BH06A**	Matrix:	Soil	Date Received:	01.23.20 15.45
Lab Sample Id:	650133-006	Date Collected:	01.23.20 13.20	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.23.20 20.28	Basis:	Wet Weight
Seq Number:	3114325				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**81.7**	9.98	mg/kg	01.24.20 10.25		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.24.20 10.27	Basis:	Wet Weight
Seq Number:	3114448				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	01.24.20 16.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	01.24.20 16.06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	01.24.20 16.06	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	01.24.20 16.06	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	01.24.20 16.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	01.24.20 16.06	
o-Terphenyl	84-15-1	102	%	70-135	01.24.20 16.06	

Certificate of Analytical Results 650133

LT Environmental, Inc., Arvada, CO

Ape Fee #001H

Sample Id:	**BH06A**	Matrix:	Soil	Date Received:	01.23.20 15.45
Lab Sample Id:	650133-006	Date Collected:	01.23.20 13.20	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.23.20 18.00	Basis:	Wet Weight
Seq Number:	3114285				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.24.20 09.33	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.24.20 09.33	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.24.20 09.33	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.24.20 09.33	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.24.20 09.33	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	01.24.20 09.33	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.24.20 09.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	70-130	01.24.20 09.33	
1,4-Difluorobenzene	540-36-3	101	%	70-130	01.24.20 09.33	

Certificate of Analytical Results 650133

LT Environmental, Inc., Arvada, CO

Ape Fee #001H

Sample Id:	**BH07A**	Matrix:	Soil	Date Received:	01.23.20 15.45
Lab Sample Id:	650133-007	Date Collected:	01.23.20 13.25	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.23.20 20.28	Basis:	Wet Weight
Seq Number:	3114325				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**26.4**	9.98	mg/kg	01.24.20 10.31		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.24.20 10.27	Basis:	Wet Weight
Seq Number:	3114448				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	01.24.20 16.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	01.24.20 16.06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	01.24.20 16.06	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	01.24.20 16.06	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	01.24.20 16.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	01.24.20 16.06	
o-Terphenyl	84-15-1	105	%	70-135	01.24.20 16.06	

Certificate of Analytical Results 650133

LT Environmental, Inc., Arvada, CO

Ape Fee #001H

Sample Id:	**BH07A**	Matrix:	Soil	Date Received:	01.23.20 15.45
Lab Sample Id:	650133-007	Date Collected:	01.23.20 13.25	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.24.20 07.14	Basis:	Wet Weight
Seq Number:	3114404				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.24.20 13.56	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.24.20 13.56	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.24.20 13.56	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.24.20 13.56	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.24.20 13.56	U	1
Xylenes, Total	1330-20-7	<0.00201	0.00201	mg/kg	01.24.20 13.56	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.24.20 13.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	92	%	70-130	01.24.20 13.56	
1,4-Difluorobenzene	540-36-3	109	%	70-130	01.24.20 13.56	

Certificate of Analytical Results 650133

LT Environmental, Inc., Arvada, CO

Ape Fee #001H

Sample Id:	**BH08A**	Matrix:	Soil	Date Received:	01.23.20 15.45
Lab Sample Id:	650133-008	Date Collected:	01.23.20 13.30	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.23.20 20.28	Basis:	Wet Weight
Seq Number:	3114325				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**157**	9.92	mg/kg	01.24.20 10.36		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.24.20 10.27	Basis:	Wet Weight
Seq Number:	3114448				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	01.24.20 16.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	01.24.20 16.26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.24.20 16.26	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	01.24.20 16.26	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.24.20 16.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	01.24.20 16.26	
o-Terphenyl	84-15-1	98	%	70-135	01.24.20 16.26	

Certificate of Analytical Results 650133

LT Environmental, Inc., Arvada, CO

Ape Fee #001H

Sample Id:	**BH08A**	Matrix:	Soil	Date Received:	01.23.20 15.45
Lab Sample Id:	650133-008	Date Collected:	01.23.20 13.30	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.24.20 07.14	Basis:	Wet Weight
Seq Number:	3114404				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.24.20 14.16	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.24.20 14.16	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.24.20 14.16	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	01.24.20 14.16	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.24.20 14.16	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	01.24.20 14.16	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.24.20 14.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	01.24.20 14.16	
4-Bromofluorobenzene	460-00-4	91	%	70-130	01.24.20 14.16	

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 650133

LT Environmental, Inc.

