



LT Environmental, Inc.
820 Megan Avenue, Unit B
Rifle, Colorado 81650
970.285.9985

May 6, 2020

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

**RE: Closure Request
WPX Energy Permian, LLC
Ape Fee #001
Incident ID NVV2003029246
Eddy County, New Mexico**

Dear Mr. Bratcher:

Pursuant to the 90-day requirement in 19.15.29.11(A) of the New Mexico Administrative Code (NMAC), LT Environmental, Inc. (LTE), on behalf of WPX Energy Permian, LLC. (WPX), timely submits the following closure request detailing soil sampling and excavation activities 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). The purpose of the soil sampling and excavation activities was to address impacts to soil as per the New Mexico Oil Conservation Division (NMOCD) approved remediation work plan as presented in the March 4, 2020, *Assessment Report and Proposed Remediation Work Plan* and the April 13, 2020, *Assessment and Remediation Update*. Based on the excavation activities and results of the soil sampling events to date, WPX is submitting this closure report and requesting no further action regarding Incident ID NVV2003029246.

BACKGROUND

On January 21, 2020 at approximately 2:30 A.M., a split estimated to be 0.5 inches in diameter developed in the flowline connected to the Ape Fee #001 wellhead, causing a release of natural gas, produced water, and crude oil. The fluids misted onto the adjacent property. The volumes released were estimated to be less than 25 barrels (bbl) combined of produced water and crude oil and less than 500 thousand cubic feet (MCF) of natural gas. Approximately 0.5 bbl of free liquids were observed at the surface near the point of the damaged flowline; however, no additional free liquids were observed. WPX responded 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. Visual staining from 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 the 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 was assigned Incident ID NVV2003029246. Following further investigation, WPX revised the Form C-141 to include more detail and submitted the form on March 4, 2020.

CLOSURE CRITERIA

As presented in the February 3, 2020, *Assessment Report and Proposed Remediation Work Plan* and approved by the NMOCD, 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. Potential receptors identified during site characterization are displayed in Figure 1.

PRELIMINARY SITE ASSESSMENT

On January 21, 2020, LTE personnel conducted site assessment activities 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 to remove visually impacted soil (Figure 3).

DELINEATION AND EXCAVATION

On January 23, 2020, eight boreholes (BH01 through BH08) were advanced using a hand auger within the impacted area on the private property located west of South Thomason Road. Soil boring locations were selected to investigate the presence or absence of impacted soil and agreed upon by both WPX and the landowner (Figure 2). Soil samples were collected from each borehole location at 0 to 0.25 feet below ground surface (bgs) and 0.5 feet bgs. All soil samples were field screened for volatile aromatic hydrocarbons using a photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. 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. The sampling and associated results were documented in the initial *Assessment Report and Proposed Remediation Work Plan* dated February 3, 2020. The



remediation work plan proposed continued soil sampling activities to fully delineate chloride and hydrocarbon impacted soil.

On February 14 and 18, 2020, additional soil samples were collected from the release area (BH09 through BH19 and SS01 through SS12) and excavation areas (FS01 through FS24) as described in the *Assessment Report and Proposed Remediation Work Plan* dated February 3, 2020. The NMOCD was on site during all sampling activities and directed additional soil sample locations. At the direction of the NMOCD, discrete soil samples were collected from the excavation area south of the landowner's property in order to ensure samples were collected below the road base that had been spread in the area. All soil samples were field screened for volatile aromatic hydrocarbons using a PID and chloride using Hach® chloride QuanTab® test strips. The soil samples were collected, handled, and analyzed as previously described. Soil sample locations are depicted on the attached Figure 2 and Figure 3.

On March 26, 2020 and March 30, 2020, LTE personnel was onsite to oversee remaining excavation activities east of South Thomason Road. Excavation activities were directed by field screening soil samples for volatile aromatic hydrocarbons using a PID and chloride using Hach® chloride QuanTab® test strips. The smaller excavation area immediately east of the road was advanced to a depth of 0.5 feet bgs in the southern portion to address the TPH impacts as shown in soil sample FS23. The larger eastern-most excavation area was advanced to a depth of 1 to 2 feet bgs to address TPH impacts as shown in soil samples FS01 through FS05. Following the completion of excavation activities, new 5-point composite confirmation soil samples were collected from the advanced floor of the excavation area (FS01A through FS05A and FS23A). Each soil sample represented at most 200 square feet and was collected, handled, and analyzed as previously described. The excavation areas and sample locations are depicted on Figure 3. A total of approximately 65 cubic yards of impacted soil were excavated from the Site and transported to the R360 landfill located in Hobbs, New Mexico under WPX approved manifests.

On March 30, 2020, additional delineation soil boring samples (BH20 through BH25) were collected utilizing a hand auger around the home on the landowner's property to further investigate the elevated chloride concentration associated with SS11. Soil samples were collected from ground surface (0 – 0.25 feet bgs) and 0.5 feet bgs. All soil samples were field screened, collected, handled, and analyzed as previously described. Soil sample locations are depicted on Figure 2.

An area centralized around SS09 with an approximate radius of 25 feet was treated with an application of 3% solution of MicroBlaze. On April 23, 2020, LTE collected soil samples to confirm successful bioremediation of impacted soils associated with SS09. Soil samples were collected from the SS09 location at the ground surface (0 to 0.3 feet bgs) and 0.6 to 1 foot bgs. The soil samples were collected, handled as previously described, and analyzed for TPH-GRO, TPH-DRO, and TPH-ORO following USEPA Method 8015M/D. Photographic documentation was conducted throughout the remediation process. The Photographic Logs are included in Attachment 3.



ANALYTICAL RESULTS

One discrete sample (SS11) collected in February 2020 exceeded the Closure Criteria for chloride, containing 697 milligrams per kilogram (mg/kg) compared to the Closure Criteria of 600 mg/kg. Laboratory analytical results of soil samples collected on March 30, 2020 from BH20 through BH25 indicate compliance with Closure Criteria.

One discrete sample (SS09) collected in February 2020 from the private land located to the southwest exceeded the Closure Criteria for TPH, containing 183 mg/kg compared to the Closure Criteria of 100 mg/kg. This area was treated with MicroBlaze on March 26, 2020. Laboratory analytical results of soil samples collected on April 23, 2020 indicate compliance with Closure Criteria, thus confirming successful remediation of the area.

Laboratory analytical results of all final excavation confirmation soil samples indicate compliance with the Closure Criteria. Laboratory analytical results are summarized in Table 1 and complete laboratory analytical reports are included as Attachment 2.

CONCLUSIONS

Laboratory analytical results of final excavation confirmation soil samples indicate compliance with Closure Criteria. WPX is requesting permission to backfill all of these areas. Upon approval of this request, WPX will backfill the excavation with material purchased locally and recontour the Site to match pre-existing site conditions.

Laboratory analytical results of soil sample SS11 collected in February 2020 indicated a chloride concentration exceeding the Closure Criteria. At the direction of the NMOCD, on March 30, 2020, soil borings were advanced surrounding the residence to investigate the potential that the release affected this area. Laboratory analytical results of soil samples collected from BH20 through BH25 on March 30, 2020 indicate compliance with Closure Criteria. Based on conversations between WPX and NMOCD, this indicates that the release did not affect this area and there are no additional plans to remediate soil immediately next to the house containing 697 mg/kg of chloride.

Laboratory analytical results of SS09 collected in February 2020 indicate a TPH concentration exceeding the Closure Criteria of 100 mg/kg. This area was treated with MicroBlaze on March 26, 2020. Laboratory analytical results of confirmation soil samples collected from this area on April 23, 2020 indicate compliance with Closure Criteria and confirm successful remediation. WPX is submitting this final closure report and requesting no further action regarding Incident ID NVV2003029246.



Bratcher, M.
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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.

A handwritten signature in black ink, appearing to read 'Chris McKisson'.

Chris McKisson
Project Environmental Scientist

A handwritten signature in black ink, appearing to read 'Ashley L. Ager'.

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

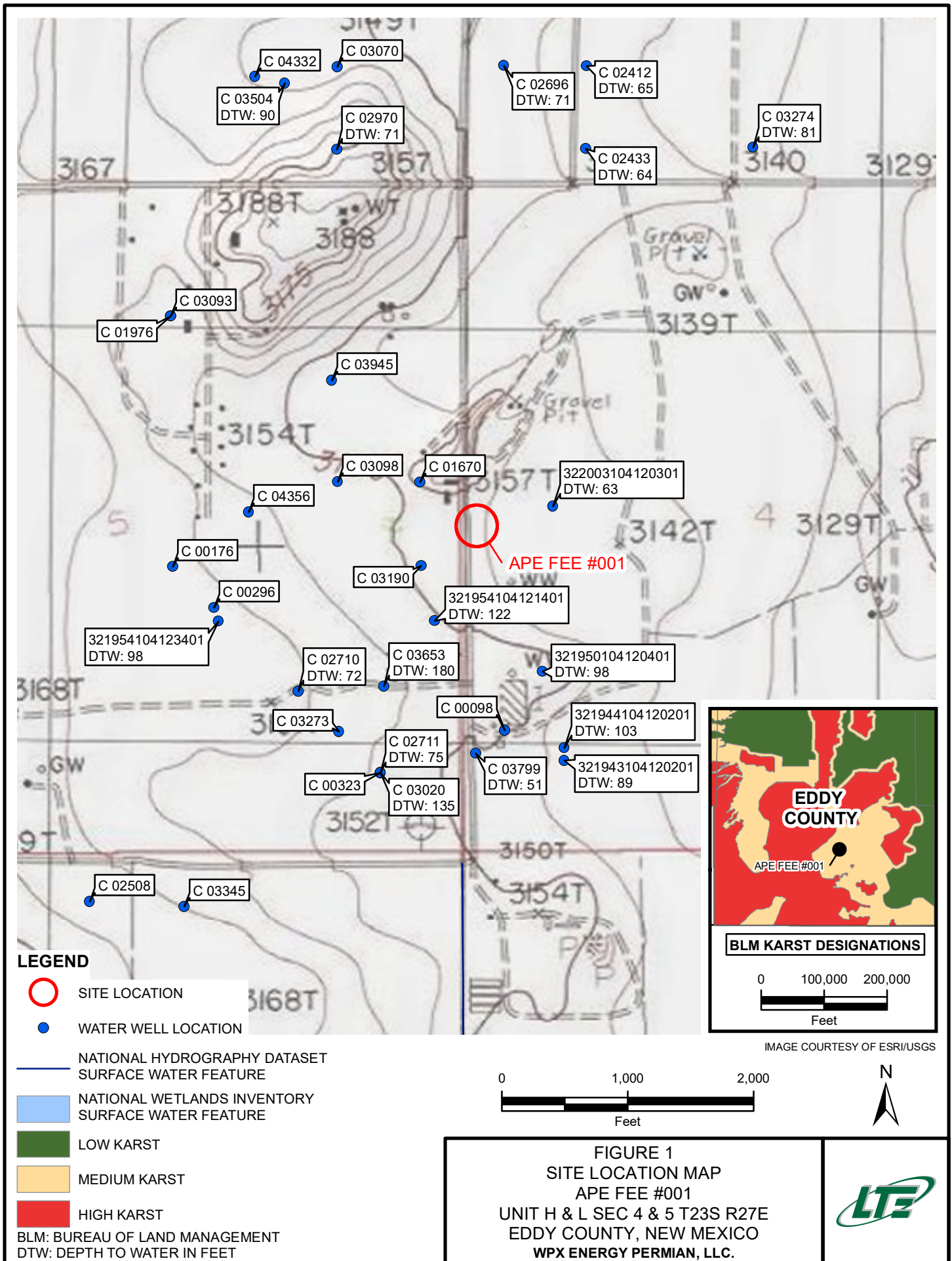
cc: Jim Raley, WPX
Robert Hamlet, NMOCD
Victoria Venegas, NMOCD
Jim Amos, BLM

Attachments:

Figure 1 Site Location Map
Figure 2 Site Characterization Assessment
Figure 3 Delineation Soil Sample Locations
Figure 4 Excavation Soil Sample Locations
Table 1 Soil Analytical Results
Attachment 1 Form C-141
Attachment 2 Laboratory Analytical Reports
Attachment 3 Photographic Logs

FIGURES





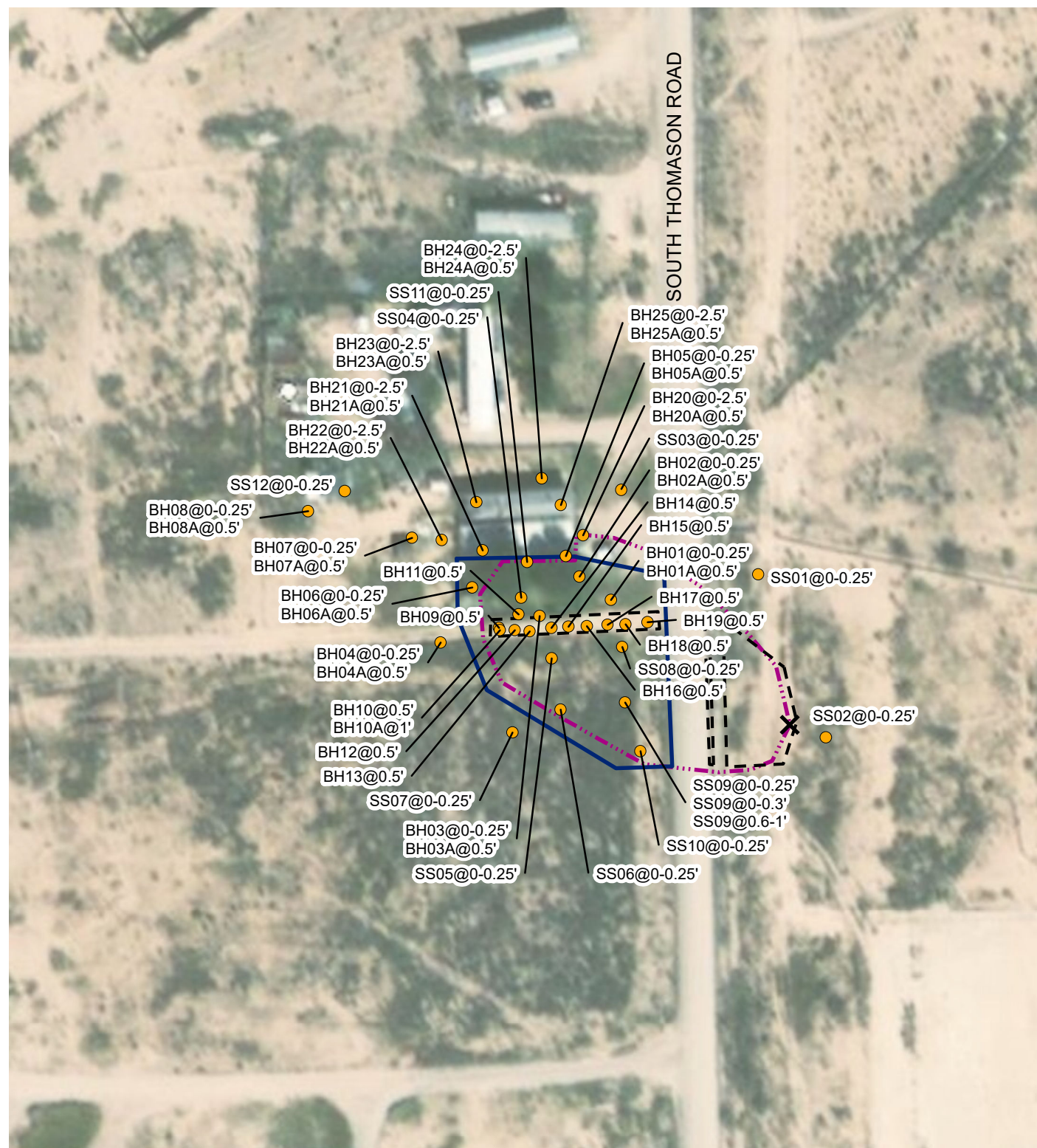
**LEGEND**

IMAGE COURTESY OF ESRI



RELEASE LOCATION



DELINEATION SOIL SAMPLE



EXCAVATION EXTENT



RELEASE EXTENT (24,465 SQUARE FEET)



MICRO-BLAZE EMERGENCY LIQUID SPILL CONTROL

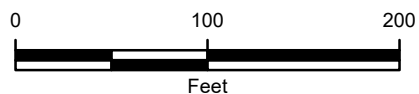
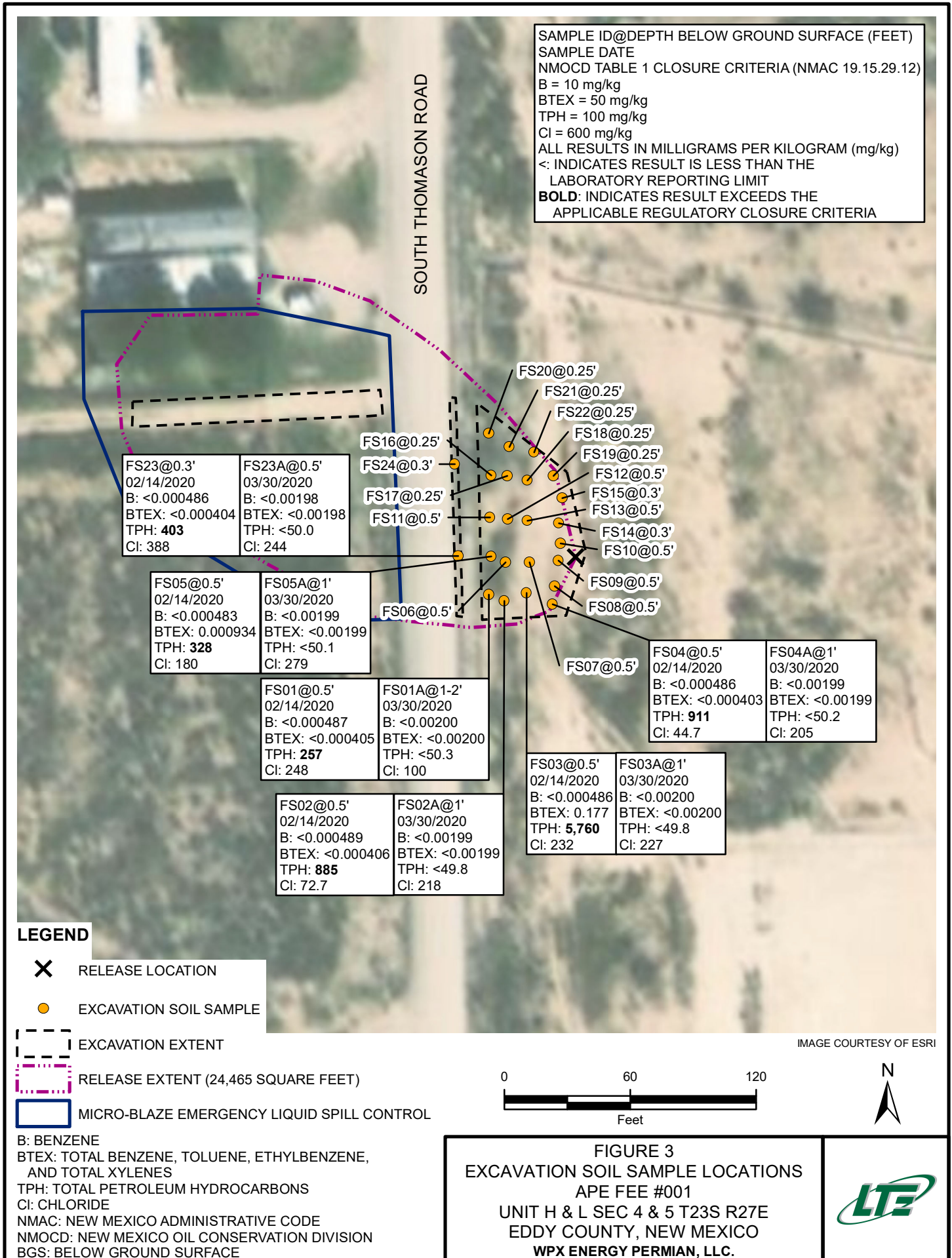


FIGURE 2
DELINEATION SOIL SAMPLE LOCATIONS
 APE FEE #001
 UNIT H & L SEC 4 & 5 T23S R27E
 EDDY COUNTY, NEW MEXICO
 WPX ENERGY PERMIAN, LLC.





TABLES



TABLE 1
SOIL ANALYTICAL RESULTS

APE FEE #001H
EDDY COUNTY, NEW MEXICO
WPX ENERGY PERMIAN, LLC.

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)	Application
NMOCD Table 1 Closure Criteria			10	NE	NE	NE	50	NE	NE	NE	100	600	
SS01	0 - 0.25	02/14/2020	<0.000483	<0.000525	<0.000404	<0.000401	<0.000401	<13.9	<11.5	<11.5	<11.5	18.5	In - Situ
SS02	0 - 0.25	02/14/2020	<0.000484	<0.000526	<0.000405	<0.000401	<0.000401	<13.9	14.6 J	<11.4	14.6 J	5.73 J	In - Situ
SS03	0 - 0.25	02/18/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	10.2	In - Situ
SS04	0 - 0.25	02/18/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.3	<50.3	<50.3	<50.3	65.7	In - Situ
SS05	0 - 0.25	02/18/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	16.6	In - Situ
SS06	0 - 0.25	02/18/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	79.4	In - Situ
SS07	0 - 0.25	02/18/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	14.3	In - Situ
SS08	0 - 0.25	02/18/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.3	<50.3	<50.3	<50.3	359	In - Situ
SS09	0 - 0.25	02/18/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.3	183	<50.3	183	148	Remediated
SS09	0 - 0.3	04/23/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.2	<50.2	<50.2	<50.2	132	In - Situ
SS09A	0.6 - 1	04/23/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.9	<49.9	<49.9	<49.9	48.1	In - Situ
SS10	0 - 0.25	02/18/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.3	<50.3	<50.3	<50.3	65.7	In - Situ
SS11	0 - 0.25	02/18/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.3	<50.3	<50.3	<50.3	697	In - Situ
SS12	0 - 0.25	02/18/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.1	<50.1	<50.1	<50.1	27.2	In - Situ
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	In - Situ
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	In - Situ
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	In - Situ
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	In - Situ
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	In - Situ
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	In - Situ
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	In - Situ
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	In - Situ
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	In - Situ
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	In - Situ
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	In - Situ
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	In - Situ
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	In - Situ
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	In - Situ
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	In - Situ
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	In - Situ
BH09	0.5	02/18/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	87.6	In - Situ



TABLE 1
SOIL ANALYTICAL RESULTS

APE FEE #001H
EDDY COUNTY, NEW MEXICO
WPX ENERGY PERMIAN, LLC.