Ape Fee #001H

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3114325 Matrix: Solid Date Prep: 01.23.20
MB Sample Id: 7695077-1-BLK LCS Sample Id: 7695077-1-BKS LCSD Sample Id: 7695077-1-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	247	99	246	98	90-110	0	20	mg/kg	01.24.20 08:08	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3114325 Matrix: Soil Date Prep: 01.23.20
Parent Sample Id: 650130-001 MS Sample Id: 650130-001 S MSD Sample Id: 650130-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	3190	201	3380	95	3400	104	90-110	1	20	mg/kg	01.24.20 08:29	

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3114448 Matrix: Solid Date Prep: 01.24.20
MB Sample Id: 7695115-1-BLK LCS Sample Id: 7695115-1-BKS LCSD Sample Id: 7695115-1-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	1140	114	821	82	70-135	33	35	mg/kg	01.24.20 14:26	
Diesel Range Organics (DRO)	<50.0	1000	1100	110	912	91	70-135	19	35	mg/kg	01.24.20 14:26	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	92		116		85		70-135	%	01.24.20 14:26
o-Terphenyl	87		106		76		70-135	%	01.24.20 14:26

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3114448 Matrix: Solid Date Prep: 01.24.20
MB Sample Id: 7695115-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	01.24.20 14:26	

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 650133

LT Environmental, Inc.

Ape Fee #001H

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3114448 Matrix: Soil Date Prep: 01.24.20
Parent Sample Id: 650133-001 MS Sample Id: 650133-001 S MSD Sample Id: 650133-001 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)	<50.2	1000	1030	103	1080	108	70-135	5	35	mg/kg	01.24.20 15:06	
Diesel Range Organics (DRO)	<50.2	1000	997	100	1070	107	70-135	7	35	mg/kg	01.24.20 15:06	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	120		126		70-135	%	01.24.20 15:06
o-Terphenyl	109		114		70-135	%	01.24.20 15:06

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3114285 Matrix: Solid Date Prep: 01.23.20
MB Sample Id: 7695072-1-BLK LCS Sample Id: 7695072-1-BKS LCSD Sample Id: 7695072-1-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	0.0983	98	0.0965	97	70-130	2	35	mg/kg	01.24.20 00:28	
Toluene	<0.00200	0.100	0.0949	95	0.0932	93	70-130	2	35	mg/kg	01.24.20 00:28	
Ethylbenzene	<0.00200	0.100	0.0917	92	0.0900	90	71-129	2	35	mg/kg	01.24.20 00:28	
m,p-Xylenes	<0.00400	0.200	0.188	94	0.185	93	70-135	2	35	mg/kg	01.24.20 00:28	
o-Xylene	<0.00200	0.100	0.0940	94	0.0927	93	71-133	1	35	mg/kg	01.24.20 00:28	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		102		102		70-130	%	01.24.20 00:28
4-Bromofluorobenzene	95		94		98		70-130	%	01.24.20 00:28

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3114404 Matrix: Solid Date Prep: 01.24.20
MB Sample Id: 7695073-1-BLK LCS Sample Id: 7695073-1-BKS LCSD Sample Id: 7695073-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.114	114	0.113	113	70-130	1	35	mg/kg	01.24.20 11:13	
Toluene	<0.00200	0.100	0.104	104	0.103	103	70-130	1	35	mg/kg	01.24.20 11:13	
Ethylbenzene	<0.00200	0.100	0.100	100	0.0985	99	71-129	2	35	mg/kg	01.24.20 11:13	
m,p-Xylenes	<0.00400	0.200	0.196	98	0.193	97	70-135	2	35	mg/kg	01.24.20 11:13	
o-Xylene	<0.00200	0.100	0.100	100	0.0984	98	71-133	2	35	mg/kg	01.24.20 11:13	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		108		108		70-130	%	01.24.20 11:13
4-Bromofluorobenzene	90		93		93		70-130	%	01.24.20 11:13

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

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

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

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

QC Summary 650133

LT Environmental, Inc.