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)	Application
NMOCD Table 1 Closure Criteria			10	NE	NE	NE	50	NE	NE	NE	100	600	
BH10	0.5	02/18/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.3	<50.3	<50.3	<50.3	28.1	In - Situ
BH10A	1	02/18/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.3	<50.3	<50.3	<50.3	20.9	In - Situ
BH11	0.5	02/18/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.3	<50.3	<50.3	<50.3	12.0	In - Situ
BH12	0.5	02/18/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	142	In - Situ
BH13	0.5	02/18/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.3	<50.3	<50.3	<50.3	50.5	In - Situ
BH14	0.5	02/18/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	26.3	In - Situ
BH15	0.5	02/18/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	204	In - Situ
BH16	0.5	02/18/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<49.4	In - Situ
BH17	0.5	02/18/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	32.0	In - Situ
BH18	0.5	02/18/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	42.3	In - Situ
BH19	0.5	02/18/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.2	<50.2	<50.2	<50.2	126	In - Situ
BH20	0 - 2.5	03/30/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<49.9	<49.9	<49.9	<49.9	<9.98	In - Situ
BH20A	0.5	03/30/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<10.0	In - Situ
BH21	0 - 2.5	03/30/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.3	<50.3	<50.3	<50.3	75.5	In - Situ
BH21A	0.5	03/30/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.3	<50.3	<50.3	<50.3	81.8	In - Situ
BH22	0 - 2.5	03/30/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.2	<50.2	<50.2	<50.2	22.3	In - Situ
BH22A	0.5	03/30/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.3	<50.3	<50.3	<50.3	119	In - Situ
BH23	0 - 2.5	03/30/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<10.1	In - Situ
BH23A	0.5	03/30/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.2	<50.2	<50.2	<50.2	11.7	In - Situ
BH24	0 - 2.5	03/30/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.3	<50.3	<50.3	<50.3	<10.0	In - Situ
BH24A	0.5	03/30/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.3	<50.3	<50.3	<50.3	10.4	In - Situ
BH25	0 - 2.5	03/30/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.1	<50.1	<50.1	<50.1	256	In - Situ
BH25A	0.5	03/30/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.8	<49.8	<49.8	<49.8	224	In - Situ
FS01	0.5	02/14/2020	<0.000487	<0.000530	<0.000408	<0.000405	<0.000405	25.0	215	16.6	257	248	Excavated
FS01A	1 - 2	03/30/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.3	<50.3	<50.3	<50.3	100	In - Situ
FS02	0.5	02/14/2020	<0.000489	<0.000532	<0.000409	<0.000406	<0.000406	15.9	817	52.1	885	72.7	Excavated
FS02A	1	03/30/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.8	<49.8	<49.8	<49.8	218	In - Situ
FS03	0.5	02/14/2020	<0.000486	0.0108	0.0112	0.155	0.177	401	4970	386	5760	232	Excavated
FS03A	1	03/30/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	227	In - Situ
FS04	0.5	02/14/2020	<0.000486	<0.000528	<0.000406	<0.000403	<0.000403	<13.9	837	74.2	911	44.7	Excavated
FS04A	1	03/30/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.2	<50.2	<50.2	<50.2	205	In - Situ



**TABLE 1
SOIL ANALYTICAL RESULTS**

**APE FEE #001H
EDDY COUNTY, NEW MEXICO
WPX ENERGY PERMIAN, LLC.**

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)	Application
NMOCDC Table 1 Closure Criteria			10	NE	NE	NE	50	NE	NE	NE	100	600	
FS05	0.5	02/14/2020	<0.000483	<0.000525	<0.000404	0.000934	0.000934	24.5	239	64.0	328	180	Excavated
FS05A	1	03/30/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.1	<50.1	<50.1	<50.1	279	In - Situ
FS06	0.5	02/14/2020	<0.000488	<0.000531	<0.000409	<0.000406	<0.000406	<13.8	37.8	16.8	54.6	44.7	In - Situ
FS07	0.5	02/14/2020	<0.000484	<0.000526	<0.000405	<0.000401	<0.000401	<14.0	<11.5	<11.5	<11.5	<0.351	In - Situ
FS08	0.5	02/14/2020	<0.000488	<0.000531	<0.000409	<0.000406	<0.000406	<14.0	<11.5	<11.5	<11.5	21.0	In - Situ
FS09	0.5	02/14/2020	<0.000487	<0.000530	<0.000408	<0.000405	<0.000405	<13.9	<11.5	<11.5	<11.5	8.80	In - Situ
FS10	0.5	02/14/2020	<0.000488	<0.000531	<0.000409	<0.000406	<0.000406	<13.9	<11.5	<11.5	<11.5	18.7	In - Situ
FS11	0.5	02/14/2020	<0.000486	<0.000529	<0.000407	<0.000404	<0.000404	<13.9	<11.4	<11.4	<11.4	18.1	In - Situ
FS12	0.5	02/14/2020	<0.000486	<0.000529	<0.000407	<0.000404	<0.000404	<13.8	<11.4	<11.4	<11.4	12.6	In - Situ
FS13	0.5	02/14/2020	<0.000489	<0.000532	<0.000409	<0.000406	<0.000406	<13.8	<11.4	<11.4	<11.4	5.58 J	In - Situ
FS14	0.3	02/14/2020	<0.000484	<0.000526	<0.000405	<0.000401	<0.000401	<14.0	<11.5	<11.5	<11.5	30.8	In - Situ
FS15	0.3	02/14/2020	<0.000480	<0.000521	<0.000401	<0.000398	<0.000398	<14.0	<11.5	<11.5	<11.5	17.3	In - Situ
FS16	0.25	02/14/2020	<0.000485	<0.000527	<0.000405	<0.000402	<0.000402	<13.8	<11.4	<11.4	<11.4	29.6	In - Situ
FS17	0.25	02/14/2020	<0.000484	<0.000526	<0.000405	<0.000401	<0.000401	<13.9	<11.4	<11.4	<11.4	6.04 J	In - Situ
FS18	0.25	02/14/2020	<0.000489	<0.000532	<0.000409	<0.000406	<0.000406	<13.9	<11.5	<11.5	<11.5	14.6	In - Situ
FS19	0.25	02/14/2020	<0.000486	<0.000528	<0.000406	<0.000403	<0.000403	<13.9	<11.5	<11.5	<11.5	58.4	In - Situ
FS20	0.25	02/14/2020	<0.000488	<0.000531	<0.000409	<0.000406	<0.000406	<13.8	<11.4	<11.4	<11.4	14.2	In - Situ
FS21	0.25	02/14/2020	<0.000485	<0.000527	<0.000405	<0.000402	<0.000402	25.2 J	14.9 J	<11.5	40.1 J	5.58 J	In - Situ
FS22	0.25	02/14/2020	<0.000485	<0.000527	<0.000405	<0.000402	<0.000402	<13.9	<11.5	<11.5	<11.5	21.2	In - Situ
FS23	0.3	02/14/2020	<0.000486	<0.000529	<0.000407	<0.000404	<0.000404	20.5 J	355	27.6 J	403	388	Excavated
FS23A	0.5	03/30/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.0	<50.0	<50.0	<50.0	244	In - Situ
FS24	0.3	02/14/2020	<0.000487	<0.000530	<0.000408	<0.000405	<0.000405	<13.8	25.8 J	<11.4	25.8 J	157	In - Situ

Notes:

bgs - below ground surface

BTEX - benzene, toluene, ethylbenzene, and total xylenes

mg/kg - milligrams per kilogram

NE - not established

NMOCDC - 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

J - Analyte was positively identified below the quantitation limit and above the detection limit



ATTACHMENT 1: FORM C-141



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	NVV2003029246
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party	WPX Energy, Inc.	OGRID	246289
Contact Name	Jim Raley	Contact Telephone	575-689-7597
Contact email	James.Raley@wpxenergy.com	Incident # (assigned by OCD)	
Contact mailing address	5315 Buena Vista Dr., Carlsbad, NM 88220		

Location of Release Source

Latitude 32.333864 Longitude -104.203312
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Ape Fee #001	Site Type	Well Pad Facility Flowline
Date Release Discovered	January 21, 2020	API# (if applicable)	30-015-42101

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

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

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) 0.5 -1.5 bbl	Volume Recovered (bbls) TBD
☒ Produced Water	Volume Released (bbls) 1 – 4.5 bbl	Volume Recovered (bbls) TBD
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

At approximately 2:30 a.m. on 1/21/2020, a split approximately 0.5 inches in diameter developed in the flowline connected to the Ape Fee No. 1 well (API 30-015-42101), causing a misting of natural gas, produced water, and crude oil to occur.

Initial Response

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

OCD Only

Incident ID	NVV2003029246
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Page 4

Incident ID	NVV2003029246
District RP	
Facility ID	
Application ID	

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

Printed Name: Robert W. Raup II

Title: HSE Supervisor

Signature: _____

Date: May 1, 2020

email: Bob.Raup@wpenergy.com

Telephone: 701-310-5194

OCD Only

Received by: _____

Date: _____

Incident ID	NVV2003029246
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: *Each of the following items must be included in the closure report.*

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: **Lynda Laumbach**

Title: **Environmental Specialist**

Signature: 

Date: **05/06/2020**

email: **lynda.laumbach@wpenergy.com**

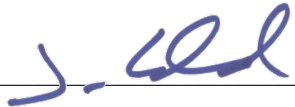
Telephone: **(575) 725-1647**

OCD Only

Received by: _____

Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by:  Date: **8/4/20**

Printed Name: **Jim Griswold**

Title: _____

ATTACHMENT 2: LABORATORY ANALYTICAL REPORTS





Analytical Report 652836

for

LT Environmental, Inc.

Project Manager: Chris McKisson

Ape Fee 001

034820008

05.01.2020

Collected By: Client

**1089 N Canal Street
Carlsbad, NM 88220**

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



05.01.2020

Project Manager: **Chris McKisson**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **652836**

Ape Fee 001

Project Address: Eddy

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) 652836. 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. 652836 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads 'Jessica Kramer'.

Jessica Kramer

Project Manager

A Small Business and Minority Company

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



Sample Cross Reference 652836

LT Environmental, Inc., Arvada, CO

Ape Fee 001

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH09	S	02.18.2020 10:35	0.5 ft	652836-001
BH10	S	02.18.2020 10:45	0.5 ft	652836-002
BH10A	S	02.18.2020 10:50	1 ft	652836-003
BH11	S	02.18.2020 10:59	0.5 ft	652836-004
BH12	S	02.18.2020 11:06	0.5 ft	652836-005
BH13	S	02.18.2020 11:14	0.5 ft	652836-006
BH14	S	02.18.2020 11:24	0.5 ft	652836-007
BH15	S	02.18.2020 11:31	0.5 ft	652836-008
BH16	S	02.18.2020 11:38	0.5 ft	652836-009
BH17	S	02.18.2020 11:52	0.5 ft	652836-010
BH18	S	02.18.2020 12:02	0.5 ft	652836-011
BH19	S	02.18.2020 12:13	0.5 ft	652836-012
SS03	S	02.18.2020 13:14	0 - 0.25 ft	652836-013
SS04	S	02.18.2020 12:33	0 - 0.25 ft	652836-014
SS05	S	02.18.2020 13:18	0 - 0.25 ft	652836-015
SS06	S	02.18.2020 13:23	0 - 0.25 ft	652836-016
SS07	S	02.18.2020 13:29	0 - 0.25 ft	652836-017
SS08	S	02.18.2020 13:34	0 - 0.25 ft	652836-018
SS09	S	02.18.2020 13:39	0 - 0.25 ft	652836-019
SS10	S	02.18.2020 13:44	0 - 0.25 ft	652836-020
SS11	S	02.18.2020 12:27	0 - 0.25 ft	652836-021
SS12	S	02.18.2020 12:40	0 - 0.25 ft	652836-022



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *Ape Fee 001*

Project ID: 034820008
Work Order Number(s): 652836

Report Date: 05.01.2020
Date Received: 02.18.2020

Sample receipt non conformances and comments:

V1.001 - Revision (client email) Corrected sample name from S09 to SS09. JK 02/25/20

V1.001 - Revision (client email) Revised COC, removed composite from COC, all samples discrete. JK 05/01/20

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3116910 BTEX by EPA 8021B

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

Batch: LBA-3116911 BTEX by EPA 8021B

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



Certificate of Analysis Summary 652836

LT Environmental, Inc., Arvada, CO

Project Name: Ape Fee 001

Project Id: 034820008
Contact: Chris McKisson
Project Location: Eddy

Date Received in Lab: Tue 02.18.2020 15:53

Report Date: 05.01.2020 11:31

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	652836-001	652836-002	652836-003	652836-004	652836-005	652836-006
	<i>Field Id:</i>	BH09	BH10	BH10A	BH11	BH12	BH13
	<i>Depth:</i>	0.5- ft	0.5- ft	1- ft	0.5- ft	0.5- ft	0.5- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	02.18.2020 10:35	02.18.2020 10:45	02.18.2020 10:50	02.18.2020 10:59	02.18.2020 11:06	02.18.2020 11:14
BTEX by EPA 8021B	<i>Extracted:</i>	02.18.2020 17:00	02.18.2020 17:00	02.18.2020 17:00	02.18.2020 17:00	02.18.2020 17:00	02.18.2020 17:00
	<i>Analyzed:</i>	02.18.2020 21:39	02.18.2020 22:00	02.18.2020 22:20	02.18.2020 23:21	02.18.2020 23:41	02.19.2020 00:02
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199
Toluene		<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199
Ethylbenzene		<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199
m,p-Xylenes		<0.00398 0.00398	<0.00397 0.00397	<0.00399 0.00399	<0.00399 0.00399	<0.00399 0.00399	<0.00398 0.00398
o-Xylene		<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199
Xylenes, Total		<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199
Total BTEX		<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199
Chloride by EPA 300	<i>Extracted:</i>	02.18.2020 16:00	02.18.2020 16:00	02.18.2020 16:00	02.18.2020 16:00	02.18.2020 16:00	02.18.2020 16:00
	<i>Analyzed:</i>	02.18.2020 18:18	02.18.2020 18:35	02.18.2020 18:40	02.18.2020 18:57	02.18.2020 19:03	02.18.2020 19:08
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		87.6 9.92	28.1 10.0	20.9 10.1	12.0 9.98	142 49.6	50.5 49.8
TPH by SW8015 Mod	<i>Extracted:</i>	02.18.2020 17:00	02.18.2020 17:00	02.18.2020 17:00	02.18.2020 17:00	02.18.2020 17:00	02.18.2020 17:00
	<i>Analyzed:</i>	02.18.2020 22:48	02.18.2020 22:48	02.18.2020 23:08	02.18.2020 23:08	02.18.2020 23:28	02.18.2020 23:48
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<49.9 49.9	<50.3 50.3	<50.3 50.3	<50.3 50.3	<50.0 50.0	<50.3 50.3
Diesel Range Organics (DRO)		<49.9 49.9	<50.3 50.3	<50.3 50.3	<50.3 50.3	<50.0 50.0	<50.3 50.3
Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9	<50.3 50.3	<50.3 50.3	<50.3 50.3	<50.0 50.0	<50.3 50.3
Total TPH		<49.9 49.9	<50.3 50.3	<50.3 50.3	<50.3 50.3	<50.0 50.0	<50.3 50.3

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

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

Jessica Kramer
Project Manager



Certificate of Analysis Summary 652836

LT Environmental, Inc., Arvada, CO

Project Name: Ape Fee 001

Project Id: 034820008
Contact: Chris McKisson
Project Location: Eddy

Date Received in Lab: Tue 02.18.2020 15:53
Report Date: 05.01.2020 11:31
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	652836-007	652836-008	652836-009	652836-010	652836-011	652836-012
	<i>Field Id:</i>	BH14	BH15	BH16	BH17	BH18	BH19
	<i>Depth:</i>	0.5- ft	0.5- ft	0.5- ft	0.5- ft	0.5- ft	0.5- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	02.18.2020 11:24	02.18.2020 11:31	02.18.2020 11:38	02.18.2020 11:52	02.18.2020 12:02	02.18.2020 12:13
BTEX by EPA 8021B	<i>Extracted:</i>	02.18.2020 17:00	02.18.2020 17:00	02.18.2020 17:00	02.18.2020 17:00	02.18.2020 17:00	02.18.2020 17:00
	<i>Analyzed:</i>	02.19.2020 00:22	02.19.2020 00:43	02.19.2020 01:03	02.19.2020 01:23	02.19.2020 01:44	02.19.2020 02:04
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199
Toluene		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199
Ethylbenzene		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199
m,p-Xylenes		<0.00401 0.00401	<0.00398 0.00398	<0.00399 0.00399	<0.00400 0.00400	<0.00401 0.00401	<0.00398 0.00398
o-Xylene		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199
Xylenes, Total		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199
Total BTEX		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199
Chloride by EPA 300	<i>Extracted:</i>	02.18.2020 16:00	02.18.2020 16:00	02.18.2020 16:00	02.18.2020 16:00	02.18.2020 17:30	02.18.2020 17:30
	<i>Analyzed:</i>	02.18.2020 19:14	02.18.2020 19:20	02.18.2020 19:25	02.18.2020 19:31	02.18.2020 20:04	02.18.2020 20:21
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		26.3 9.98	204 50.4	<49.4 49.4	32.0 9.98	42.3 9.92	126 49.8
TPH by SW8015 Mod	<i>Extracted:</i>	02.18.2020 17:00	02.18.2020 17:00	02.18.2020 17:00	02.18.2020 17:00	02.18.2020 17:00	02.18.2020 17:00
	<i>Analyzed:</i>	02.18.2020 23:48	02.19.2020 00:08	02.19.2020 00:08	02.19.2020 00:28	02.19.2020 00:28	02.19.2020 01:07
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<49.8 49.8	<50.0 50.0	<50.0 50.0	<50.2 50.2	<49.9 49.9	<50.2 50.2
Diesel Range Organics (DRO)		<49.8 49.8	<50.0 50.0	<50.0 50.0	<50.2 50.2	<49.9 49.9	<50.2 50.2
Motor Oil Range Hydrocarbons (MRO)		<49.8 49.8	<50.0 50.0	<50.0 50.0	<50.2 50.2	<49.9 49.9	<50.2 50.2
Total TPH		<49.8 49.8	<50.0 50.0	<50.0 50.0	<50.2 50.2	<49.9 49.9	<50.2 50.2

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Jessica Kramer
Project Manager



Certificate of Analysis Summary 652836

LT Environmental, Inc., Arvada, CO

Project Name: Ape Fee 001

Project Id: 034820008
 Contact: Chris McKisson
 Project Location: Eddy

Date Received in Lab: Tue 02.18.2020 15:53

Report Date: 05.01.2020 11:31

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	652836-013	652836-014	652836-015	652836-016	652836-017	652836-018
	<i>Field Id:</i>	SS03	SS04	SS05	SS06	SS07	SS08
	<i>Depth:</i>	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	02.18.2020 13:14	02.18.2020 12:33	02.18.2020 13:18	02.18.2020 13:23	02.18.2020 13:29	02.18.2020 13:34
BTEX by EPA 8021B	<i>Extracted:</i>	02.18.2020 17:00	02.18.2020 16:00	02.18.2020 17:00	02.18.2020 17:00	02.18.2020 17:00	02.18.2020 17:00
	<i>Analyzed:</i>	02.19.2020 02:25	02.18.2020 20:52	02.18.2020 21:12	02.18.2020 21:32	02.18.2020 21:53	02.18.2020 22:13
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200
Toluene		<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200
Ethylbenzene		<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200
m,p-Xylenes		<0.00401 0.00401	<0.00403 0.00403	<0.00401 0.00401	<0.00400 0.00400	<0.00398 0.00398	<0.00401 0.00401
o-Xylene		<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200
Xylenes, Total		<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200
Total BTEX		<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200
Chloride by EPA 300	<i>Extracted:</i>	02.18.2020 17:30	02.18.2020 17:30	02.18.2020 17:30	02.18.2020 17:30	02.18.2020 17:30	02.18.2020 17:30
	<i>Analyzed:</i>	02.18.2020 20:26	02.18.2020 20:32	02.18.2020 20:38	02.18.2020 20:54	02.18.2020 21:00	02.18.2020 21:05
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		10.2 9.98	65.7 9.92	16.6 9.88	79.4 9.98	14.3 9.96	359 9.88
TPH by SW8015 Mod	<i>Extracted:</i>	02.18.2020 17:00	02.18.2020 17:00	02.18.2020 17:00	02.18.2020 17:15	02.18.2020 17:15	02.18.2020 17:15
	<i>Analyzed:</i>	02.19.2020 00:47	02.19.2020 00:47	02.19.2020 01:07	02.19.2020 02:46	02.19.2020 03:06	02.19.2020 03:26
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.1 50.1	<50.3 50.3	<49.8 49.8	<50.2 50.2	<49.9 49.9	<50.3 50.3
Diesel Range Organics (DRO)		<50.1 50.1	<50.3 50.3	<49.8 49.8	<50.2 50.2	<49.9 49.9	<50.3 50.3
Motor Oil Range Hydrocarbons (MRO)		<50.1 50.1	<50.3 50.3	<49.8 49.8	<50.2 50.2	<49.9 49.9	<50.3 50.3
Total TPH		<50.1 50.1	<50.3 50.3	<49.8 49.8	<50.2 50.2	<49.9 49.9	<50.3 50.3

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Jessica Kramer
Project Manager



Certificate of Analysis Summary 652836

LT Environmental, Inc., Arvada, CO

Project Name: Ape Fee 001

Project Id: 034820008
Contact: Chris McKisson
Project Location: Eddy

Date Received in Lab: Tue 02.18.2020 15:53
Report Date: 05.01.2020 11:31
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	652836-019	652836-020	652836-021	652836-022		
	<i>Field Id:</i>	SS09	SS10	SS11	SS12		
	<i>Depth:</i>	0-0.25 ft	0-0.25 ft	0-0.25 ft	0-0.25 ft		
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	02.18.2020 13:39	02.18.2020 13:44	02.18.2020 12:27	02.18.2020 12:40		
BTEX by EPA 8021B	<i>Extracted:</i>	02.18.2020 17:00	02.18.2020 17:00	02.18.2020 17:00	02.18.2020 17:00		
	<i>Analyzed:</i>	02.18.2020 23:14	02.18.2020 23:35	02.18.2020 23:55	02.19.2020 00:16		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Benzene		<0.00202 0.00202	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199		
Toluene		<0.00202 0.00202	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199		
Ethylbenzene		<0.00202 0.00202	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199		
m,p-Xylenes		<0.00403 0.00403	<0.00403 0.00403	<0.00399 0.00399	<0.00398 0.00398		
o-Xylene		<0.00202 0.00202	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199		
Xylenes, Total		<0.00202 0.00202	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199		
Total BTEX		<0.00202 0.00202	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199		
Chloride by EPA 300	<i>Extracted:</i>	02.18.2020 17:30	02.18.2020 17:30	02.18.2020 17:30	02.18.2020 17:30		
	<i>Analyzed:</i>	02.18.2020 21:11	02.18.2020 21:17	02.18.2020 21:23	02.18.2020 21:41		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		148 9.82	65.7 9.96	697 49.8	27.2 9.98		
TPH by SW8015 Mod	<i>Extracted:</i>	02.18.2020 17:15	02.18.2020 17:15	02.18.2020 17:15	02.18.2020 17:15		
	<i>Analyzed:</i>	02.19.2020 03:26	02.19.2020 03:46	02.19.2020 03:46	02.19.2020 04:06		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Gasoline Range Hydrocarbons (GRO)		<50.3 50.3	<50.3 50.3	<50.3 50.3	<50.1 50.1		
Diesel Range Organics (DRO)		183 50.3	<50.3 50.3	<50.3 50.3	<50.1 50.1		
Motor Oil Range Hydrocarbons (MRO)		<50.3 50.3	<50.3 50.3	<50.3 50.3	<50.1 50.1		
Total TPH		183 50.3	<50.3 50.3	<50.3 50.3	<50.1 50.1		

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Jessica Kramer
Project Manager



Certificate of Analytical Results 652836

LT Environmental, Inc., Arvada, CO

Ape Fee 001

Sample Id: **BH09** Matrix: Soil Date Received: 02.18.2020 15:53
 Lab Sample Id: 652836-001 Date Collected: 02.18.2020 10:35 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.18.2020 16:00 Basis: Wet Weight
 Seq Number: 3116915

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	87.6	9.92	mg/kg	02.18.2020 18:18		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.18.2020 17:00 Basis: Wet Weight
 Seq Number: 3116932

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	02.18.2020 22:48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	02.18.2020 22:48	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	02.18.2020 22:48	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	02.18.2020 22:48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	02.18.2020 22:48	
o-Terphenyl	84-15-1	107	%	70-135	02.18.2020 22:48	



Certificate of Analytical Results 652836

LT Environmental, Inc., Arvada, CO

Ape Fee 001

Sample Id: **BH09**
Lab Sample Id: 652836-001

Matrix: Soil
Date Collected: 02.18.2020 10:35

Date Received: 02.18.2020 15:53
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.18.2020 17:00

Basis: Wet Weight

Seq Number: 3116910

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.18.2020 21:39	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.18.2020 21:39	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.18.2020 21:39	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.18.2020 21:39	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.18.2020 21:39	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	02.18.2020 21:39	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.18.2020 21:39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	02.18.2020 21:39	
4-Bromofluorobenzene	460-00-4	101	%	70-130	02.18.2020 21:39	



Certificate of Analytical Results 652836

LT Environmental, Inc., Arvada, CO

Ape Fee 001

Sample Id: **BH10** Matrix: Soil Date Received: 02.18.2020 15:53
 Lab Sample Id: 652836-002 Date Collected: 02.18.2020 10:45 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.18.2020 16:00 Basis: Wet Weight
 Seq Number: 3116915

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	28.1	10.0	mg/kg	02.18.2020 18:35		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.18.2020 17:00 Basis: Wet Weight
 Seq Number: 3116932

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	02.18.2020 22:48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	02.18.2020 22:48	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	02.18.2020 22:48	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	02.18.2020 22:48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	02.18.2020 22:48	
o-Terphenyl	84-15-1	107	%	70-135	02.18.2020 22:48	



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LT Environmental, Inc., Arvada, CO

Ape Fee 001

Sample Id: **BH10**
Lab Sample Id: 652836-002

Matrix: Soil
Date Collected: 02.18.2020 10:45

Date Received: 02.18.2020 15:53
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.18.2020 17:00

Basis: Wet Weight

Seq Number: 3116910

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	02.18.2020 22:00	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	02.18.2020 22:00	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	02.18.2020 22:00	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	02.18.2020 22:00	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	02.18.2020 22:00	U	1
Xylenes, Total	1330-20-7	<0.00198	0.00198	mg/kg	02.18.2020 22:00	U	1
Total BTEX		<0.00198	0.00198	mg/kg	02.18.2020 22:00	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	106	%	70-130	02.18.2020 22:00		
4-Bromofluorobenzene	460-00-4	99	%	70-130	02.18.2020 22:00		



Certificate of Analytical Results 652836

LT Environmental, Inc., Arvada, CO

Ape Fee 001

Sample Id: **BH10A** Matrix: Soil Date Received: 02.18.2020 15:53
 Lab Sample Id: 652836-003 Date Collected: 02.18.2020 10:50 Sample Depth: 1 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.18.2020 16:00 Basis: Wet Weight
 Seq Number: 3116915

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	20.9	10.1	mg/kg	02.18.2020 18:40		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.18.2020 17:00 Basis: Wet Weight
 Seq Number: 3116932

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	02.18.2020 23:08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	02.18.2020 23:08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	02.18.2020 23:08	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	02.18.2020 23:08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	02.18.2020 23:08	
o-Terphenyl	84-15-1	116	%	70-135	02.18.2020 23:08	



Certificate of Analytical Results 652836

LT Environmental, Inc., Arvada, CO

Ape Fee 001

Sample Id: **BH10A**
Lab Sample Id: 652836-003

Matrix: Soil
Date Collected: 02.18.2020 10:50

Date Received: 02.18.2020 15:53
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.18.2020 17:00

Basis: Wet Weight

Seq Number: 3116910

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.18.2020 22:20	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.18.2020 22:20	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.18.2020 22:20	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.18.2020 22:20	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.18.2020 22:20	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	02.18.2020 22:20	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.18.2020 22:20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	02.18.2020 22:20	
4-Bromofluorobenzene	460-00-4	97	%	70-130	02.18.2020 22:20	



Certificate of Analytical Results 652836

LT Environmental, Inc., Arvada, CO

Ape Fee 001

Sample Id: **BH11** Matrix: Soil Date Received: 02.18.2020 15:53
 Lab Sample Id: 652836-004 Date Collected: 02.18.2020 10:59 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.18.2020 16:00 Basis: Wet Weight
 Seq Number: 3116915

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	12.0	9.98	mg/kg	02.18.2020 18:57		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.18.2020 17:00 Basis: Wet Weight
 Seq Number: 3116932

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	02.18.2020 23:08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	02.18.2020 23:08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	02.18.2020 23:08	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	02.18.2020 23:08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	02.18.2020 23:08	
o-Terphenyl	84-15-1	110	%	70-135	02.18.2020 23:08	



Certificate of Analytical Results 652836

LT Environmental, Inc., Arvada, CO

Ape Fee 001

Sample Id: **BH11**
Lab Sample Id: 652836-004

Matrix: Soil
Date Collected: 02.18.2020 10:59

Date Received: 02.18.2020 15:53
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.18.2020 17:00

Basis: Wet Weight

Seq Number: 3116910

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.18.2020 23:21	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.18.2020 23:21	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.18.2020 23:21	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.18.2020 23:21	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.18.2020 23:21	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	02.18.2020 23:21	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.18.2020 23:21	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	97	%	70-130	02.18.2020 23:21		
1,4-Difluorobenzene	540-36-3	106	%	70-130	02.18.2020 23:21		



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LT Environmental, Inc., Arvada, CO

Ape Fee 001

Sample Id: **BH12** Matrix: Soil Date Received: 02.18.2020 15:53
 Lab Sample Id: 652836-005 Date Collected: 02.18.2020 11:06 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.18.2020 16:00 Basis: Wet Weight
 Seq Number: 3116915

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	142	49.6	mg/kg	02.18.2020 19:03		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.18.2020 17:00 Basis: Wet Weight
 Seq Number: 3116932

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	02.18.2020 23:28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	02.18.2020 23:28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	02.18.2020 23:28	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	02.18.2020 23:28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	02.18.2020 23:28	
o-Terphenyl	84-15-1	113	%	70-135	02.18.2020 23:28	



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LT Environmental, Inc., Arvada, CO

Ape Fee 001

Sample Id: **BH12**
Lab Sample Id: 652836-005

Matrix: Soil
Date Collected: 02.18.2020 11:06

Date Received: 02.18.2020 15:53
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3116910

Prep Method: SW5030B

% Moisture:

Date Prep: 02.18.2020 17:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.18.2020 23:41	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.18.2020 23:41	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.18.2020 23:41	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.18.2020 23:41	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.18.2020 23:41	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	02.18.2020 23:41	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.18.2020 23:41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	02.18.2020 23:41	
4-Bromofluorobenzene	460-00-4	98	%	70-130	02.18.2020 23:41	



Certificate of Analytical Results 652836

LT Environmental, Inc., Arvada, CO

Ape Fee 001

Sample Id: **BH13** Matrix: Soil Date Received: 02.18.2020 15:53
 Lab Sample Id: 652836-006 Date Collected: 02.18.2020 11:14 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.18.2020 16:00 Basis: Wet Weight
 Seq Number: 3116915

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	50.5	49.8	mg/kg	02.18.2020 19:08		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.18.2020 17:00 Basis: Wet Weight
 Seq Number: 3116932

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	02.18.2020 23:48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	02.18.2020 23:48	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	02.18.2020 23:48	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	02.18.2020 23:48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	02.18.2020 23:48	
o-Terphenyl	84-15-1	108	%	70-135	02.18.2020 23:48	



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LT Environmental, Inc., Arvada, CO

Ape Fee 001

Sample Id: **BH13**
Lab Sample Id: 652836-006

Matrix: Soil
Date Collected: 02.18.2020 11:14

Date Received: 02.18.2020 15:53
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.18.2020 17:00

Basis: Wet Weight

Seq Number: 3116910

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.19.2020 00:02	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.19.2020 00:02	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.19.2020 00:02	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.19.2020 00:02	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.19.2020 00:02	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	02.19.2020 00:02	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.19.2020 00:02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	97	%	70-130	02.19.2020 00:02	
1,4-Difluorobenzene	540-36-3	105	%	70-130	02.19.2020 00:02	



Certificate of Analytical Results 652836

LT Environmental, Inc., Arvada, CO

Ape Fee 001

Sample Id: **BH14** Matrix: Soil Date Received: 02.18.2020 15:53
 Lab Sample Id: 652836-007 Date Collected: 02.18.2020 11:24 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.18.2020 16:00 Basis: Wet Weight
 Seq Number: 3116915

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	26.3	9.98	mg/kg	02.18.2020 19:14		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.18.2020 17:00 Basis: Wet Weight
 Seq Number: 3116932

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	02.18.2020 23:48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	02.18.2020 23:48	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	02.18.2020 23:48	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	02.18.2020 23:48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	02.18.2020 23:48	
o-Terphenyl	84-15-1	107	%	70-135	02.18.2020 23:48	



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LT Environmental, Inc., Arvada, CO

Ape Fee 001

Sample Id: **BH14**
Lab Sample Id: 652836-007

Matrix: Soil
Date Collected: 02.18.2020 11:24

Date Received: 02.18.2020 15:53
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.18.2020 17:00

Basis: Wet Weight

Seq Number: 3116910

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.19.2020 00:22	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.19.2020 00:22	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.19.2020 00:22	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	02.19.2020 00:22	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.19.2020 00:22	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	02.19.2020 00:22	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.19.2020 00:22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	96	%	70-130	02.19.2020 00:22	
1,4-Difluorobenzene	540-36-3	105	%	70-130	02.19.2020 00:22	



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LT Environmental, Inc., Arvada, CO

Ape Fee 001

Sample Id: **BH15** Matrix: Soil Date Received: 02.18.2020 15:53
 Lab Sample Id: 652836-008 Date Collected: 02.18.2020 11:31 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.18.2020 16:00 Basis: Wet Weight
 Seq Number: 3116915

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	204	50.4	mg/kg	02.18.2020 19:20		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.18.2020 17:00 Basis: Wet Weight
 Seq Number: 3116932

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	02.19.2020 00:08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	02.19.2020 00:08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	02.19.2020 00:08	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	02.19.2020 00:08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	02.19.2020 00:08	
o-Terphenyl	84-15-1	105	%	70-135	02.19.2020 00:08	



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LT Environmental, Inc., Arvada, CO

Ape Fee 001

Sample Id: **BH15**
Lab Sample Id: 652836-008

Matrix: Soil
Date Collected: 02.18.2020 11:31

Date Received: 02.18.2020 15:53
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.18.2020 17:00

Basis: Wet Weight

Seq Number: 3116910

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.19.2020 00:43	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.19.2020 00:43	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.19.2020 00:43	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.19.2020 00:43	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.19.2020 00:43	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	02.19.2020 00:43	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.19.2020 00:43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	02.19.2020 00:43	
4-Bromofluorobenzene	460-00-4	97	%	70-130	02.19.2020 00:43	



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LT Environmental, Inc., Arvada, CO

Ape Fee 001

Sample Id: **BH16** Matrix: Soil Date Received: 02.18.2020 15:53
 Lab Sample Id: 652836-009 Date Collected: 02.18.2020 11:38 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.18.2020 16:00 Basis: Wet Weight
 Seq Number: 3116915

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<49.4	49.4	mg/kg	02.18.2020 19:25	U	5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.18.2020 17:00 Basis: Wet Weight
 Seq Number: 3116932

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	02.19.2020 00:08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	02.19.2020 00:08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	02.19.2020 00:08	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	02.19.2020 00:08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	02.19.2020 00:08	
o-Terphenyl	84-15-1	107	%	70-135	02.19.2020 00:08	



Certificate of Analytical Results 652836

LT Environmental, Inc., Arvada, CO

Ape Fee 001

Sample Id: **BH16**
Lab Sample Id: 652836-009

Matrix: Soil
Date Collected: 02.18.2020 11:38

Date Received: 02.18.2020 15:53
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.18.2020 17:00

Basis: Wet Weight

Seq Number: 3116910

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.19.2020 01:03	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.19.2020 01:03	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.19.2020 01:03	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.19.2020 01:03	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.19.2020 01:03	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	02.19.2020 01:03	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.19.2020 01:03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	02.19.2020 01:03	
4-Bromofluorobenzene	460-00-4	100	%	70-130	02.19.2020 01:03	



Certificate of Analytical Results 652836

LT Environmental, Inc., Arvada, CO

Ape Fee 001

Sample Id: **BH17** Matrix: Soil Date Received: 02.18.2020 15:53
 Lab Sample Id: 652836-010 Date Collected: 02.18.2020 11:52 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.18.2020 16:00 Basis: Wet Weight
 Seq Number: 3116915

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	32.0	9.98	mg/kg	02.18.2020 19:31		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.18.2020 17:00 Basis: Wet Weight
 Seq Number: 3116932

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	02.19.2020 00:28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	02.19.2020 00:28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	02.19.2020 00:28	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	02.19.2020 00:28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	02.19.2020 00:28	
o-Terphenyl	84-15-1	104	%	70-135	02.19.2020 00:28	



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LT Environmental, Inc., Arvada, CO

Ape Fee 001

Sample Id: **BH17**
Lab Sample Id: 652836-010

Matrix: Soil
Date Collected: 02.18.2020 11:52

Date Received: 02.18.2020 15:53
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.18.2020 17:00

Basis: Wet Weight

Seq Number: 3116910

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.19.2020 01:23	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.19.2020 01:23	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.19.2020 01:23	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	02.19.2020 01:23	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.19.2020 01:23	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	02.19.2020 01:23	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.19.2020 01:23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	97	%	70-130	02.19.2020 01:23	
1,4-Difluorobenzene	540-36-3	105	%	70-130	02.19.2020 01:23	



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LT Environmental, Inc., Arvada, CO

Ape Fee 001

Sample Id: **BH18** Matrix: Soil Date Received: 02.18.2020 15:53
 Lab Sample Id: 652836-011 Date Collected: 02.18.2020 12:02 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.18.2020 17:30 Basis: Wet Weight
 Seq Number: 3116918

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	42.3	9.92	mg/kg	02.18.2020 20:04		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.18.2020 17:00 Basis: Wet Weight
 Seq Number: 3116932

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	02.19.2020 00:28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	02.19.2020 00:28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	02.19.2020 00:28	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	02.19.2020 00:28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	02.19.2020 00:28	
o-Terphenyl	84-15-1	107	%	70-135	02.19.2020 00:28	



Certificate of Analytical Results 652836

LT Environmental, Inc., Arvada, CO

Ape Fee 001

Sample Id: **BH18**
Lab Sample Id: 652836-011

Matrix: Soil
Date Collected: 02.18.2020 12:02

Date Received: 02.18.2020 15:53
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.18.2020 17:00

Basis: Wet Weight

Seq Number: 3116910

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.19.2020 01:44	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.19.2020 01:44	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.19.2020 01:44	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	02.19.2020 01:44	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.19.2020 01:44	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	02.19.2020 01:44	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.19.2020 01:44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	02.19.2020 01:44	
4-Bromofluorobenzene	460-00-4	98	%	70-130	02.19.2020 01:44	



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LT Environmental, Inc., Arvada, CO

Ape Fee 001

Sample Id: **BH19** Matrix: Soil Date Received: 02.18.2020 15:53
 Lab Sample Id: 652836-012 Date Collected: 02.18.2020 12:13 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.18.2020 17:30 Basis: Wet Weight
 Seq Number: 3116918

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	126	49.8	mg/kg	02.18.2020 20:21		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.18.2020 17:00 Basis: Wet Weight
 Seq Number: 3116932

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	02.19.2020 01:07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	02.19.2020 01:07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	02.19.2020 01:07	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	02.19.2020 01:07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	02.19.2020 01:07	
o-Terphenyl	84-15-1	105	%	70-135	02.19.2020 01:07	



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LT Environmental, Inc., Arvada, CO

Ape Fee 001

Sample Id: **BH19**
Lab Sample Id: 652836-012

Matrix: Soil
Date Collected: 02.18.2020 12:13

Date Received: 02.18.2020 15:53
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.18.2020 17:00

Basis: Wet Weight

Seq Number: 3116910

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.19.2020 02:04	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.19.2020 02:04	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.19.2020 02:04	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.19.2020 02:04	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.19.2020 02:04	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	02.19.2020 02:04	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.19.2020 02:04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	02.19.2020 02:04	
4-Bromofluorobenzene	460-00-4	97	%	70-130	02.19.2020 02:04	



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LT Environmental, Inc., Arvada, CO

Ape Fee 001

Sample Id: **SS03** Matrix: Soil Date Received: 02.18.2020 15:53
 Lab Sample Id: 652836-013 Date Collected: 02.18.2020 13:14 Sample Depth: 0 - 0.25 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.18.2020 17:30 Basis: Wet Weight
 Seq Number: 3116918

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	10.2	9.98	mg/kg	02.18.2020 20:26		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.18.2020 17:00 Basis: Wet Weight
 Seq Number: 3116932

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	02.19.2020 00:47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	02.19.2020 00:47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	02.19.2020 00:47	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	02.19.2020 00:47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	02.19.2020 00:47	
o-Terphenyl	84-15-1	107	%	70-135	02.19.2020 00:47	



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Ape Fee 001

Sample Id: **SS03**
 Lab Sample Id: 652836-013

Matrix: Soil
 Date Collected: 02.18.2020 13:14

Date Received: 02.18.2020 15:53
 Sample Depth: 0 - 0.25 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.18.2020 17:00

Basis: Wet Weight

Seq Number: 3116910

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.19.2020 02:25	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.19.2020 02:25	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.19.2020 02:25	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	02.19.2020 02:25	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.19.2020 02:25	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	02.19.2020 02:25	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.19.2020 02:25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	97	%	70-130	02.19.2020 02:25	
1,4-Difluorobenzene	540-36-3	105	%	70-130	02.19.2020 02:25	



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Ape Fee 001

Sample Id: **SS04** Matrix: Soil Date Received: 02.18.2020 15:53
 Lab Sample Id: 652836-014 Date Collected: 02.18.2020 12:33 Sample Depth: 0 - 0.25 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.18.2020 17:30 Basis: Wet Weight
 Seq Number: 3116918

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	65.7	9.92	mg/kg	02.18.2020 20:32		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.18.2020 17:00 Basis: Wet Weight
 Seq Number: 3116932

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	02.19.2020 00:47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	02.19.2020 00:47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	02.19.2020 00:47	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	02.19.2020 00:47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	02.19.2020 00:47	
o-Terphenyl	84-15-1	109	%	70-135	02.19.2020 00:47	



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Ape Fee 001

Sample Id: **SS04**
Lab Sample Id: 652836-014

Matrix: Soil
Date Collected: 02.18.2020 12:33

Date Received: 02.18.2020 15:53
Sample Depth: 0 - 0.25 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.18.2020 16:00

Basis: Wet Weight

Seq Number: 3116911

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	02.18.2020 20:52	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	02.18.2020 20:52	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	02.18.2020 20:52	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	02.18.2020 20:52	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	02.18.2020 20:52	U	1
Xylenes, Total	1330-20-7	<0.00202	0.00202	mg/kg	02.18.2020 20:52	U	1
Total BTEX		<0.00202	0.00202	mg/kg	02.18.2020 20:52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	96	%	70-130	02.18.2020 20:52	
1,4-Difluorobenzene	540-36-3	113	%	70-130	02.18.2020 20:52	



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Ape Fee 001

Sample Id: SS05	Matrix: Soil	Date Received: 02.18.2020 15:53
Lab Sample Id: 652836-015	Date Collected: 02.18.2020 13:18	Sample Depth: 0 - 0.25 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 02.18.2020 17:30	Basis: Wet Weight
Seq Number: 3116918		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	16.6	9.88	mg/kg	02.18.2020 20:38		1