Ape Fee #001H

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

Seq Number: 3114285 Matrix: Soil Date Prep: 01.23.20

Parent Sample Id: 650114-001 MS Sample Id: 650114-001 S MSD Sample Id: 650114-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0851	85	0.0881	89	70-130	3	35	mg/kg	01.24.20 01:09	
Toluene	<0.00200	0.100	0.0817	82	0.0848	85	70-130	4	35	mg/kg	01.24.20 01:09	
Ethylbenzene	<0.00200	0.100	0.0780	78	0.0812	82	71-129	4	35	mg/kg	01.24.20 01:09	
m,p-Xylenes	<0.00401	0.200	0.161	81	0.168	84	70-135	4	35	mg/kg	01.24.20 01:09	
o-Xylene	<0.00200	0.100	0.0794	79	0.0828	83	71-133	4	35	mg/kg	01.24.20 01:09	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		103		70-130	%	01.24.20 01:09
4-Bromofluorobenzene	95		96		70-130	%	01.24.20 01:09

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

Seq Number: 3114404 Matrix: Soil Date Prep: 01.24.20

Parent Sample Id: 650047-001 MS Sample Id: 650047-001 S MSD Sample Id: 650047-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.121	121	0.118	118	70-130	3	35	mg/kg	01.24.20 11:54	
Toluene	<0.00200	0.100	0.108	108	0.0999	100	70-130	8	35	mg/kg	01.24.20 11:54	
Ethylbenzene	<0.00200	0.100	0.103	103	0.0877	88	71-129	16	35	mg/kg	01.24.20 11:54	
m,p-Xylenes	<0.00401	0.200	0.200	100	0.167	84	70-135	18	35	mg/kg	01.24.20 11:54	
o-Xylene	<0.00200	0.100	0.102	102	0.0880	88	71-133	15	35	mg/kg	01.24.20 11:54	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		108		70-130	%	01.24.20 11:54
4-Bromofluorobenzene	93		99		70-130	%	01.24.20 11:54

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

Chain of Custody

XENCO LABORATORIES

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

Work Order No: 450133

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Project Manager:	Chris McKisson	Bill to: (if different)	
Company Name:	LT Environmental, Inc., Permian office	Company Name:	
Address:	820 Megan Ave Unit B	Address:	
City, State ZIP:	Rifle, CO 81650	City, State ZIP:	
Phone:	432.704.5178	Email:	ggreen@ltenv.com ; cmckisson@ltenv.com

Work Order Comments

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

Project Name:	APe Fee #001H	Turn Around	
Project Number:		Routine	☑
P.O. Number:	01/21/2020	Rush:	
Sampler's Name:	Garrett Green	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Temperature (°C):	2.2	Thermometer ID		
Received Intact:	Yes No	T-NM-007		
Cooler Custody Seals:	Yes No N/A	Correction Factor:		
Sample Custody Seals:	Yes No N/A	Total Containers:		

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
BH01A	S	01/23/2020	1250	.5'	1	X	X	X
BH02A			1255		1			
BH03A			1305		1			
BH04A			1310		1			
BH05A			1315		1			
BH06A			1320		1			
BH07A			1325		1			
BH08A	↓	↓	1330	↓	1	↓	↓	↓

Work Order Notes

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

Sample Comments

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Garrett Green		1/23/20 15:45	2		
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

Final 1.000

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 01.23.2020 03.45.00 PM

Work Order #: 650133

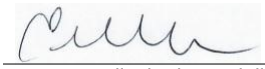
Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

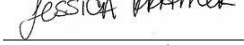
Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	2.2
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**
#5 Custody Seals intact on sample bottles?	**Yes**
#6*Custody Seals Signed and dated?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

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

Analyst: PH Device/Lot#:

Checklist completed by:  Date: 01.23.2020

Elizabeth McClellan

Checklist reviewed by:  Date: 01.24.2020

Jessica Kramer