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DTH		% Moisture:
Analyst: DTH	Date Prep: 02.18.2020 17:00	Basis: Wet Weight
Seq Number: 3116932		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	02.19.2020 01:07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	02.19.2020 01:07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	02.19.2020 01:07	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	02.19.2020 01:07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	02.19.2020 01:07	
o-Terphenyl	84-15-1	111	%	70-135	02.19.2020 01:07	



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Ape Fee 001

Sample Id: **SS05**
Lab Sample Id: 652836-015

Matrix: Soil
Date Collected: 02.18.2020 13:18

Date Received: 02.18.2020 15:53
Sample Depth: 0 - 0.25 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.18.2020 17:00

Basis: Wet Weight

Seq Number: 3116911

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.18.2020 21:12	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.18.2020 21:12	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.18.2020 21:12	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	02.18.2020 21:12	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.18.2020 21:12	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	02.18.2020 21:12	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.18.2020 21:12	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	96	%	70-130	02.18.2020 21:12		
1,4-Difluorobenzene	540-36-3	110	%	70-130	02.18.2020 21:12		



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Ape Fee 001

Sample Id: **SS06** Matrix: Soil Date Received: 02.18.2020 15:53
 Lab Sample Id: 652836-016 Date Collected: 02.18.2020 13:23 Sample Depth: 0 - 0.25 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.18.2020 17:30 Basis: Wet Weight
 Seq Number: 3116918

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	79.4	9.98	mg/kg	02.18.2020 20:54		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.18.2020 17:15 Basis: Wet Weight
 Seq Number: 3116983

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	02.19.2020 02:46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	02.19.2020 02:46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	02.19.2020 02:46	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	02.19.2020 02:46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	02.19.2020 02:46	
o-Terphenyl	84-15-1	109	%	70-135	02.19.2020 02:46	



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LT Environmental, Inc., Arvada, CO

Ape Fee 001

Sample Id: **SS06**
Lab Sample Id: 652836-016

Matrix: Soil
Date Collected: 02.18.2020 13:23

Date Received: 02.18.2020 15:53
Sample Depth: 0 - 0.25 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.18.2020 17:00

Basis: Wet Weight

Seq Number: 3116911

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.18.2020 21:32	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.18.2020 21:32	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.18.2020 21:32	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	02.18.2020 21:32	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.18.2020 21:32	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	02.18.2020 21:32	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.18.2020 21:32	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	94	%	70-130	02.18.2020 21:32		
1,4-Difluorobenzene	540-36-3	109	%	70-130	02.18.2020 21:32		



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Ape Fee 001

Sample Id: SS07 Matrix: Soil Date Received: 02.18.2020 15:53
 Lab Sample Id: 652836-017 Date Collected: 02.18.2020 13:29 Sample Depth: 0 - 0.25 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.18.2020 17:30 Basis: Wet Weight
 Seq Number: 3116918

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	14.3	9.96	mg/kg	02.18.2020 21:00		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.18.2020 17:15 Basis: Wet Weight
 Seq Number: 3116983

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	02.19.2020 03:06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	02.19.2020 03:06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	02.19.2020 03:06	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	02.19.2020 03:06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	02.19.2020 03:06	
o-Terphenyl	84-15-1	113	%	70-135	02.19.2020 03:06	



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LT Environmental, Inc., Arvada, CO

Ape Fee 001

Sample Id: **SS07**
Lab Sample Id: 652836-017

Matrix: Soil
Date Collected: 02.18.2020 13:29

Date Received: 02.18.2020 15:53
Sample Depth: 0 - 0.25 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.18.2020 17:00

Basis: Wet Weight

Seq Number: 3116911

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.18.2020 21:53	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.18.2020 21:53	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.18.2020 21:53	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.18.2020 21:53	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.18.2020 21:53	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	02.18.2020 21:53	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.18.2020 21:53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	111	%	70-130	02.18.2020 21:53	
4-Bromofluorobenzene	460-00-4	95	%	70-130	02.18.2020 21:53	



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Ape Fee 001

Sample Id: **SS08** Matrix: Soil Date Received: 02.18.2020 15:53
 Lab Sample Id: 652836-018 Date Collected: 02.18.2020 13:34 Sample Depth: 0 - 0.25 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.18.2020 17:30 Basis: Wet Weight
 Seq Number: 3116918

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	359	9.88	mg/kg	02.18.2020 21:05		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.18.2020 17:15 Basis: Wet Weight
 Seq Number: 3116983

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	02.19.2020 03:26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	02.19.2020 03:26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	02.19.2020 03:26	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	02.19.2020 03:26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	02.19.2020 03:26	
o-Terphenyl	84-15-1	114	%	70-135	02.19.2020 03:26	



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LT Environmental, Inc., Arvada, CO

Ape Fee 001

Sample Id: **SS08**
 Lab Sample Id: 652836-018

Matrix: Soil
 Date Collected: 02.18.2020 13:34

Date Received: 02.18.2020 15:53
 Sample Depth: 0 - 0.25 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.18.2020 17:00

Basis: Wet Weight

Seq Number: 3116911

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.18.2020 22:13	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.18.2020 22:13	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.18.2020 22:13	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	02.18.2020 22:13	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.18.2020 22:13	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	02.18.2020 22:13	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.18.2020 22:13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	88	%	70-130	02.18.2020 22:13	
1,4-Difluorobenzene	540-36-3	108	%	70-130	02.18.2020 22:13	



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Ape Fee 001

Sample Id: **SS09** Matrix: Soil Date Received: 02.18.2020 15:53
 Lab Sample Id: 652836-019 Date Collected: 02.18.2020 13:39 Sample Depth: 0 - 0.25 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.18.2020 17:30 Basis: Wet Weight
 Seq Number: 3116918

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	148	9.82	mg/kg	02.18.2020 21:11		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.18.2020 17:15 Basis: Wet Weight
 Seq Number: 3116983

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	02.19.2020 03:26	U	1
Diesel Range Organics (DRO)	C10C28DRO	183	50.3	mg/kg	02.19.2020 03:26		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	02.19.2020 03:26	U	1
Total TPH	PHC635	183	50.3	mg/kg	02.19.2020 03:26		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	02.19.2020 03:26	
o-Terphenyl	84-15-1	114	%	70-135	02.19.2020 03:26	



Certificate of Analytical Results 652836

LT Environmental, Inc., Arvada, CO

Ape Fee 001

Sample Id: **SS09**
Lab Sample Id: 652836-019

Matrix: Soil
Date Collected: 02.18.2020 13:39

Date Received: 02.18.2020 15:53
Sample Depth: 0 - 0.25 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.18.2020 17:00

Basis: Wet Weight

Seq Number: 3116911

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	02.18.2020 23:14	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	02.18.2020 23:14	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	02.18.2020 23:14	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	02.18.2020 23:14	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	02.18.2020 23:14	U	1
Xylenes, Total	1330-20-7	<0.00202	0.00202	mg/kg	02.18.2020 23:14	U	1
Total BTEX		<0.00202	0.00202	mg/kg	02.18.2020 23:14	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	89	%	70-130	02.18.2020 23:14		
1,4-Difluorobenzene	540-36-3	104	%	70-130	02.18.2020 23:14		



Certificate of Analytical Results 652836

LT Environmental, Inc., Arvada, CO

Ape Fee 001

Sample Id: **SS10** Matrix: Soil Date Received: 02.18.2020 15:53
 Lab Sample Id: 652836-020 Date Collected: 02.18.2020 13:44 Sample Depth: 0 - 0.25 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.18.2020 17:30 Basis: Wet Weight
 Seq Number: 3116918

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	65.7	9.96	mg/kg	02.18.2020 21:17		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.18.2020 17:15 Basis: Wet Weight
 Seq Number: 3116983

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	02.19.2020 03:46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	02.19.2020 03:46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	02.19.2020 03:46	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	02.19.2020 03:46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	02.19.2020 03:46	
o-Terphenyl	84-15-1	117	%	70-135	02.19.2020 03:46	



Certificate of Analytical Results 652836

LT Environmental, Inc., Arvada, CO

Ape Fee 001

Sample Id: **SS10**
Lab Sample Id: 652836-020

Matrix: Soil
Date Collected: 02.18.2020 13:44

Date Received: 02.18.2020 15:53
Sample Depth: 0 - 0.25 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.18.2020 17:00

Basis: Wet Weight

Seq Number: 3116911

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	02.18.2020 23:35	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	02.18.2020 23:35	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	02.18.2020 23:35	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	02.18.2020 23:35	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	02.18.2020 23:35	U	1
Xylenes, Total	1330-20-7	<0.00202	0.00202	mg/kg	02.18.2020 23:35	U	1
Total BTEX		<0.00202	0.00202	mg/kg	02.18.2020 23:35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	86	%	70-130	02.18.2020 23:35	
1,4-Difluorobenzene	540-36-3	92	%	70-130	02.18.2020 23:35	



Certificate of Analytical Results 652836

LT Environmental, Inc., Arvada, CO

Ape Fee 001

Sample Id: **SS11** Matrix: Soil Date Received: 02.18.2020 15:53
 Lab Sample Id: 652836-021 Date Collected: 02.18.2020 12:27 Sample Depth: 0 - 0.25 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.18.2020 17:30 Basis: Wet Weight
 Seq Number: 3116918

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	697	49.8	mg/kg	02.18.2020 21:23		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.18.2020 17:15 Basis: Wet Weight
 Seq Number: 3116983

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	02.19.2020 03:46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	02.19.2020 03:46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	02.19.2020 03:46	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	02.19.2020 03:46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	02.19.2020 03:46	
o-Terphenyl	84-15-1	110	%	70-135	02.19.2020 03:46	



Certificate of Analytical Results 652836

LT Environmental, Inc., Arvada, CO

Ape Fee 001

Sample Id: **SS11**
Lab Sample Id: 652836-021

Matrix: Soil
Date Collected: 02.18.2020 12:27

Date Received: 02.18.2020 15:53
Sample Depth: 0 - 0.25 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3116911

Prep Method: SW5030B

% Moisture:

Date Prep: 02.18.2020 17:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.18.2020 23:55	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.18.2020 23:55	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.18.2020 23:55	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.18.2020 23:55	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.18.2020 23:55	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	02.18.2020 23:55	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.18.2020 23:55	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	110	%	70-130	02.18.2020 23:55		
4-Bromofluorobenzene	460-00-4	93	%	70-130	02.18.2020 23:55		



Certificate of Analytical Results 652836

LT Environmental, Inc., Arvada, CO

Ape Fee 001

Sample Id: SS12 Matrix: Soil Date Received: 02.18.2020 15:53
 Lab Sample Id: 652836-022 Date Collected: 02.18.2020 12:40 Sample Depth: 0 - 0.25 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.18.2020 17:30 Basis: Wet Weight
 Seq Number: 3116918

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	27.2	9.98	mg/kg	02.18.2020 21:41		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.18.2020 17:15 Basis: Wet Weight
 Seq Number: 3116983

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	02.19.2020 04:06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	02.19.2020 04:06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	02.19.2020 04:06	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	02.19.2020 04:06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	02.19.2020 04:06	
o-Terphenyl	84-15-1	117	%	70-135	02.19.2020 04:06	



Certificate of Analytical Results 652836

LT Environmental, Inc., Arvada, CO

Ape Fee 001

Sample Id: SS12
Lab Sample Id: 652836-022

Matrix: Soil
Date Collected: 02.18.2020 12:40

Date Received: 02.18.2020 15:53
Sample Depth: 0 - 0.25 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.18.2020 17:00

Basis: Wet Weight

Seq Number: 3116911

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.19.2020 00:16	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.19.2020 00:16	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.19.2020 00:16	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.19.2020 00:16	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.19.2020 00:16	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	02.19.2020 00:16	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.19.2020 00:16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	70-130	02.19.2020 00:16	
4-Bromofluorobenzene	460-00-4	91	%	70-130	02.19.2020 00:16	



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. **ND** Not Detected.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



LT Environmental, Inc.

Ape Fee 001

Analytical Method: Chloride by EPA 300

Seq Number: 3116915

MB Sample Id: 7696884-1-BLK

Matrix: Solid

LCS Sample Id: 7696884-1-BKS

Prep Method: E300P

Date Prep: 02.18.2020

LCSD Sample Id: 7696884-1-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	255	102	249	100	90-110	2	20	mg/kg	02.18.2020 16:49	

Analytical Method: Chloride by EPA 300

Seq Number: 3116918

MB Sample Id: 7696934-1-BLK

Matrix: Solid

LCS Sample Id: 7696934-1-BKS

Prep Method: E300P

Date Prep: 02.18.2020

LCSD Sample Id: 7696934-1-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	264	106	263	105	90-110	0	20	mg/kg	02.18.2020 19:53	

Analytical Method: Chloride by EPA 300

Seq Number: 3116915

Parent Sample Id: 652817-001

Matrix: Soil

MS Sample Id: 652817-001 S

Prep Method: E300P

Date Prep: 02.18.2020

MSD Sample Id: 652817-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	240	200	449	105	453	107	90-110	1	20	mg/kg	02.18.2020 17:06	

Analytical Method: Chloride by EPA 300

Seq Number: 3116915

Parent Sample Id: 652836-001

Matrix: Soil

MS Sample Id: 652836-001 S

Prep Method: E300P

Date Prep: 02.18.2020

MSD Sample Id: 652836-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	87.6	200	271	92	267	90	90-110	1	20	mg/kg	02.18.2020 18:24	

Analytical Method: Chloride by EPA 300

Seq Number: 3116918

Parent Sample Id: 652836-011

Matrix: Soil

MS Sample Id: 652836-011 S

Prep Method: E300P

Date Prep: 02.18.2020

MSD Sample Id: 652836-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	42.3	201	236	96	238	97	90-110	1	20	mg/kg	02.18.2020 20:10	

Analytical Method: Chloride by EPA 300

Seq Number: 3116918

Parent Sample Id: 652836-021

Matrix: Soil

MS Sample Id: 652836-021 S

Prep Method: E300P

Date Prep: 02.18.2020

MSD Sample Id: 652836-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	697	201	879	91	882	93	90-110	0	20	mg/kg	02.18.2020 21:29	

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

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

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

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



LT Environmental, Inc.

Ape Fee 001

Analytical Method: TPH by SW8015 Mod

Seq Number: 3116932

MB Sample Id: 7696924-1-BLK

Matrix: Solid

LCS Sample Id: 7696924-1-BKS

Prep Method: SW8015P

Date Prep: 02.18.2020

LCSD Sample Id: 7696924-1-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	956	96	819	82	70-135	15	35	mg/kg	02.18.2020 21:07	
Diesel Range Organics (DRO)	<50.0	1000	1040	104	918	92	70-135	12	35	mg/kg	02.18.2020 21:07	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	83		120		113		70-135	%	02.18.2020 21:07
o-Terphenyl	92		113		109		70-135	%	02.18.2020 21:07

Analytical Method: TPH by SW8015 Mod

Seq Number: 3116983

MB Sample Id: 7696957-1-BLK

Matrix: Solid

LCS Sample Id: 7696957-1-BKS

Prep Method: SW8015P

Date Prep: 02.18.2020

LCSD Sample Id: 7696957-1-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	824	82	934	93	70-135	13	35	mg/kg	02.19.2020 02:27	
Diesel Range Organics (DRO)	<50.0	1000	895	90	999	100	70-135	11	35	mg/kg	02.19.2020 02:27	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	96		114		117		70-135	%	02.19.2020 02:27
o-Terphenyl	100		104		109		70-135	%	02.19.2020 02:27

Analytical Method: TPH by SW8015 Mod

Seq Number: 3116932

Matrix: Solid

MB Sample Id: 7696924-1-BLK

Prep Method: SW8015P

Date Prep: 02.18.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	02.18.2020 21:07	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3116983

Matrix: Solid

MB Sample Id: 7696957-1-BLK

Prep Method: SW8015P

Date Prep: 02.18.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	02.19.2020 02:07	

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

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

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

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



LT Environmental, Inc.

Ape Fee 001

Analytical Method: TPH by SW8015 Mod

Seq Number: 3116932

Parent Sample Id: 652818-014

Matrix: Soil

MS Sample Id: 652818-014 S

Prep Method: SW8015P

Date Prep: 02.18.2020

MSD Sample Id: 652818-014 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.8	995	984	99	971	97	70-135	1	35	mg/kg	02.18.2020 21:48	
Diesel Range Organics (DRO)	<49.8	995	1070	108	1040	104	70-135	3	35	mg/kg	02.18.2020 21:48	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	118		123		70-135	%	02.18.2020 21:48
o-Terphenyl	127		117		70-135	%	02.18.2020 21:48

Analytical Method: TPH by SW8015 Mod

Seq Number: 3116983

Parent Sample Id: 652836-016

Matrix: Soil

MS Sample Id: 652836-016 S

Prep Method: SW8015P

Date Prep: 02.18.2020

MSD Sample Id: 652836-016 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.1	1000	912	91	897	90	70-135	2	35	mg/kg	02.19.2020 02:46	
Diesel Range Organics (DRO)	<50.1	1000	1020	102	958	96	70-135	6	35	mg/kg	02.19.2020 02:46	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	118		123		70-135	%	02.19.2020 02:46
o-Terphenyl	123		109		70-135	%	02.19.2020 02:46

Analytical Method: BTEX by EPA 8021B

Seq Number: 3116910

MB Sample Id: 7696952-1-BLK

Matrix: Solid

LCS Sample Id: 7696952-1-BKS

Prep Method: SW5030B

Date Prep: 02.18.2020

LCSD Sample Id: 7696952-1-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	0.107	107	0.106	106	70-130	1	35	mg/kg	02.18.2020 17:14	
Toluene	<0.00200	0.100	0.104	104	0.102	102	70-130	2	35	mg/kg	02.18.2020 17:14	
Ethylbenzene	<0.00200	0.100	0.101	101	0.0987	99	71-129	2	35	mg/kg	02.18.2020 17:14	
m,p-Xylenes	<0.00400	0.200	0.207	104	0.203	102	70-135	2	35	mg/kg	02.18.2020 17:14	
o-Xylene	<0.00200	0.100	0.104	104	0.102	102	71-133	2	35	mg/kg	02.18.2020 17:14	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		104		105		70-130	%	02.18.2020 17:14
4-Bromofluorobenzene	93		95		92		70-130	%	02.18.2020 17:14

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

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

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

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



LT Environmental, Inc.

Ape Fee 001

Analytical Method: BTEX by EPA 8021B

Seq Number: 3116911

Matrix: Solid

Prep Method: SW5030B

Date Prep: 02.18.2020

MB Sample Id: 7696953-1-BLK

LCS Sample Id: 7696953-1-BKS

LCSD Sample Id: 7696953-1-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	0.124	124	0.122	122	70-130	2	35	mg/kg	02.18.2020 17:28	
Toluene	<0.00200	0.100	0.115	115	0.113	113	70-130	2	35	mg/kg	02.18.2020 17:28	
Ethylbenzene	<0.00200	0.100	0.110	110	0.109	109	71-129	1	35	mg/kg	02.18.2020 17:28	
m,p-Xylenes	<0.00400	0.200	0.214	107	0.212	106	70-135	1	35	mg/kg	02.18.2020 17:28	
o-Xylene	<0.00200	0.100	0.108	108	0.107	107	71-133	1	35	mg/kg	02.18.2020 17:28	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	113		110		111		70-130	%	02.18.2020 17:28
4-Bromofluorobenzene	94		89		92		70-130	%	02.18.2020 17:28

Analytical Method: BTEX by EPA 8021B

Seq Number: 3116910

Matrix: Soil

Prep Method: SW5030B

Date Prep: 02.18.2020

Parent Sample Id: 652817-001

MS Sample Id: 652817-001 S

MSD Sample Id: 652817-001 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	0.108	108	0.115	115	70-130	6	35	mg/kg	02.18.2020 17:55	
Toluene	<0.00200	0.100	0.103	103	0.107	107	70-130	4	35	mg/kg	02.18.2020 17:55	
Ethylbenzene	<0.00200	0.100	0.0994	99	0.105	105	71-129	5	35	mg/kg	02.18.2020 17:55	
m,p-Xylenes	<0.00400	0.200	0.205	103	0.217	109	70-135	6	35	mg/kg	02.18.2020 17:55	
o-Xylene	<0.00200	0.100	0.102	102	0.109	109	71-133	7	35	mg/kg	02.18.2020 17:55	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		103		70-130	%	02.18.2020 17:55
4-Bromofluorobenzene	96		90		70-130	%	02.18.2020 17:55

Analytical Method: BTEX by EPA 8021B

Seq Number: 3116911

Matrix: Soil

Prep Method: SW5030B

Date Prep: 02.18.2020

Parent Sample Id: 652818-014

MS Sample Id: 652818-014 S

MSD Sample Id: 652818-014 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	0.123	123	0.117	116	70-130	5	35	mg/kg	02.18.2020 18:09	
Toluene	<0.00200	0.100	0.123	123	0.107	106	70-130	14	35	mg/kg	02.18.2020 18:09	
Ethylbenzene	<0.00200	0.100	0.116	116	0.0984	97	71-129	16	35	mg/kg	02.18.2020 18:09	
m,p-Xylenes	<0.00400	0.200	0.226	113	0.190	94	70-135	17	35	mg/kg	02.18.2020 18:09	
o-Xylene	<0.00200	0.100	0.114	114	0.0958	95	71-133	17	35	mg/kg	02.18.2020 18:09	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	111		109		70-130	%	02.18.2020 18:09
4-Bromofluorobenzene	93		91		70-130	%	02.18.2020 18:09

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

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

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

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



Chain of Custody

Work Order No: 1052820

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 3

Project Manager:	Chris McKisson	BH-60 (if different)	
Company Name:	LT Environmental	Company Name:	
Address:	820 Megan Ave, Unit B	Address:	
City, State ZIP:	Rifle, CO 81650	City-State ZIP:	
Phone:	970-285-9985	Email:	wmather@ltenv.com, cmckisson@ltenv.com

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

09:49 AM

Project Number:		034820008		Turn Around		ANALYSIS REQUEST												Work Order Notes																	
P.O. Number:		Eddy		Routine																															
Sampler's Name:		William Mather		Rush:		24hr																													
				Due Date:																															
SAMPLE RECEIPT				Temp Blank:		Yes No		Wet Ice:		Yes No																									
Temperature (°C):		2.0		2.0		2.0		2.0		2.0		Thermometer ID																							
Received Intact:		Yes		No		Yes		No		Yes		No		T-24-004																					
Cooler Custody Seals:		Yes		No		Yes		No		Yes		No		Correction Factor: -0.2																					
Sample Custody Seals:		Yes		No		Yes		No		Yes		No		Total Containers: 22																					
Sample Identification				Matrix		Date Sampled		Time Sampled		Depth		Number of Containers																							
BH09				S		2/18/20		10:35		.5'		1																							
BH10								10:45		.5'		1																							
BH10A								10:50		1'		1																							
BH11								10:59		.5'		1																							
BH12								11:06				1																							
BH13								11:14				1																							
BH14								11:24				1																							
BH15								11:31				1																							
BH16								11:38				1																							
BH17								11:52				1																							
												TPH (EPA 8015)																							
												BTEX (EPA 0-8021)																							
												Chloride (EPA 300.0)																							

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

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	2/18/20 15:53			



Chain of Custody

Work Order No.: 1057820

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, NIM (575-392-7550) Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813-620-2000)

MANLY HONORABLE

Project Manager:	Chris McKisson	Bill to: (if different)	☒
Company Name:	LT Environmental	Company Name:	☒
Address:	820 Megan Ave. Unit B	Address:	☒
City, State ZIP:	Rifle, CO 81650	City, State ZIP:	☒
Phone:	970-285-9985	Email:	ymather@ltenv.com, cmckisson@ltenv.com
Project Name:	Ape Fee 001		

Hobbs, NM (575-392-7550) Phoenix, AZ (480-365-0900) Atlanta GA (770-449-8800) Tampa FL (813-620-2000)

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Work Order Comments			
Program: UST/PST	☐ RP	☐ Growfields	☐ RC
State of Project:			☐ \$perfund
Reporting Level II	☐ Level III	☐ \$T/UST	☐ RP
Deliverables: EDD	☐ ADAPT		Other: ☐ Level IV

SAMPLE RECEIPT								ANALYSIS REQUEST										Work Order Notes	
Project Number:		634820008		Routine		☐												TAT starts the day received by the lab, if received by 4:30pm Sample Comments	
P.O. Number:		Eddy		Rush:		24 hr													
Sampler's Name:		William Mather		Due Date:															
Temperature (°C):	Temp Blank:	Yes	No	Wet Ice:	Yes	No													
Received Intact:		Yes	No	Thermometer ID:	2941														
Cooler Custody Seals:	Yes	No	N/A	Correction Factor:															
Sample Custody Seals:	Yes	No	N/A	Total Containers:															
Sample Identification				Matrix	Date Sampled	Time Sampled	Depth	Number of Containers											
BH18	S	2/18/20	14:02	.5'	1	X	X	X											
BH19			12:13	.5'	1	X	X	X											
SS03			13:14	0-0.25'	1	X	X	X											
SS04			12:33		1	X	X	X											
SS05			13:18		1	X	X	X											
SS06			13:23		1	X	X	X											
SS07			13:29		1	X	X	X											
SS08			13:34		1	X	X	X											
SS09			13:39		1	X	X	X											
SS16			13:44		1	X	X	X											
Discrete Composite OK																			
Discrete																			
V																			

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

Disinquired by: (Signature) _____ Received by: _____

1631 / 245.1 / 7470 / 7471 · Ha

Received by: (Signature)

Date/Time

Relinquished by: (Signature)

Received by: (Signature)

Date/Time

Received by OCD: 5/6/2020 11:09:49 AM



Chain of Custody

Work Order No: 1252836

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) 355-0800 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000

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Project Manager:	Chris McKisson	Company Name:	LT Environmental
Address:	820 Megan Ave, Unit B	City, State ZIP:	Rifle, CO 81650
Phone:	970-285-9985	Email:	wmather@ltenv.com, cmckisson@ltenv.com
Project Name:	Ape Fee 001	Turn Around:	
Project Number:	034820008	Routine:	☐
P.O. Number:	Eddy	Rush:	24hr
Sampler's Name:	William Mather	Due Date:	

Program: UST/PST	☐ RP	☐ Trowfields	☐ RC	☐ Spent
State of Project:				
Reporting Level:	☐ Level II	☐ Level III	☐ ST/UST	☐ RP
Deliverables:	EDD	ADAPT	Other:	

Temperature (°C):	2.0	Temp Blank:	Yes	No	Wet Ice:	Yes	No
Received Intact:	Yes	No	Thermometer ID:	9091			
Cooler Custody Seals:	Yes	No	Correlation Factor:				
Sample Custody Seals:	Yes	No	Total Containers:				

SAMPLE RECEIPT				ANALYSIS REQUEST				Work Order Notes			
Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0-8021)	Chloride (EPA 300.0)			
SS11	S	2/18/20	12:27	0-0.25'	1	X	X	X			
SS12	S	2/18/20	12:40	0-0.25'	1	X	X	X			

Discrete Composite
Discrete Composite
5/1/21
5/1/21

Element	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	SiO2	Na	Sr	Ti	Sn	U	V	Zn
1631 / 245.1 / 7470 / 7471 : Hg																												

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		2/18/20 15:53			

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 02.18.2020 03.53.00 PM

Work Order #: 652836

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

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

Analyst:

PH Device/Lot#:

Checklist completed by:



Elizabeth McClellan

Date: 02.18.2020

Checklist reviewed by:



Jessica Kramer

Date: 02.19.2020



Analytical Report 652514

for

LT Environmental, Inc.

Project Manager: Chris McKisson

APE FEE #001

034820008

05.01.2020

Collected By: Client

**1089 N Canal Street
Carlsbad, NM 88220**

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



05.01.2020

Project Manager: **Chris McKisson**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **652514**

APE FEE #001

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) 652514. 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. 652514 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads 'Jessica Kramer'.

Jessica Kramer

Project Manager

A Small Business and Minority Company

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



Sample Cross Reference 652514

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	02.14.2020 10:25	0.5 ft	652514-001
FS02	S	02.14.2020 10:33	0.5 ft	652514-002
FS03	S	02.14.2020 10:41	0.5 ft	652514-003
FS04	S	02.14.2020 10:47	0.5 ft	652514-004
FS05	S	02.14.2020 10:54	0.5 ft	652514-005
FS06	S	02.14.2020 11:02	0.5 ft	652514-006
FS07	S	02.14.2020 11:11	0.5 ft	652514-007
FS08	S	02.14.2020 11:18	0.5 ft	652514-008
FS09	S	02.14.2020 11:27	0.5 ft	652514-009
FS10	S	02.14.2020 11:36	0.5 ft	652514-010
FS11	S	02.14.2020 11:47	0.5 ft	652514-011
FS12	S	02.14.2020 11:54	0.5 ft	652514-012
FS13	S	02.14.2020 12:01	0.5 ft	652514-013
FS14	S	02.14.2020 12:09	0.3 ft	652514-014
FS15	S	02.14.2020 12:17	0.3 ft	652514-015
FS16	S	02.14.2020 12:26	0.25 ft	652514-016
FS17	S	02.14.2020 12:36	0.25 ft	652514-017
FS18	S	02.14.2020 12:45	0.25 ft	652514-018
FS19	S	02.14.2020 12:42	0.25 ft	652514-019
FS20	S	02.14.2020 13:09	0.25 ft	652514-020
FS21	S	02.14.2020 13:19	0.25 ft	652514-021
FS22	S	02.14.2020 13:27	0.25 ft	652514-022
FS23	S	02.14.2020 13:47	0.3 ft	652514-023
FS24	S	02.14.2020 13:58	0.3 ft	652514-024
SS01	S	02.14.2020 14:11	0 - 0.25 ft	652514-025
SS02	S	02.14.2020 14:20	0 - 0.25 ft	652514-026

**CASE NARRATIVE****Client Name: LT Environmental, Inc.****Project Name: APE FEE #001**Project ID: 034820008
Work Order Number(s): 652514Report Date: 05.01.2020
Date Received: 02.14.2020

Sample receipt non conformances and comments:V1.001 Revision (client email) Corrected typo in project name to read APE FEE #001 JK 05/01/20

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3116666 BTEX by EPA 8021B

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

Batch: LBA-3116667 BTEX by EPA 8021B

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

Batch: LBA-3116693 TPH by SW8015 Mod

Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 652514-004.

Batch: LBA-3116796 BTEX by EPA 8021B

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



Certificate of Analysis Summary 652514

LT Environmental, Inc., Arvada, CO

Project Name: APE FEE #001

Project Id: 034820008
Contact: Chris McKisson
Project Location:

Date Received in Lab: Fri 02.14.2020 16:35
Report Date: 05.01.2020 10:25
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	652514-001	652514-002	652514-003	652514-004	652514-005	652514-006
	<i>Field Id:</i>	FS01	FS02	FS03	FS04	FS05	FS06
	<i>Depth:</i>	0.5- ft	0.5- ft	0.5- ft	0.5- ft	0.5- ft	0.5- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	02.14.2020 10:25	02.14.2020 10:33	02.14.2020 10:41	02.14.2020 10:47	02.14.2020 10:54	02.14.2020 11:02
BTEX by EPA 8021B	<i>Extracted:</i>	02.14.2020 18:00	02.14.2020 18:00	02.14.2020 18:00	02.14.2020 18:00	02.14.2020 18:00	02.14.2020 18:00
	<i>Analyzed:</i>	02.15.2020 13:49	02.15.2020 14:10	02.15.2020 14:30	02.15.2020 14:50	02.15.2020 15:52	02.15.2020 16:12
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.000487 0.000487	<0.000489 0.000489	<0.000486 0.000486	<0.000486 0.000486	<0.000483 0.000483	<0.000488 0.000488
Toluene		<0.000530 0.000530	<0.000532 0.000532	0.0108 0.000528	<0.000528 0.000528	<0.000525 0.000525	<0.000531 0.000531
Ethylbenzene		<0.000408 0.000408	<0.000409 0.000409	0.0112 0.000406	<0.000406 0.000406	<0.000404 0.000404	<0.000409 0.000409
m,p-Xylenes		<0.000757 0.000757	<0.000760 0.000760	0.100 0.000754	<0.000754 0.000754	0.000934 J 0.000749	<0.000758 0.000758
o-Xylene		<0.000405 0.000405	<0.000406 0.000406	0.0550 0.000403	<0.000403 0.000403	<0.000401 0.000401	<0.000406 0.000406
Total Xylenes		<0.000405 0.000405	<0.000406 0.000406	0.155 0.000403	<0.000403 0.000403	0.000934 J 0.000401	<0.000406 0.000406
Total BTEX		<0.000405 0.000405	<0.000406 0.000406	0.177 0.000403	<0.000403 0.000403	0.000934 J 0.000401	<0.000406 0.000406
Chloride by EPA 300	<i>Extracted:</i>	02.15.2020 08:00	02.15.2020 08:00	02.15.2020 08:00	02.15.2020 08:00	02.15.2020 08:00	02.15.2020 08:00
	<i>Analyzed:</i>	02.15.2020 11:45	02.15.2020 11:50	02.15.2020 11:56	02.15.2020 12:01	02.15.2020 12:07	02.15.2020 12:23
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		248 0.353	72.7 0.350	232 0.353	44.7 0.353	180 0.353	44.7 0.354
TPH by SW8015 Mod	<i>Extracted:</i>	02.14.2020 17:15	02.14.2020 17:15	02.14.2020 17:15	02.14.2020 17:15	02.14.2020 17:15	02.14.2020 17:15
	<i>Analyzed:</i>	02.15.2020 04:51	02.15.2020 04:51	02.15.2020 05:11	02.15.2020 05:11	02.15.2020 05:30	02.15.2020 05:30
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		25.0 J 13.9	15.9 J 13.9	401 13.8	<13.9 13.9	24.5 J 13.9	<13.8 13.8
Diesel Range Organics (DRO)		215 11.4	817 11.5	4970 11.4	837 11.5	239 11.5	37.8 J 11.4
Motor Oil Range Hydrocarbons (MRO)		16.6 J 11.4	52.1 11.5	386 11.4	74.2 11.5	64.0 11.5	16.8 J 11.4
Total TPH		257 11.4	885 11.5	5760 11.4	911 11.5	328 11.5	54.6 11.4

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Jessica Kramer
Project Manager



Certificate of Analysis Summary 652514

LT Environmental, Inc., Arvada, CO

Project Name: APE FEE #001

Project Id: 034820008
Contact: Chris McKisson
Project Location:

Date Received in Lab: Fri 02.14.2020 16:35
Report Date: 05.01.2020 10:25
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	652514-007	652514-008	652514-009	652514-010	652514-011	652514-012
	<i>Field Id:</i>	FS07	FS08	FS09	FS10	FS11	FS12
	<i>Depth:</i>	0.5- ft	0.5- ft	0.5- ft	0.5- ft	0.5- ft	0.5- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	02.14.2020 11:11	02.14.2020 11:18	02.14.2020 11:27	02.14.2020 11:36	02.14.2020 11:47	02.14.2020 11:54
BTEX by EPA 8021B	<i>Extracted:</i>	02.14.2020 18:00	02.14.2020 18:00	02.14.2020 18:00	02.14.2020 18:00	02.14.2020 18:00	02.14.2020 18:00
	<i>Analyzed:</i>	02.15.2020 16:33	02.15.2020 16:53	02.15.2020 17:14	02.15.2020 17:34	02.15.2020 17:54	02.15.2020 18:15
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.000484 0.000484	<0.000488 0.000488	<0.000487 0.000487	<0.000488 0.000488	<0.000486 0.000486	<0.000486 0.000486
Toluene		<0.000526 0.000526	<0.000531 0.000531	<0.000530 0.000530	<0.000531 0.000531	<0.000529 0.000529	<0.000529 0.000529
Ethylbenzene		<0.000405 0.000405	<0.000409 0.000409	<0.000408 0.000408	<0.000409 0.000409	<0.000407 0.000407	<0.000407 0.000407
m,p-Xylenes		<0.000751 0.000751	<0.000758 0.000758	<0.000757 0.000757	<0.000758 0.000758	<0.000755 0.000755	<0.000755 0.000755
o-Xylene		<0.000401 0.000401	<0.000406 0.000406	<0.000405 0.000405	<0.000406 0.000406	<0.000404 0.000404	<0.000404 0.000404
Total Xylenes		<0.000401 0.000401	<0.000406 0.000406	<0.000405 0.000405	<0.000406 0.000406	<0.000404 0.000404	<0.000404 0.000404
Total BTEX		<0.000401 0.000401	<0.000406 0.000406	<0.000405 0.000405	<0.000406 0.000406	<0.000404 0.000404	<0.000404 0.000404
Chloride by EPA 300	<i>Extracted:</i>	02.15.2020 08:00	02.15.2020 08:00	02.15.2020 08:00	02.15.2020 08:00	02.15.2020 08:00	02.15.2020 08:00
	<i>Analyzed:</i>	02.15.2020 12:39	02.15.2020 12:45	02.15.2020 12:50	02.15.2020 12:56	02.15.2020 13:01	02.15.2020 13:07
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		<0.351 0.351	21.0 0.352	8.80 J 0.353	18.7 0.350	18.1 0.353	12.6 0.355
TPH by SW8015 Mod	<i>Extracted:</i>	02.14.2020 17:30	02.14.2020 17:30	02.14.2020 17:30	02.14.2020 17:30	02.14.2020 17:30	02.14.2020 17:30
	<i>Analyzed:</i>	02.15.2020 06:29	02.15.2020 07:08	02.15.2020 07:08	02.15.2020 07:27	02.15.2020 07:27	02.15.2020 07:47
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<14.0 14.0	<14.0 14.0	<13.9 13.9	<13.9 13.9	<13.9 13.9	<13.8 13.8
Diesel Range Organics (DRO)		<11.5 11.5	<11.5 11.5	<11.5 11.5	<11.5 11.5	<11.4 11.4	<11.4 11.4
Motor Oil Range Hydrocarbons (MRO)		<11.5 11.5	<11.5 11.5	<11.5 11.5	<11.5 11.5	<11.4 11.4	<11.4 11.4
Total TPH		<11.5 11.5	<11.5 11.5	<11.5 11.5	<11.5 11.5	<11.4 11.4	<11.4 11.4

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Jessica Kramer
Project Manager



Certificate of Analysis Summary 652514

LT Environmental, Inc., Arvada, CO

Project Name: APE FEE #001

Project Id: 034820008
Contact: Chris McKisson
Project Location:

Date Received in Lab: Fri 02.14.2020 16:35
Report Date: 05.01.2020 10:25
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	652514-013	652514-014	652514-015	652514-016	652514-017	652514-018
	<i>Field Id:</i>	FS13	FS14	FS15	FS16	FS17	FS18
	<i>Depth:</i>	0.5- ft	0.3- ft	0.3- ft	0.25- ft	0.25- ft	0.25- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	02.14.2020 12:01	02.14.2020 12:09	02.14.2020 12:17	02.14.2020 12:26	02.14.2020 12:36	02.14.2020 12:45
BTEX by EPA 8021B	<i>Extracted:</i>	02.14.2020 18:00	02.14.2020 18:00	02.14.2020 17:09	02.14.2020 17:09	02.14.2020 17:09	02.14.2020 17:09
	<i>Analyzed:</i>	02.15.2020 18:35	02.15.2020 18:55	02.15.2020 05:00	02.15.2020 05:20	02.15.2020 05:40	02.15.2020 06:01
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.000489 0.000489	<0.000484 0.000484	<0.000480 0.000480	<0.000485 0.000485	<0.000484 0.000484	<0.000489 0.000489
Toluene		<0.000532 0.000532	<0.000526 0.000526	<0.000521 0.000521	<0.000527 0.000527	<0.000526 0.000526	<0.000532 0.000532
Ethylbenzene		<0.000409 0.000409	<0.000405 0.000405	<0.000401 0.000401	<0.000405 0.000405	<0.000405 0.000405	<0.000409 0.000409
m,p-Xylenes		<0.000760 0.000760	<0.000751 0.000751	<0.000745 0.000745	<0.000752 0.000752	<0.000751 0.000751	<0.000760 0.000760
o-Xylene		<0.000406 0.000406	<0.000401 0.000401	<0.000398 0.000398	<0.000402 0.000402	<0.000401 0.000401	<0.000406 0.000406
Total Xylenes		<0.000406 0.000406	<0.000401 0.000401	<0.000398 0.000398	<0.000402 0.000402	<0.000401 0.000401	<0.000406 0.000406
Total BTEX		<0.000406 0.000406	<0.000401 0.000401	<0.000398 0.000398	<0.000402 0.000402	<0.000401 0.000401	<0.000406 0.000406
Chloride by EPA 300	<i>Extracted:</i>	02.15.2020 08:00	02.15.2020 08:00	02.15.2020 08:30	02.15.2020 08:30	02.15.2020 08:30	02.15.2020 08:30
	<i>Analyzed:</i>	02.15.2020 13:12	02.15.2020 13:18	02.15.2020 13:51	02.15.2020 14:07	02.15.2020 14:13	02.15.2020 14:18
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		5.58 J 0.355	30.8 0.353	17.3 0.353	29.6 0.351	6.04 J 0.353	14.6 0.351
TPH by SW8015 Mod	<i>Extracted:</i>	02.14.2020 17:30	02.14.2020 17:30	02.14.2020 17:30	02.14.2020 17:30	02.14.2020 17:30	02.14.2020 17:30
	<i>Analyzed:</i>	02.15.2020 07:47	02.15.2020 08:06	02.15.2020 08:06	02.15.2020 08:26	02.15.2020 08:45	02.15.2020 08:45
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<13.8 13.8	<14.0 14.0	<14.0 14.0	<13.8 13.8	<13.9 13.9	<13.9 13.9
Diesel Range Organics (DRO)		<11.4 11.4	<11.5 11.5	<11.5 11.5	<11.4 11.4	<11.4 11.4	<11.5 11.5
Motor Oil Range Hydrocarbons (MRO)		<11.4 11.4	<11.5 11.5	<11.5 11.5	<11.4 11.4	<11.4 11.4	<11.5 11.5
Total TPH		<11.4 11.4	<11.5 11.5	<11.5 11.5	<11.4 11.4	<11.4 11.4	<11.5 11.5

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Jessica Kramer
Project Manager



Certificate of Analysis Summary 652514

LT Environmental, Inc., Arvada, CO

Project Name: APE FEE #001

Project Id: 034820008
Contact: Chris McKisson
Project Location:

Date Received in Lab: Fri 02.14.2020 16:35
Report Date: 05.01.2020 10:25
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	652514-019	652514-020	652514-021	652514-022	652514-023	652514-024
	<i>Field Id:</i>	FS19	FS20	FS21	FS22	FS23	FS24
	<i>Depth:</i>	0.25- ft	0.25- ft	0.25- ft	0.25- ft	0.3- ft	0.3- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	02.14.2020 12:42	02.14.2020 13:09	02.14.2020 13:19	02.14.2020 13:27	02.14.2020 13:47	02.14.2020 13:58
BTEX by EPA 8021B	<i>Extracted:</i>	02.14.2020 17:09	02.14.2020 17:09	02.14.2020 17:09	02.14.2020 17:09	02.14.2020 17:09	02.14.2020 17:09
	<i>Analyzed:</i>	02.15.2020 06:21	02.15.2020 06:42	02.15.2020 07:02	02.15.2020 07:23	02.15.2020 07:43	02.15.2020 08:03
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.000486 0.000486	<0.000488 0.000488	<0.000485 0.000485	<0.000485 0.000485	<0.000486 0.000486	<0.000487 0.000487
Toluene		<0.000528 0.000528	<0.000531 0.000531	<0.000527 0.000527	<0.000527 0.000527	<0.000529 0.000529	<0.000530 0.000530
Ethylbenzene		<0.000406 0.000406	<0.000409 0.000409	<0.000405 0.000405	<0.000405 0.000405	<0.000407 0.000407	<0.000408 0.000408
m,p-Xylenes		<0.000754 0.000754	<0.000758 0.000758	<0.000752 0.000752	<0.000752 0.000752	<0.000755 0.000755	<0.000757 0.000757
o-Xylene		<0.000403 0.000403	<0.000406 0.000406	<0.000402 0.000402	<0.000402 0.000402	<0.000404 0.000404	<0.000405 0.000405
Total Xylenes		<0.000403 0.000403	<0.000406 0.000406	<0.000402 0.000402	<0.000402 0.000402	<0.000404 0.000404	<0.000405 0.000405
Total BTEX		<0.000403 0.000403	<0.000406 0.000406	<0.000402 0.000402	<0.000402 0.000402	<0.000404 0.000404	<0.000405 0.000405
Chloride by EPA 300	<i>Extracted:</i>	02.15.2020 08:30	02.15.2020 08:30	02.15.2020 08:30	02.15.2020 08:30	02.15.2020 08:30	02.15.2020 08:30
	<i>Analyzed:</i>	02.15.2020 14:23	02.15.2020 14:40	02.15.2020 14:45	02.15.2020 14:51	02.15.2020 14:57	02.15.2020 15:03
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		58.4 0.350	14.2 0.352	5.58 J 0.355	21.2 0.353	388 0.353	157 0.353
TPH by SW8015 Mod	<i>Extracted:</i>	02.14.2020 17:30	02.14.2020 17:30	02.14.2020 17:30	02.14.2020 17:30	02.14.2020 17:30	02.14.2020 17:30
	<i>Analyzed:</i>	02.15.2020 09:04	02.15.2020 09:04	02.15.2020 09:24	02.15.2020 09:24	02.15.2020 09:44	02.15.2020 10:03
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<13.9 13.9	<13.8 13.8	25.2 J 13.9	<13.9 13.9	20.5 J 13.9	<13.8 13.8
Diesel Range Organics (DRO)		<11.5 11.5	<11.4 11.4	14.9 J 11.5	<11.5 11.5	355 11.5	25.8 J 11.4
Motor Oil Range Hydrocarbons (MRO)		<11.5 11.5	<11.4 11.4	<11.5 11.5	<11.5 11.5	27.6 J 11.5	<11.4 11.4
Total TPH		<11.5 11.5	<11.4 11.4	40.1 J 11.5	<11.5 11.5	403 11.5	25.8 J 11.4

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Jessica Kramer
Project Manager



Certificate of Analysis Summary 652514

LT Environmental, Inc., Arvada, CO

Project Name: APE FEE #001

Project Id: 034820008
Contact: Chris McKisson
Project Location:

Date Received in Lab: Fri 02.14.2020 16:35
Report Date: 05.01.2020 10:25
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	652514-025	652514-026				
	Field Id:	SS01	SS02				
	Depth:	0-0.25 ft	0-0.25 ft				
	Matrix:	SOIL	SOIL				
	Sampled:	02.14.2020 14:11	02.14.2020 14:20				
BTEX by EPA 8021B	Extracted:	02.17.2020 11:00	02.17.2020 11:00				
	Analyzed:	02.17.2020 16:34	02.17.2020 16:54				
	Units/RL:	mg/kg RL	mg/kg RL				
Benzene		<0.000483 0.000483	<0.000484 0.000484				
Toluene		<0.000525 0.000525	<0.000526 0.000526				
Ethylbenzene		<0.000404 0.000404	<0.000405 0.000405				
m,p-Xylenes		<0.000749 0.000749	<0.000751 0.000751				
o-Xylene		<0.000401 0.000401	<0.000401 0.000401				
Total Xylenes		<0.000401 0.000401	<0.000401 0.000401				
Total BTEX		<0.000401 0.000401	<0.000401 0.000401				
Chloride by EPA 300	Extracted:	02.15.2020 08:30	02.15.2020 08:30				
	Analyzed:	02.15.2020 15:09	02.15.2020 15:26				
	Units/RL:	mg/kg RL	mg/kg RL				
Chloride		18.5 0.353	5.73 J 0.354				
TPH by SW8015 Mod	Extracted:	02.17.2020 12:15	02.17.2020 12:15				
	Analyzed:	02.17.2020 13:53	02.17.2020 14:13				
	Units/RL:	mg/kg RL	mg/kg RL				
Gasoline Range Hydrocarbons (GRO)		<13.9 13.9	<13.9 13.9				
Diesel Range Organics (DRO)		<11.5 11.5	14.6 J 11.4				
Motor Oil Range Hydrocarbons (MRO)		<11.5 11.5	<11.4 11.4				
Total TPH		<11.5 11.5	14.6 J 11.4				

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Jessica Kramer
Project Manager



Certificate of Analytical Results 652514

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS01** Matrix: Soil Date Received: 02.14.2020 16:35
 Lab Sample Id: 652514-001 Date Collected: 02.14.2020 10:25 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.15.2020 08:00 Basis: Wet Weight
 Seq Number: 3116676

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	248	9.96	0.353	mg/kg	02.15.2020 11:45		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.14.2020 17:15 Basis: Wet Weight
 Seq Number: 3116693

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	25.0	49.9	13.9	mg/kg	02.15.2020 04:51	J	1
Diesel Range Organics (DRO)	C10C28DRO	215	49.9	11.4	mg/kg	02.15.2020 04:51		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	16.6	49.9	11.4	mg/kg	02.15.2020 04:51	J	1
Total TPH	PHC635	257	49.9	11.4	mg/kg	02.15.2020 04:51		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	02.15.2020 04:51	
o-Terphenyl	84-15-1	122	%	70-135	02.15.2020 04:51	



Certificate of Analytical Results 652514

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS01**
Lab Sample Id: 652514-001

Matrix: Soil
Date Collected: 02.14.2020 10:25

Date Received: 02.14.2020 16:35
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.14.2020 18:00

Basis: Wet Weight

Seq Number: 3116667

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000487	0.00201	0.000487	mg/kg	02.15.2020 13:49	U	1
Toluene	108-88-3	<0.000530	0.00201	0.000530	mg/kg	02.15.2020 13:49	U	1
Ethylbenzene	100-41-4	<0.000408	0.00201	0.000408	mg/kg	02.15.2020 13:49	U	1
m,p-Xylenes	179601-23-1	<0.000757	0.00402	0.000757	mg/kg	02.15.2020 13:49	U	1
o-Xylene	95-47-6	<0.000405	0.00201	0.000405	mg/kg	02.15.2020 13:49	U	1
Total Xylenes	1330-20-7	<0.000405	0.00201	0.000405	mg/kg	02.15.2020 13:49	U	1
Total BTEX		<0.000405	0.00201	0.000405	mg/kg	02.15.2020 13:49	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	95	%	70-130	02.15.2020 13:49			
1,4-Difluorobenzene	540-36-3	101	%	70-130	02.15.2020 13:49			



Certificate of Analytical Results 652514

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS02** Matrix: Soil Date Received: 02.14.2020 16:35
 Lab Sample Id: 652514-002 Date Collected: 02.14.2020 10:33 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.15.2020 08:00 Basis: Wet Weight
 Seq Number: 3116676

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	72.7	9.90	0.350	mg/kg	02.15.2020 11:50		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.14.2020 17:15 Basis: Wet Weight
 Seq Number: 3116693

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	15.9	50.2	13.9	mg/kg	02.15.2020 04:51	J	1
Diesel Range Organics (DRO)	C10C28DRO	817	50.2	11.5	mg/kg	02.15.2020 04:51		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	52.1	50.2	11.5	mg/kg	02.15.2020 04:51		1
Total TPH	PHC635	885	50.2	11.5	mg/kg	02.15.2020 04:51		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	02.15.2020 04:51	
o-Terphenyl	84-15-1	116	%	70-135	02.15.2020 04:51	



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LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS02**
Lab Sample Id: 652514-002

Matrix: Soil
Date Collected: 02.14.2020 10:33

Date Received: 02.14.2020 16:35
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.14.2020 18:00

Basis: Wet Weight

Seq Number: 3116667

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000489	0.00202	0.000489	mg/kg	02.15.2020 14:10	U	1
Toluene	108-88-3	<0.000532	0.00202	0.000532	mg/kg	02.15.2020 14:10	U	1
Ethylbenzene	100-41-4	<0.000409	0.00202	0.000409	mg/kg	02.15.2020 14:10	U	1
m,p-Xylenes	179601-23-1	<0.000760	0.00403	0.000760	mg/kg	02.15.2020 14:10	U	1
o-Xylene	95-47-6	<0.000406	0.00202	0.000406	mg/kg	02.15.2020 14:10	U	1
Total Xylenes	1330-20-7	<0.000406	0.00202	0.000406	mg/kg	02.15.2020 14:10	U	1
Total BTEX		<0.000406	0.00202	0.000406	mg/kg	02.15.2020 14:10	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
1,4-Difluorobenzene	540-36-3	101	%	70-130	02.15.2020 14:10			
4-Bromofluorobenzene	460-00-4	101	%	70-130	02.15.2020 14:10			



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LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: FS03	Matrix: Soil	Date Received: 02.14.2020 16:35
Lab Sample Id: 652514-003	Date Collected: 02.14.2020 10:41	Sample Depth: 0.5 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 02.15.2020 08:00	Basis: Wet Weight
Seq Number: 3116676		

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	232	9.98	0.353	mg/kg	02.15.2020 11:56		1

Analytical Method: TPH by SW8015 Mod	Prep Method: SW8015P
Tech: DTH	% Moisture:
Analyst: DTH	Date Prep: 02.14.2020 17:15
Seq Number: 3116693	Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	401	49.8	13.8	mg/kg	02.15.2020 05:11		1
Diesel Range Organics (DRO)	C10C28DRO	4970	49.8	11.4	mg/kg	02.15.2020 05:11		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	386	49.8	11.4	mg/kg	02.15.2020 05:11		1
Total TPH	PHC635	5760	49.8	11.4	mg/kg	02.15.2020 05:11		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	02.15.2020 05:11	
o-Terphenyl	84-15-1	113	%	70-135	02.15.2020 05:11	



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LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS03**
Lab Sample Id: 652514-003

Matrix: Soil
Date Collected: 02.14.2020 10:41

Date Received: 02.14.2020 16:35
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.14.2020 18:00

Basis: Wet Weight

Seq Number: 3116667

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000486	0.00200	0.000486	mg/kg	02.15.2020 14:30	U	1
Toluene	108-88-3	0.0108	0.00200	0.000528	mg/kg	02.15.2020 14:30		1
Ethylbenzene	100-41-4	0.0112	0.00200	0.000406	mg/kg	02.15.2020 14:30		1
m,p-Xylenes	179601-23-1	0.100	0.00400	0.000754	mg/kg	02.15.2020 14:30		1
o-Xylene	95-47-6	0.0550	0.00200	0.000403	mg/kg	02.15.2020 14:30		1
Total Xylenes	1330-20-7	0.155	0.00200	0.000403	mg/kg	02.15.2020 14:30		1
Total BTEX		0.177	0.00200	0.000403	mg/kg	02.15.2020 14:30		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	122	%	70-130	02.15.2020 14:30			
1,4-Difluorobenzene	540-36-3	100	%	70-130	02.15.2020 14:30			



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LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS04** Matrix: Soil Date Received: 02.14.2020 16:35
 Lab Sample Id: 652514-004 Date Collected: 02.14.2020 10:47 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.15.2020 08:00 Basis: Wet Weight
 Seq Number: 3116676

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	44.7	9.96	0.353	mg/kg	02.15.2020 12:01		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.14.2020 17:15 Basis: Wet Weight
 Seq Number: 3116693

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<13.9	50.2	13.9	mg/kg	02.15.2020 05:11	U	1
Diesel Range Organics (DRO)	C10C28DRO	837	50.2	11.5	mg/kg	02.15.2020 05:11		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	74.2	50.2	11.5	mg/kg	02.15.2020 05:11		1
Total TPH	PHC635	911	50.2	11.5	mg/kg	02.15.2020 05:11		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	02.15.2020 05:11	
o-Terphenyl	84-15-1	139	%	70-135	02.15.2020 05:11	**



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LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS04**
Lab Sample Id: 652514-004

Matrix: Soil
Date Collected: 02.14.2020 10:47

Date Received: 02.14.2020 16:35
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.14.2020 18:00

Basis: Wet Weight

Seq Number: 3116667

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000486	0.00200	0.000486	mg/kg	02.15.2020 14:50	U	1
Toluene	108-88-3	<0.000528	0.00200	0.000528	mg/kg	02.15.2020 14:50	U	1
Ethylbenzene	100-41-4	<0.000406	0.00200	0.000406	mg/kg	02.15.2020 14:50	U	1
m,p-Xylenes	179601-23-1	<0.000754	0.00400	0.000754	mg/kg	02.15.2020 14:50	U	1
o-Xylene	95-47-6	<0.000403	0.00200	0.000403	mg/kg	02.15.2020 14:50	U	1
Total Xylenes	1330-20-7	<0.000403	0.00200	0.000403	mg/kg	02.15.2020 14:50	U	1
Total BTEX		<0.000403	0.00200	0.000403	mg/kg	02.15.2020 14:50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	02.15.2020 14:50	
4-Bromofluorobenzene	460-00-4	124	%	70-130	02.15.2020 14:50	



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LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS05** Matrix: Soil Date Received: 02.14.2020 16:35
 Lab Sample Id: 652514-005 Date Collected: 02.14.2020 10:54 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.15.2020 08:00 Basis: Wet Weight
 Seq Number: 3116676

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	180	9.98	0.353	mg/kg	02.15.2020 12:07		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.14.2020 17:15 Basis: Wet Weight
 Seq Number: 3116693

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	24.5	50.0	13.9	mg/kg	02.15.2020 05:30	J	1
Diesel Range Organics (DRO)	C10C28DRO	239	50.0	11.5	mg/kg	02.15.2020 05:30		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	64.0	50.0	11.5	mg/kg	02.15.2020 05:30		1
Total TPH	PHC635	328	50.0	11.5	mg/kg	02.15.2020 05:30		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	02.15.2020 05:30	
o-Terphenyl	84-15-1	123	%	70-135	02.15.2020 05:30	



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LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS05**
Lab Sample Id: 652514-005

Matrix: Soil
Date Collected: 02.14.2020 10:54

Date Received: 02.14.2020 16:35
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.14.2020 18:00

Basis: Wet Weight

Seq Number: 3116667

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000483	0.00199	0.000483	mg/kg	02.15.2020 15:52	U	1
Toluene	108-88-3	<0.000525	0.00199	0.000525	mg/kg	02.15.2020 15:52	U	1
Ethylbenzene	100-41-4	<0.000404	0.00199	0.000404	mg/kg	02.15.2020 15:52	U	1
m,p-Xylenes	179601-23-1	0.000934	0.00398	0.000749	mg/kg	02.15.2020 15:52	J	1
o-Xylene	95-47-6	<0.000401	0.00199	0.000401	mg/kg	02.15.2020 15:52	U	1
Total Xylenes	1330-20-7	0.000934	0.00199	0.000401	mg/kg	02.15.2020 15:52	J	1
Total BTEX		0.000934	0.00199	0.000401	mg/kg	02.15.2020 15:52	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	02.15.2020 15:52	
4-Bromofluorobenzene	460-00-4	96	%	70-130	02.15.2020 15:52	



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LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS06** Matrix: Soil Date Received: 02.14.2020 16:35
 Lab Sample Id: 652514-006 Date Collected: 02.14.2020 11:02 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.15.2020 08:00 Basis: Wet Weight
 Seq Number: 3116676

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	44.7	10.0	0.354	mg/kg	02.15.2020 12:23		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.14.2020 17:15 Basis: Wet Weight
 Seq Number: 3116693

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<13.8	49.8	13.8	mg/kg	02.15.2020 05:30	U	1
Diesel Range Organics (DRO)	C10C28DRO	37.8	49.8	11.4	mg/kg	02.15.2020 05:30	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	16.8	49.8	11.4	mg/kg	02.15.2020 05:30	J	1
Total TPH	PHC635	54.6	49.8	11.4	mg/kg	02.15.2020 05:30		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	02.15.2020 05:30	
o-Terphenyl	84-15-1	108	%	70-135	02.15.2020 05:30	



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LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS06**
Lab Sample Id: 652514-006

Matrix: Soil
Date Collected: 02.14.2020 11:02

Date Received: 02.14.2020 16:35
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.14.2020 18:00

Basis: Wet Weight

Seq Number: 3116667

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000488	0.00201	0.000488	mg/kg	02.15.2020 16:12	U	1
Toluene	108-88-3	<0.000531	0.00201	0.000531	mg/kg	02.15.2020 16:12	U	1
Ethylbenzene	100-41-4	<0.000409	0.00201	0.000409	mg/kg	02.15.2020 16:12	U	1
m,p-Xylenes	179601-23-1	<0.000758	0.00402	0.000758	mg/kg	02.15.2020 16:12	U	1
o-Xylene	95-47-6	<0.000406	0.00201	0.000406	mg/kg	02.15.2020 16:12	U	1
Total Xylenes	1330-20-7	<0.000406	0.00201	0.000406	mg/kg	02.15.2020 16:12	U	1
Total BTEX		<0.000406	0.00201	0.000406	mg/kg	02.15.2020 16:12	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
1,4-Difluorobenzene	540-36-3	105	%	70-130	02.15.2020 16:12			
4-Bromofluorobenzene	460-00-4	99	%	70-130	02.15.2020 16:12			



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LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS07** Matrix: Soil Date Received: 02.14.2020 16:35
 Lab Sample Id: 652514-007 Date Collected: 02.14.2020 11:11 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.15.2020 08:00 Basis: Wet Weight
 Seq Number: 3116676

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<0.351	9.92	0.351	mg/kg	02.15.2020 12:39	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.14.2020 17:30 Basis: Wet Weight
 Seq Number: 3116700

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.0	50.3	14.0	mg/kg	02.15.2020 06:29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<11.5	50.3	11.5	mg/kg	02.15.2020 06:29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<11.5	50.3	11.5	mg/kg	02.15.2020 06:29	U	1
Total TPH	PHC635	<11.5	50.3	11.5	mg/kg	02.15.2020 06:29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	02.15.2020 06:29	
o-Terphenyl	84-15-1	108	%	70-135	02.15.2020 06:29	



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LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS07**
Lab Sample Id: 652514-007

Matrix: Soil
Date Collected: 02.14.2020 11:11

Date Received: 02.14.2020 16:35
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.14.2020 18:00

Basis: Wet Weight

Seq Number: 3116667

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000484	0.00199	0.000484	mg/kg	02.15.2020 16:33	U	1
Toluene	108-88-3	<0.000526	0.00199	0.000526	mg/kg	02.15.2020 16:33	U	1
Ethylbenzene	100-41-4	<0.000405	0.00199	0.000405	mg/kg	02.15.2020 16:33	U	1
m,p-Xylenes	179601-23-1	<0.000751	0.00398	0.000751	mg/kg	02.15.2020 16:33	U	1
o-Xylene	95-47-6	<0.000401	0.00199	0.000401	mg/kg	02.15.2020 16:33	U	1
Total Xylenes	1330-20-7	<0.000401	0.00199	0.000401	mg/kg	02.15.2020 16:33	U	1
Total BTEX		<0.000401	0.00199	0.000401	mg/kg	02.15.2020 16:33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	95	%	70-130	02.15.2020 16:33	
4-Bromofluorobenzene	460-00-4	97	%	70-130	02.15.2020 16:33	



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APE FEE #001

Sample Id: **FS08** Matrix: Soil Date Received: 02.14.2020 16:35
 Lab Sample Id: 652514-008 Date Collected: 02.14.2020 11:18 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.15.2020 08:00 Basis: Wet Weight
 Seq Number: 3116676

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	21.0	9.94	0.352	mg/kg	02.15.2020 12:45		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.14.2020 17:30 Basis: Wet Weight
 Seq Number: 3116700

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.0	50.3	14.0	mg/kg	02.15.2020 07:08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<11.5	50.3	11.5	mg/kg	02.15.2020 07:08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<11.5	50.3	11.5	mg/kg	02.15.2020 07:08	U	1
Total TPH	PHC635	<11.5	50.3	11.5	mg/kg	02.15.2020 07:08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	02.15.2020 07:08	
o-Terphenyl	84-15-1	106	%	70-135	02.15.2020 07:08	



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LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS08**
Lab Sample Id: 652514-008

Matrix: Soil
Date Collected: 02.14.2020 11:18

Date Received: 02.14.2020 16:35
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.14.2020 18:00

Basis: Wet Weight

Seq Number: 3116667

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000488	0.00201	0.000488	mg/kg	02.15.2020 16:53	U	1
Toluene	108-88-3	<0.000531	0.00201	0.000531	mg/kg	02.15.2020 16:53	U	1
Ethylbenzene	100-41-4	<0.000409	0.00201	0.000409	mg/kg	02.15.2020 16:53	U	1
m,p-Xylenes	179601-23-1	<0.000758	0.00402	0.000758	mg/kg	02.15.2020 16:53	U	1
o-Xylene	95-47-6	<0.000406	0.00201	0.000406	mg/kg	02.15.2020 16:53	U	1
Total Xylenes	1330-20-7	<0.000406	0.00201	0.000406	mg/kg	02.15.2020 16:53	U	1
Total BTEX		<0.000406	0.00201	0.000406	mg/kg	02.15.2020 16:53	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
1,4-Difluorobenzene	540-36-3	99	%	70-130	02.15.2020 16:53			
4-Bromofluorobenzene	460-00-4	92	%	70-130	02.15.2020 16:53			



Certificate of Analytical Results 652514

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS09** Matrix: Soil Date Received: 02.14.2020 16:35
 Lab Sample Id: 652514-009 Date Collected: 02.14.2020 11:27 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.15.2020 08:00 Basis: Wet Weight
 Seq Number: 3116676

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.80	9.98	0.353	mg/kg	02.15.2020 12:50	J	1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.14.2020 17:30 Basis: Wet Weight
 Seq Number: 3116700

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<13.9	50.2	13.9	mg/kg	02.15.2020 07:08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<11.5	50.2	11.5	mg/kg	02.15.2020 07:08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<11.5	50.2	11.5	mg/kg	02.15.2020 07:08	U	1
Total TPH	PHC635	<11.5	50.2	11.5	mg/kg	02.15.2020 07:08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	02.15.2020 07:08	
o-Terphenyl	84-15-1	115	%	70-135	02.15.2020 07:08	



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LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS09**
Lab Sample Id: 652514-009

Matrix: Soil
Date Collected: 02.14.2020 11:27

Date Received: 02.14.2020 16:35
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.14.2020 18:00

Basis: Wet Weight

Seq Number: 3116667

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000487	0.00201	0.000487	mg/kg	02.15.2020 17:14	U	1
Toluene	108-88-3	<0.000530	0.00201	0.000530	mg/kg	02.15.2020 17:14	U	1
Ethylbenzene	100-41-4	<0.000408	0.00201	0.000408	mg/kg	02.15.2020 17:14	U	1
m,p-Xylenes	179601-23-1	<0.000757	0.00402	0.000757	mg/kg	02.15.2020 17:14	U	1
o-Xylene	95-47-6	<0.000405	0.00201	0.000405	mg/kg	02.15.2020 17:14	U	1
Total Xylenes	1330-20-7	<0.000405	0.00201	0.000405	mg/kg	02.15.2020 17:14	U	1
Total BTEX		<0.000405	0.00201	0.000405	mg/kg	02.15.2020 17:14	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
1,4-Difluorobenzene	540-36-3	105	%	70-130	02.15.2020 17:14			
4-Bromofluorobenzene	460-00-4	96	%	70-130	02.15.2020 17:14			



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LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS10** Matrix: Soil Date Received: 02.14.2020 16:35
 Lab Sample Id: 652514-010 Date Collected: 02.14.2020 11:36 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.15.2020 08:00 Basis: Wet Weight
 Seq Number: 3116676

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	18.7	9.88	0.350	mg/kg	02.15.2020 12:56		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.14.2020 17:30 Basis: Wet Weight
 Seq Number: 3116700

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<13.9	50.1	13.9	mg/kg	02.15.2020 07:27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<11.5	50.1	11.5	mg/kg	02.15.2020 07:27	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<11.5	50.1	11.5	mg/kg	02.15.2020 07:27	U	1
Total TPH	PHC635	<11.5	50.1	11.5	mg/kg	02.15.2020 07:27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	02.15.2020 07:27	
o-Terphenyl	84-15-1	109	%	70-135	02.15.2020 07:27	



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LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS10**
Lab Sample Id: 652514-010

Matrix: Soil
Date Collected: 02.14.2020 11:36

Date Received: 02.14.2020 16:35
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.14.2020 18:00

Basis: Wet Weight

Seq Number: 3116667

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000488	0.00201	0.000488	mg/kg	02.15.2020 17:34	U	1
Toluene	108-88-3	<0.000531	0.00201	0.000531	mg/kg	02.15.2020 17:34	U	1
Ethylbenzene	100-41-4	<0.000409	0.00201	0.000409	mg/kg	02.15.2020 17:34	U	1
m,p-Xylenes	179601-23-1	<0.000758	0.00402	0.000758	mg/kg	02.15.2020 17:34	U	1
o-Xylene	95-47-6	<0.000406	0.00201	0.000406	mg/kg	02.15.2020 17:34	U	1
Total Xylenes	1330-20-7	<0.000406	0.00201	0.000406	mg/kg	02.15.2020 17:34	U	1
Total BTEX		<0.000406	0.00201	0.000406	mg/kg	02.15.2020 17:34	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	95	%	70-130	02.15.2020 17:34			
1,4-Difluorobenzene	540-36-3	101	%	70-130	02.15.2020 17:34			



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APE FEE #001

Sample Id: **FS11**
Lab Sample Id: 652514-011

Matrix: Soil
Date Collected: 02.14.2020 11:47

Date Received: 02.14.2020 16:35
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3116676

Date Prep: 02.15.2020 08:00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	18.1	9.98	0.353	mg/kg	02.15.2020 13:01		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3116700

Date Prep: 02.14.2020 17:30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<13.9	49.9	13.9	mg/kg	02.15.2020 07:27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<11.4	49.9	11.4	mg/kg	02.15.2020 07:27	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<11.4	49.9	11.4	mg/kg	02.15.2020 07:27	U	1
Total TPH	PHC635	<11.4	49.9	11.4	mg/kg	02.15.2020 07:27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	02.15.2020 07:27	
o-Terphenyl	84-15-1	115	%	70-135	02.15.2020 07:27	



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LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS11**
Lab Sample Id: 652514-011

Matrix: Soil
Date Collected: 02.14.2020 11:47

Date Received: 02.14.2020 16:35
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.14.2020 18:00

Basis: Wet Weight

Seq Number: 3116667

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000486	0.00200	0.000486	mg/kg	02.15.2020 17:54	U	1
Toluene	108-88-3	<0.000529	0.00200	0.000529	mg/kg	02.15.2020 17:54	U	1
Ethylbenzene	100-41-4	<0.000407	0.00200	0.000407	mg/kg	02.15.2020 17:54	U	1
m,p-Xylenes	179601-23-1	<0.000755	0.00401	0.000755	mg/kg	02.15.2020 17:54	U	1
o-Xylene	95-47-6	<0.000404	0.00200	0.000404	mg/kg	02.15.2020 17:54	U	1
Total Xylenes	1330-20-7	<0.000404	0.00200	0.000404	mg/kg	02.15.2020 17:54	U	1
Total BTEX		<0.000404	0.00200	0.000404	mg/kg	02.15.2020 17:54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	94	%	70-130	02.15.2020 17:54	
4-Bromofluorobenzene	460-00-4	99	%	70-130	02.15.2020 17:54	



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LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS12** Matrix: Soil Date Received: 02.14.2020 16:35
 Lab Sample Id: 652514-012 Date Collected: 02.14.2020 11:54 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.15.2020 08:00 Basis: Wet Weight
 Seq Number: 3116676

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	12.6	10.0	0.355	mg/kg	02.15.2020 13:07		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.14.2020 17:30 Basis: Wet Weight
 Seq Number: 3116700

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<13.8	49.8	13.8	mg/kg	02.15.2020 07:47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<11.4	49.8	11.4	mg/kg	02.15.2020 07:47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<11.4	49.8	11.4	mg/kg	02.15.2020 07:47	U	1
Total TPH	PHC635	<11.4	49.8	11.4	mg/kg	02.15.2020 07:47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-135	02.15.2020 07:47	
o-Terphenyl	84-15-1	125	%	70-135	02.15.2020 07:47	



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LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS12**
Lab Sample Id: 652514-012

Matrix: Soil
Date Collected: 02.14.2020 11:54

Date Received: 02.14.2020 16:35
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3116667

Prep Method: SW5030B

% Moisture:

Date Prep: 02.14.2020 18:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000486	0.00200	0.000486	mg/kg	02.15.2020 18:15	U	1
Toluene	108-88-3	<0.000529	0.00200	0.000529	mg/kg	02.15.2020 18:15	U	1
Ethylbenzene	100-41-4	<0.000407	0.00200	0.000407	mg/kg	02.15.2020 18:15	U	1
m,p-Xylenes	179601-23-1	<0.000755	0.00401	0.000755	mg/kg	02.15.2020 18:15	U	1
o-Xylene	95-47-6	<0.000404	0.00200	0.000404	mg/kg	02.15.2020 18:15	U	1
Total Xylenes	1330-20-7	<0.000404	0.00200	0.000404	mg/kg	02.15.2020 18:15	U	1
Total BTEX		<0.000404	0.00200	0.000404	mg/kg	02.15.2020 18:15	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	98	%	70-130	02.15.2020 18:15			
1,4-Difluorobenzene	540-36-3	102	%	70-130	02.15.2020 18:15			



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LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS13** Matrix: Soil Date Received: 02.14.2020 16:35
 Lab Sample Id: 652514-013 Date Collected: 02.14.2020 12:01 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.15.2020 08:00 Basis: Wet Weight
 Seq Number: 3116676

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	5.58	10.0	0.355	mg/kg	02.15.2020 13:12	J	1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.14.2020 17:30 Basis: Wet Weight
 Seq Number: 3116700

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<13.8	49.8	13.8	mg/kg	02.15.2020 07:47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<11.4	49.8	11.4	mg/kg	02.15.2020 07:47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<11.4	49.8	11.4	mg/kg	02.15.2020 07:47	U	1
Total TPH	PHC635	<11.4	49.8	11.4	mg/kg	02.15.2020 07:47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	02.15.2020 07:47	
o-Terphenyl	84-15-1	114	%	70-135	02.15.2020 07:47	



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LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS13**
Lab Sample Id: 652514-013

Matrix: Soil
Date Collected: 02.14.2020 12:01

Date Received: 02.14.2020 16:35
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.14.2020 18:00

Basis: Wet Weight

Seq Number: 3116667

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000489	0.00202	0.000489	mg/kg	02.15.2020 18:35	U	1
Toluene	108-88-3	<0.000532	0.00202	0.000532	mg/kg	02.15.2020 18:35	U	1
Ethylbenzene	100-41-4	<0.000409	0.00202	0.000409	mg/kg	02.15.2020 18:35	U	1
m,p-Xylenes	179601-23-1	<0.000760	0.00403	0.000760	mg/kg	02.15.2020 18:35	U	1
o-Xylene	95-47-6	<0.000406	0.00202	0.000406	mg/kg	02.15.2020 18:35	U	1
Total Xylenes	1330-20-7	<0.000406	0.00202	0.000406	mg/kg	02.15.2020 18:35	U	1
Total BTEX		<0.000406	0.00202	0.000406	mg/kg	02.15.2020 18:35	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	99	%	70-130	02.15.2020 18:35			
1,4-Difluorobenzene	540-36-3	101	%	70-130	02.15.2020 18:35			



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LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS14** Matrix: Soil Date Received: 02.14.2020 16:35
 Lab Sample Id: 652514-014 Date Collected: 02.14.2020 12:09 Sample Depth: 0.3 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.15.2020 08:00 Basis: Wet Weight
 Seq Number: 3116676

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	30.8	9.98	0.353	mg/kg	02.15.2020 13:18		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.14.2020 17:30 Basis: Wet Weight
 Seq Number: 3116700

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.0	50.3	14.0	mg/kg	02.15.2020 08:06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<11.5	50.3	11.5	mg/kg	02.15.2020 08:06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<11.5	50.3	11.5	mg/kg	02.15.2020 08:06	U	1
Total TPH	PHC635	<11.5	50.3	11.5	mg/kg	02.15.2020 08:06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	02.15.2020 08:06	
o-Terphenyl	84-15-1	122	%	70-135	02.15.2020 08:06	



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LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS14**
Lab Sample Id: 652514-014

Matrix: Soil
Date Collected: 02.14.2020 12:09

Date Received: 02.14.2020 16:35
Sample Depth: 0.3 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3116667

Prep Method: SW5030B

% Moisture:

Date Prep: 02.14.2020 18:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000484	0.00199	0.000484	mg/kg	02.15.2020 18:55	U	1
Toluene	108-88-3	<0.000526	0.00199	0.000526	mg/kg	02.15.2020 18:55	U	1
Ethylbenzene	100-41-4	<0.000405	0.00199	0.000405	mg/kg	02.15.2020 18:55	U	1
m,p-Xylenes	179601-23-1	<0.000751	0.00398	0.000751	mg/kg	02.15.2020 18:55	U	1
o-Xylene	95-47-6	<0.000401	0.00199	0.000401	mg/kg	02.15.2020 18:55	U	1
Total Xylenes	1330-20-7	<0.000401	0.00199	0.000401	mg/kg	02.15.2020 18:55	U	1
Total BTEX		<0.000401	0.00199	0.000401	mg/kg	02.15.2020 18:55	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
1,4-Difluorobenzene	540-36-3	98	%	70-130	02.15.2020 18:55			
4-Bromofluorobenzene	460-00-4	93	%	70-130	02.15.2020 18:55			



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LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS15** Matrix: Soil Date Received: 02.14.2020 16:35
 Lab Sample Id: 652514-015 Date Collected: 02.14.2020 12:17 Sample Depth: 0.3 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.15.2020 08:30 Basis: Wet Weight
 Seq Number: 3116677

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	17.3	9.98	0.353	mg/kg	02.15.2020 13:51		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.14.2020 17:30 Basis: Wet Weight
 Seq Number: 3116700

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.0	50.3	14.0	mg/kg	02.15.2020 08:06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<11.5	50.3	11.5	mg/kg	02.15.2020 08:06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<11.5	50.3	11.5	mg/kg	02.15.2020 08:06	U	1
Total TPH	PHC635	<11.5	50.3	11.5	mg/kg	02.15.2020 08:06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	02.15.2020 08:06	
o-Terphenyl	84-15-1	120	%	70-135	02.15.2020 08:06	



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LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS15**
Lab Sample Id: 652514-015

Matrix: Soil
Date Collected: 02.14.2020 12:17

Date Received: 02.14.2020 16:35
Sample Depth: 0.3 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.14.2020 17:09

Basis: Wet Weight

Seq Number: 3116666

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000480	0.00198	0.000480	mg/kg	02.15.2020 05:00	U	1
Toluene	108-88-3	<0.000521	0.00198	0.000521	mg/kg	02.15.2020 05:00	U	1
Ethylbenzene	100-41-4	<0.000401	0.00198	0.000401	mg/kg	02.15.2020 05:00	U	1
m,p-Xylenes	179601-23-1	<0.000745	0.00395	0.000745	mg/kg	02.15.2020 05:00	U	1
o-Xylene	95-47-6	<0.000398	0.00198	0.000398	mg/kg	02.15.2020 05:00	U	1
Total Xylenes	1330-20-7	<0.000398	0.00198	0.000398	mg/kg	02.15.2020 05:00	U	1
Total BTEX		<0.000398	0.00198	0.000398	mg/kg	02.15.2020 05:00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	02.15.2020 05:00	
4-Bromofluorobenzene	460-00-4	93	%	70-130	02.15.2020 05:00	



Certificate of Analytical Results 652514

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS16** Matrix: Soil Date Received: 02.14.2020 16:35
 Lab Sample Id: 652514-016 Date Collected: 02.14.2020 12:26 Sample Depth: 0.25 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.15.2020 08:30 Basis: Wet Weight
 Seq Number: 3116677

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	29.6	9.92	0.351	mg/kg	02.15.2020 14:07		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.14.2020 17:30 Basis: Wet Weight
 Seq Number: 3116700

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<13.8	49.8	13.8	mg/kg	02.15.2020 08:26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<11.4	49.8	11.4	mg/kg	02.15.2020 08:26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<11.4	49.8	11.4	mg/kg	02.15.2020 08:26	U	1
Total TPH	PHC635	<11.4	49.8	11.4	mg/kg	02.15.2020 08:26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	02.15.2020 08:26	
o-Terphenyl	84-15-1	114	%	70-135	02.15.2020 08:26	



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LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS16**
Lab Sample Id: 652514-016

Matrix: Soil
Date Collected: 02.14.2020 12:26

Date Received: 02.14.2020 16:35
Sample Depth: 0.25 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.14.2020 17:09

Basis: Wet Weight

Seq Number: 3116666

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000485	0.00200	0.000485	mg/kg	02.15.2020 05:20	U	1
Toluene	108-88-3	<0.000527	0.00200	0.000527	mg/kg	02.15.2020 05:20	U	1
Ethylbenzene	100-41-4	<0.000405	0.00200	0.000405	mg/kg	02.15.2020 05:20	U	1
m,p-Xylenes	179601-23-1	<0.000752	0.00399	0.000752	mg/kg	02.15.2020 05:20	U	1
o-Xylene	95-47-6	<0.000402	0.00200	0.000402	mg/kg	02.15.2020 05:20	U	1
Total Xylenes	1330-20-7	<0.000402	0.00200	0.000402	mg/kg	02.15.2020 05:20	U	1
Total BTEX		<0.000402	0.00200	0.000402	mg/kg	02.15.2020 05:20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	84	%	70-130	02.15.2020 05:20	
4-Bromofluorobenzene	460-00-4	76	%	70-130	02.15.2020 05:20	



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LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS17** Matrix: Soil Date Received: 02.14.2020 16:35
 Lab Sample Id: 652514-017 Date Collected: 02.14.2020 12:36 Sample Depth: 0.25 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.15.2020 08:30 Basis: Wet Weight
 Seq Number: 3116677

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6.04	9.98	0.353	mg/kg	02.15.2020 14:13	J	1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.14.2020 17:30 Basis: Wet Weight
 Seq Number: 3116700

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<13.9	49.9	13.9	mg/kg	02.15.2020 08:45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<11.4	49.9	11.4	mg/kg	02.15.2020 08:45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<11.4	49.9	11.4	mg/kg	02.15.2020 08:45	U	1
Total TPH	PHC635	<11.4	49.9	11.4	mg/kg	02.15.2020 08:45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	02.15.2020 08:45	
o-Terphenyl	84-15-1	111	%	70-135	02.15.2020 08:45	



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LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS17**
Lab Sample Id: 652514-017

Matrix: Soil
Date Collected: 02.14.2020 12:36

Date Received: 02.14.2020 16:35
Sample Depth: 0.25 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.14.2020 17:09

Basis: Wet Weight

Seq Number: 3116666

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000484	0.00199	0.000484	mg/kg	02.15.2020 05:40	U	1
Toluene	108-88-3	<0.000526	0.00199	0.000526	mg/kg	02.15.2020 05:40	U	1
Ethylbenzene	100-41-4	<0.000405	0.00199	0.000405	mg/kg	02.15.2020 05:40	U	1
m,p-Xylenes	179601-23-1	<0.000751	0.00398	0.000751	mg/kg	02.15.2020 05:40	U	1
o-Xylene	95-47-6	<0.000401	0.00199	0.000401	mg/kg	02.15.2020 05:40	U	1
Total Xylenes	1330-20-7	<0.000401	0.00199	0.000401	mg/kg	02.15.2020 05:40	U	1
Total BTEX		<0.000401	0.00199	0.000401	mg/kg	02.15.2020 05:40	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	79	%	70-130	02.15.2020 05:40			
1,4-Difluorobenzene	540-36-3	84	%	70-130	02.15.2020 05:40			



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LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS18** Matrix: Soil Date Received: 02.14.2020 16:35
 Lab Sample Id: 652514-018 Date Collected: 02.14.2020 12:45 Sample Depth: 0.25 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.15.2020 08:30 Basis: Wet Weight
 Seq Number: 3116677

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	14.6	9.92	0.351	mg/kg	02.15.2020 14:18		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.14.2020 17:30 Basis: Wet Weight
 Seq Number: 3116700

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<13.9	50.0	13.9	mg/kg	02.15.2020 08:45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<11.5	50.0	11.5	mg/kg	02.15.2020 08:45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<11.5	50.0	11.5	mg/kg	02.15.2020 08:45	U	1
Total TPH	PHC635	<11.5	50.0	11.5	mg/kg	02.15.2020 08:45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	02.15.2020 08:45	
o-Terphenyl	84-15-1	115	%	70-135	02.15.2020 08:45	



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LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS18**
Lab Sample Id: 652514-018

Matrix: Soil
Date Collected: 02.14.2020 12:45

Date Received: 02.14.2020 16:35
Sample Depth: 0.25 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.14.2020 17:09

Basis: Wet Weight

Seq Number: 3116666

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000489	0.00202	0.000489	mg/kg	02.15.2020 06:01	U	1
Toluene	108-88-3	<0.000532	0.00202	0.000532	mg/kg	02.15.2020 06:01	U	1
Ethylbenzene	100-41-4	<0.000409	0.00202	0.000409	mg/kg	02.15.2020 06:01	U	1
m,p-Xylenes	179601-23-1	<0.000760	0.00403	0.000760	mg/kg	02.15.2020 06:01	U	1
o-Xylene	95-47-6	<0.000406	0.00202	0.000406	mg/kg	02.15.2020 06:01	U	1
Total Xylenes	1330-20-7	<0.000406	0.00202	0.000406	mg/kg	02.15.2020 06:01	U	1
Total BTEX		<0.000406	0.00202	0.000406	mg/kg	02.15.2020 06:01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	108	%	70-130	02.15.2020 06:01	
4-Bromofluorobenzene	460-00-4	96	%	70-130	02.15.2020 06:01	



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LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS19** Matrix: Soil Date Received: 02.14.2020 16:35
 Lab Sample Id: 652514-019 Date Collected: 02.14.2020 12:42 Sample Depth: 0.25 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.15.2020 08:30 Basis: Wet Weight
 Seq Number: 3116677

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	58.4	9.90	0.350	mg/kg	02.15.2020 14:23		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.14.2020 17:30 Basis: Wet Weight
 Seq Number: 3116700

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<13.9	50.1	13.9	mg/kg	02.15.2020 09:04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<11.5	50.1	11.5	mg/kg	02.15.2020 09:04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<11.5	50.1	11.5	mg/kg	02.15.2020 09:04	U	1
Total TPH	PHC635	<11.5	50.1	11.5	mg/kg	02.15.2020 09:04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	02.15.2020 09:04	
o-Terphenyl	84-15-1	107	%	70-135	02.15.2020 09:04	



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LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS19**
Lab Sample Id: 652514-019

Matrix: Soil
Date Collected: 02.14.2020 12:42

Date Received: 02.14.2020 16:35
Sample Depth: 0.25 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3116666

Prep Method: SW5030B

% Moisture:

Date Prep: 02.14.2020 17:09

Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000486	0.00200	0.000486	mg/kg	02.15.2020 06:21	U	1
Toluene	108-88-3	<0.000528	0.00200	0.000528	mg/kg	02.15.2020 06:21	U	1
Ethylbenzene	100-41-4	<0.000406	0.00200	0.000406	mg/kg	02.15.2020 06:21	U	1
m,p-Xylenes	179601-23-1	<0.000754	0.00400	0.000754	mg/kg	02.15.2020 06:21	U	1
o-Xylene	95-47-6	<0.000403	0.00200	0.000403	mg/kg	02.15.2020 06:21	U	1
Total Xylenes	1330-20-7	<0.000403	0.00200	0.000403	mg/kg	02.15.2020 06:21	U	1
Total BTEX		<0.000403	0.00200	0.000403	mg/kg	02.15.2020 06:21	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
1,4-Difluorobenzene	540-36-3	85	%	70-130	02.15.2020 06:21			
4-Bromofluorobenzene	460-00-4	83	%	70-130	02.15.2020 06:21			



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LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS20** Matrix: Soil Date Received: 02.14.2020 16:35
 Lab Sample Id: 652514-020 Date Collected: 02.14.2020 13:09 Sample Depth: 0.25 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.15.2020 08:30 Basis: Wet Weight
 Seq Number: 3116677

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	14.2	9.94	0.352	mg/kg	02.15.2020 14:40		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.14.2020 17:30 Basis: Wet Weight
 Seq Number: 3116700

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<13.8	49.8	13.8	mg/kg	02.15.2020 09:04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<11.4	49.8	11.4	mg/kg	02.15.2020 09:04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<11.4	49.8	11.4	mg/kg	02.15.2020 09:04	U	1
Total TPH	PHC635	<11.4	49.8	11.4	mg/kg	02.15.2020 09:04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-135	02.15.2020 09:04	
o-Terphenyl	84-15-1	121	%	70-135	02.15.2020 09:04	



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LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS20**
Lab Sample Id: 652514-020

Matrix: Soil
Date Collected: 02.14.2020 13:09

Date Received: 02.14.2020 16:35
Sample Depth: 0.25 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.14.2020 17:09

Basis: Wet Weight

Seq Number: 3116666

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000488	0.00201	0.000488	mg/kg	02.15.2020 06:42	U	1
Toluene	108-88-3	<0.000531	0.00201	0.000531	mg/kg	02.15.2020 06:42	U	1
Ethylbenzene	100-41-4	<0.000409	0.00201	0.000409	mg/kg	02.15.2020 06:42	U	1
m,p-Xylenes	179601-23-1	<0.000758	0.00402	0.000758	mg/kg	02.15.2020 06:42	U	1
o-Xylene	95-47-6	<0.000406	0.00201	0.000406	mg/kg	02.15.2020 06:42	U	1
Total Xylenes	1330-20-7	<0.000406	0.00201	0.000406	mg/kg	02.15.2020 06:42	U	1
Total BTEX		<0.000406	0.00201	0.000406	mg/kg	02.15.2020 06:42	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	89	%	70-130	02.15.2020 06:42			
1,4-Difluorobenzene	540-36-3	89	%	70-130	02.15.2020 06:42			



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LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS21** Matrix: Soil Date Received: 02.14.2020 16:35
 Lab Sample Id: 652514-021 Date Collected: 02.14.2020 13:19 Sample Depth: 0.25 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.15.2020 08:30 Basis: Wet Weight
 Seq Number: 3116677

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	5.58	10.0	0.355	mg/kg	02.15.2020 14:45	J	1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.14.2020 17:30 Basis: Wet Weight
 Seq Number: 3116700

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	25.2	50.2	13.9	mg/kg	02.15.2020 09:24	J	1
Diesel Range Organics (DRO)	C10C28DRO	14.9	50.2	11.5	mg/kg	02.15.2020 09:24	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<11.5	50.2	11.5	mg/kg	02.15.2020 09:24	U	1
Total TPH	PHC635	40.1	50.2	11.5	mg/kg	02.15.2020 09:24	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	02.15.2020 09:24	
o-Terphenyl	84-15-1	112	%	70-135	02.15.2020 09:24	



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LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS21**
Lab Sample Id: 652514-021

Matrix: Soil
Date Collected: 02.14.2020 13:19

Date Received: 02.14.2020 16:35
Sample Depth: 0.25 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.14.2020 17:09

Basis: Wet Weight

Seq Number: 3116666

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000485	0.00200	0.000485	mg/kg	02.15.2020 07:02	U	1
Toluene	108-88-3	<0.000527	0.00200	0.000527	mg/kg	02.15.2020 07:02	U	1
Ethylbenzene	100-41-4	<0.000405	0.00200	0.000405	mg/kg	02.15.2020 07:02	U	1
m,p-Xylenes	179601-23-1	<0.000752	0.00399	0.000752	mg/kg	02.15.2020 07:02	U	1
o-Xylene	95-47-6	<0.000402	0.00200	0.000402	mg/kg	02.15.2020 07:02	U	1
Total Xylenes	1330-20-7	<0.000402	0.00200	0.000402	mg/kg	02.15.2020 07:02	U	1
Total BTEX		<0.000402	0.00200	0.000402	mg/kg	02.15.2020 07:02	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	88	%	70-130	02.15.2020 07:02			
1,4-Difluorobenzene	540-36-3	99	%	70-130	02.15.2020 07:02			



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LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: FS22 Matrix: Soil Date Received: 02.14.2020 16:35
 Lab Sample Id: 652514-022 Date Collected: 02.14.2020 13:27 Sample Depth: 0.25 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.15.2020 08:30 Basis: Wet Weight
 Seq Number: 3116677

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	21.2	9.96	0.353	mg/kg	02.15.2020 14:51		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.14.2020 17:30 Basis: Wet Weight
 Seq Number: 3116700

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<13.9	50.2	13.9	mg/kg	02.15.2020 09:24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<11.5	50.2	11.5	mg/kg	02.15.2020 09:24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<11.5	50.2	11.5	mg/kg	02.15.2020 09:24	U	1
Total TPH	PHC635	<11.5	50.2	11.5	mg/kg	02.15.2020 09:24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	02.15.2020 09:24	
o-Terphenyl	84-15-1	114	%	70-135	02.15.2020 09:24	



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LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: FS22
Lab Sample Id: 652514-022

Matrix: Soil
Date Collected: 02.14.2020 13:27

Date Received: 02.14.2020 16:35
Sample Depth: 0.25 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.14.2020 17:09

Basis: Wet Weight

Seq Number: 3116666

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000485	0.00200	0.000485	mg/kg	02.15.2020 07:23	U	1
Toluene	108-88-3	<0.000527	0.00200	0.000527	mg/kg	02.15.2020 07:23	U	1
Ethylbenzene	100-41-4	<0.000405	0.00200	0.000405	mg/kg	02.15.2020 07:23	U	1
m,p-Xylenes	179601-23-1	<0.000752	0.00399	0.000752	mg/kg	02.15.2020 07:23	U	1
o-Xylene	95-47-6	<0.000402	0.00200	0.000402	mg/kg	02.15.2020 07:23	U	1
Total Xylenes	1330-20-7	<0.000402	0.00200	0.000402	mg/kg	02.15.2020 07:23	U	1
Total BTEX		<0.000402	0.00200	0.000402	mg/kg	02.15.2020 07:23	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	94	%	70-130	02.15.2020 07:23			
1,4-Difluorobenzene	540-36-3	106	%	70-130	02.15.2020 07:23			



Certificate of Analytical Results 652514

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: FS23
Lab Sample Id: 652514-023

Matrix: Soil
Date Collected: 02.14.2020 13:47

Date Received: 02.14.2020 16:35
Sample Depth: 0.3 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3116677

Date Prep: 02.15.2020 08:30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	388	9.98	0.353	mg/kg	02.15.2020 14:57		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3116700

Date Prep: 02.14.2020 17:30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	20.5	50.1	13.9	mg/kg	02.15.2020 09:44	J	1
Diesel Range Organics (DRO)	C10C28DRO	355	50.1	11.5	mg/kg	02.15.2020 09:44		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	27.6	50.1	11.5	mg/kg	02.15.2020 09:44	J	1
Total TPH	PHC635	403	50.1	11.5	mg/kg	02.15.2020 09:44		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	02.15.2020 09:44	
o-Terphenyl	84-15-1	111	%	70-135	02.15.2020 09:44	



Certificate of Analytical Results 652514

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS23**
Lab Sample Id: 652514-023

Matrix: Soil
Date Collected: 02.14.2020 13:47

Date Received: 02.14.2020 16:35
Sample Depth: 0.3 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.14.2020 17:09

Basis: Wet Weight

Seq Number: 3116666

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000486	0.00200	0.000486	mg/kg	02.15.2020 07:43	U	1
Toluene	108-88-3	<0.000529	0.00200	0.000529	mg/kg	02.15.2020 07:43	U	1
Ethylbenzene	100-41-4	<0.000407	0.00200	0.000407	mg/kg	02.15.2020 07:43	U	1
m,p-Xylenes	179601-23-1	<0.000755	0.00401	0.000755	mg/kg	02.15.2020 07:43	U	1
o-Xylene	95-47-6	<0.000404	0.00200	0.000404	mg/kg	02.15.2020 07:43	U	1
Total Xylenes	1330-20-7	<0.000404	0.00200	0.000404	mg/kg	02.15.2020 07:43	U	1
Total BTEX		<0.000404	0.00200	0.000404	mg/kg	02.15.2020 07:43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	02.15.2020 07:43	
4-Bromofluorobenzene	460-00-4	93	%	70-130	02.15.2020 07:43	



Certificate of Analytical Results 652514

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS24** Matrix: Soil Date Received: 02.14.2020 16:35
 Lab Sample Id: 652514-024 Date Collected: 02.14.2020 13:58 Sample Depth: 0.3 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.15.2020 08:30 Basis: Wet Weight
 Seq Number: 3116677

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	157	9.96	0.353	mg/kg	02.15.2020 15:03		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.14.2020 17:30 Basis: Wet Weight
 Seq Number: 3116700

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<13.8	49.8	13.8	mg/kg	02.15.2020 10:03	U	1
Diesel Range Organics (DRO)	C10C28DRO	25.8	49.8	11.4	mg/kg	02.15.2020 10:03	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<11.4	49.8	11.4	mg/kg	02.15.2020 10:03	U	1
Total TPH	PHC635	25.8	49.8	11.4	mg/kg	02.15.2020 10:03	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	02.15.2020 10:03	
o-Terphenyl	84-15-1	111	%	70-135	02.15.2020 10:03	



Certificate of Analytical Results 652514

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: FS24
Lab Sample Id: 652514-024

Matrix: Soil
Date Collected: 02.14.2020 13:58

Date Received: 02.14.2020 16:35
Sample Depth: 0.3 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.14.2020 17:09

Basis: Wet Weight

Seq Number: 3116666

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000487	0.00201	0.000487	mg/kg	02.15.2020 08:03	U	1
Toluene	108-88-3	<0.000530	0.00201	0.000530	mg/kg	02.15.2020 08:03	U	1
Ethylbenzene	100-41-4	<0.000408	0.00201	0.000408	mg/kg	02.15.2020 08:03	U	1
m,p-Xylenes	179601-23-1	<0.000757	0.00402	0.000757	mg/kg	02.15.2020 08:03	U	1
o-Xylene	95-47-6	<0.000405	0.00201	0.000405	mg/kg	02.15.2020 08:03	U	1
Total Xylenes	1330-20-7	<0.000405	0.00201	0.000405	mg/kg	02.15.2020 08:03	U	1
Total BTEX		<0.000405	0.00201	0.000405	mg/kg	02.15.2020 08:03	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	93	%	70-130	02.15.2020 08:03			
1,4-Difluorobenzene	540-36-3	87	%	70-130	02.15.2020 08:03			



Certificate of Analytical Results 652514

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **SS01** Matrix: Soil Date Received: 02.14.2020 16:35
 Lab Sample Id: 652514-025 Date Collected: 02.14.2020 14:11 Sample Depth: 0 - 0.25 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.15.2020 08:30 Basis: Wet Weight
 Seq Number: 3116677

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	18.5	9.98	0.353	mg/kg	02.15.2020 15:09		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.17.2020 12:15 Basis: Wet Weight
 Seq Number: 3116742

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<13.9	50.1	13.9	mg/kg	02.17.2020 13:53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<11.5	50.1	11.5	mg/kg	02.17.2020 13:53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<11.5	50.1	11.5	mg/kg	02.17.2020 13:53	U	1
Total TPH	PHC635	<11.5	50.1	11.5	mg/kg	02.17.2020 13:53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	02.17.2020 13:53	
o-Terphenyl	84-15-1	108	%	70-135	02.17.2020 13:53	



Certificate of Analytical Results 652514

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **SS01**
Lab Sample Id: 652514-025

Matrix: Soil
Date Collected: 02.14.2020 14:11

Date Received: 02.14.2020 16:35
Sample Depth: 0 - 0.25 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.17.2020 11:00

Basis: Wet Weight

Seq Number: 3116796

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000483	0.00199	0.000483	mg/kg	02.17.2020 16:34	U	1
Toluene	108-88-3	<0.000525	0.00199	0.000525	mg/kg	02.17.2020 16:34	U	1
Ethylbenzene	100-41-4	<0.000404	0.00199	0.000404	mg/kg	02.17.2020 16:34	U	1
m,p-Xylenes	179601-23-1	<0.000749	0.00398	0.000749	mg/kg	02.17.2020 16:34	U	1
o-Xylene	95-47-6	<0.000401	0.00199	0.000401	mg/kg	02.17.2020 16:34	U	1
Total Xylenes	1330-20-7	<0.000401	0.00199	0.000401	mg/kg	02.17.2020 16:34	U	1
Total BTEX		<0.000401	0.00199	0.000401	mg/kg	02.17.2020 16:34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	02.17.2020 16:34	
4-Bromofluorobenzene	460-00-4	96	%	70-130	02.17.2020 16:34	



Certificate of Analytical Results 652514

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **SS02** Matrix: Soil Date Received: 02.14.2020 16:35
 Lab Sample Id: 652514-026 Date Collected: 02.14.2020 14:20 Sample Depth: 0 - 0.25 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.15.2020 08:30 Basis: Wet Weight
 Seq Number: 3116677

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	5.73	10.0	0.354	mg/kg	02.15.2020 15:26	J	1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.17.2020 12:15 Basis: Wet Weight
 Seq Number: 3116742

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<13.9	49.9	13.9	mg/kg	02.17.2020 14:13	U	1
Diesel Range Organics (DRO)	C10C28DRO	14.6	49.9	11.4	mg/kg	02.17.2020 14:13	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<11.4	49.9	11.4	mg/kg	02.17.2020 14:13	U	1
Total TPH	PHC635	14.6	49.9	11.4	mg/kg	02.17.2020 14:13	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	02.17.2020 14:13	
o-Terphenyl	84-15-1	105	%	70-135	02.17.2020 14:13	



Certificate of Analytical Results 652514

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: SS02
Lab Sample Id: 652514-026

Matrix: Soil
Date Collected: 02.14.2020 14:20

Date Received: 02.14.2020 16:35
Sample Depth: 0 - 0.25 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.17.2020 11:00

Basis: Wet Weight

Seq Number: 3116796

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000484	0.00199	0.000484	mg/kg	02.17.2020 16:54	U	1
Toluene	108-88-3	<0.000526	0.00199	0.000526	mg/kg	02.17.2020 16:54	U	1
Ethylbenzene	100-41-4	<0.000405	0.00199	0.000405	mg/kg	02.17.2020 16:54	U	1
m,p-Xylenes	179601-23-1	<0.000751	0.00398	0.000751	mg/kg	02.17.2020 16:54	U	1
o-Xylene	95-47-6	<0.000401	0.00199	0.000401	mg/kg	02.17.2020 16:54	U	1
Total Xylenes	1330-20-7	<0.000401	0.00199	0.000401	mg/kg	02.17.2020 16:54	U	1
Total BTEX		<0.000401	0.00199	0.000401	mg/kg	02.17.2020 16:54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	02.17.2020 16:54	
4-Bromofluorobenzene	460-00-4	93	%	70-130	02.17.2020 16:54	



Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



LT Environmental, Inc.

APE FEE #001

Analytical Method: Chloride by EPA 300

Seq Number: 3116676

MB Sample Id: 7696735-1-BLK

Matrix: Solid

LCS Sample Id: 7696735-1-BKS

Prep Method: E300P

Date Prep: 02.15.2020

LCSD Sample Id: 7696735-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.354	250	262	105	263	105	90-110	0	20	mg/kg	02.15.2020 10:39	

Analytical Method: Chloride by EPA 300

Seq Number: 3116677

MB Sample Id: 7696736-1-BLK

Matrix: Solid

LCS Sample Id: 7696736-1-BKS

Prep Method: E300P

Date Prep: 02.15.2020

LCSD Sample Id: 7696736-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.354	250	257	103	258	103	90-110	0	20	mg/kg	02.15.2020 13:40	

Analytical Method: Chloride by EPA 300

Seq Number: 3116676

Parent Sample Id: 652512-001

Matrix: Soil

MS Sample Id: 652512-001 S

Prep Method: E300P

Date Prep: 02.15.2020

MSD Sample Id: 652512-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1250	198	1480	116	1470	111	90-110	1	20	mg/kg	02.15.2020 10:56	X

Analytical Method: Chloride by EPA 300

Seq Number: 3116676

Parent Sample Id: 652514-005

Matrix: Soil

MS Sample Id: 652514-005 S

Prep Method: E300P

Date Prep: 02.15.2020

MSD Sample Id: 652514-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	180	200	391	106	395	108	90-110	1	20	mg/kg	02.15.2020 12:12	

Analytical Method: Chloride by EPA 300

Seq Number: 3116677

Parent Sample Id: 652514-015

Matrix: Soil

MS Sample Id: 652514-015 S

Prep Method: E300P

Date Prep: 02.15.2020

MSD Sample Id: 652514-015 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	17.3	200	220	101	219	101	90-110	0	20	mg/kg	02.15.2020 13:56	

Analytical Method: Chloride by EPA 300

Seq Number: 3116677

Parent Sample Id: 652514-025

Matrix: Soil

MS Sample Id: 652514-025 S

Prep Method: E300P

Date Prep: 02.15.2020

MSD Sample Id: 652514-025 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	18.5	200	228	105	233	107	90-110	2	20	mg/kg	02.15.2020 15:14	

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

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

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

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



LT Environmental, Inc.

APE FEE #001

Analytical Method: TPH by SW8015 Mod

Seq Number: 3116693

MB Sample Id: 7696789-1-BLK

Matrix: Solid

LCS Sample Id: 7696789-1-BKS

Prep Method: SW8015P

Date Prep: 02.14.2020

LCSD Sample Id: 7696789-1-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)	<13.9	1000	944	94	827	83	70-135	13	35	mg/kg	02.15.2020 01:35	
Diesel Range Organics (DRO)	<11.5	1000	1030	103	873	87	70-135	17	35	mg/kg	02.15.2020 01:35	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date			
1-Chlorooctane	81		118		100		70-135	%	02.15.2020 01:35			
o-Terphenyl	88		112		100		70-135	%	02.15.2020 01:35			

Analytical Method: TPH by SW8015 Mod

Seq Number: 3116700

MB Sample Id: 7696791-1-BLK

Matrix: Solid

LCS Sample Id: 7696791-1-BKS

Prep Method: SW8015P

Date Prep: 02.14.2020

LCSD Sample Id: 7696791-1-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)	<13.9	1000	938	94	832	83	70-135	12	35	mg/kg	02.15.2020 06:09	
Diesel Range Organics (DRO)	<11.5	1000	1050	105	894	89	70-135	16	35	mg/kg	02.15.2020 06:09	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date			
1-Chlorooctane	82		119		101		70-135	%	02.15.2020 06:09			
o-Terphenyl	92		117		104		70-135	%	02.15.2020 06:09			

Analytical Method: TPH by SW8015 Mod

Seq Number: 3116742

MB Sample Id: 7696815-1-BLK

Matrix: Solid

LCS Sample Id: 7696815-1-BKS

Prep Method: SW8015P

Date Prep: 02.17.2020

LCSD Sample Id: 7696815-1-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)	<13.9	1000	797	80	837	84	70-135	5	35	mg/kg	02.17.2020 12:52	
Diesel Range Organics (DRO)	<11.5	1000	870	87	920	92	70-135	6	35	mg/kg	02.17.2020 12:52	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date			
1-Chlorooctane	94		110		119		70-135	%	02.17.2020 12:52			
o-Terphenyl	97		97		104		70-135	%	02.17.2020 12:52			

Analytical Method: TPH by SW8015 Mod

Seq Number: 3116693

Matrix: Solid

MB Sample Id: 7696789-1-BLK

Prep Method: SW8015P

Date Prep: 02.14.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<11.5	mg/kg	02.15.2020 01:35	

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

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

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

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



LT Environmental, Inc.

APE FEE #001

Analytical Method: TPH by SW8015 Mod

Seq Number: 3116700

Matrix: Solid

Prep Method: SW8015P

Date Prep: 02.14.2020

MB Sample Id: 7696791-1-BLK

Parameter

Motor Oil Range Hydrocarbons (MRO)

MB
Result

<11.5

Units

mg/kg

Analysis
Date

02.15.2020 06:09

Flag

Analytical Method: TPH by SW8015 Mod

Seq Number: 3116742

Matrix: Solid

Prep Method: SW8015P

Date Prep: 02.17.2020

MB Sample Id: 7696815-1-BLK

Parameter

Motor Oil Range Hydrocarbons (MRO)

MB
Result

<11.5

Units

mg/kg

Analysis
Date

02.17.2020 12:32

Flag

Analytical Method: TPH by SW8015 Mod

Seq Number: 3116693

Matrix: Soil

Prep Method: SW8015P

Date Prep: 02.14.2020

Parent Sample Id: 652450-005

MS Sample Id: 652450-005 S

MSD Sample Id: 652450-005 SD

Parameter

Gasoline Range Hydrocarbons (GRO)

Parent
Result

<13.8

Spike
Amount

997

MS
Result

897

MS
%Rec

90

MSD
Result

985

MSD
%Rec

99

Limits

70-135

%RPD

9

RPD
Limit

35

Units

mg/kg

Analysis
Date

02.15.2020 02:15

Flag

Diesel Range Organics (DRO)

<11.4

997

961

96

1090

109

70-135

13

35

mg/kg

02.15.2020 02:15

Surrogate

1-Chlorooctane

MS
%Rec

108

MS
FlagMSD
%Rec

124

MSD
Flag

Limits

70-135

Units

%

Analysis
Date

02.15.2020 02:15

o-Terphenyl

110

118

70-135

%

02.15.2020 02:15

Analytical Method: TPH by SW8015 Mod

Seq Number: 3116700

Matrix: Soil

Prep Method: SW8015P

Date Prep: 02.14.2020

Parent Sample Id: 652514-007

MS Sample Id: 652514-007 S

MSD Sample Id: 652514-007 SD

Parameter

Gasoline Range Hydrocarbons (GRO)

Parent
Result

<14.0

Spike
Amount

1010

MS
Result

942

MS
%Rec

93

MSD
Result

961

MSD
%Rec

96

Limits

70-135

%RPD

2

RPD
Limit

35

Units

mg/kg

Analysis
Date

02.15.2020 06:48

Flag

Diesel Range Organics (DRO)

<11.5

1010

1010

100

1070

107

70-135

6

35

mg/kg

02.15.2020 06:48

Surrogate

1-Chlorooctane

MS
%Rec

114

MS
FlagMSD
%Rec

122

MSD
Flag

Limits

70-135

Units

%

Analysis
Date

02.15.2020 06:48

o-Terphenyl

116

118

70-135

%

02.15.2020 06:48

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

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

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

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



LT Environmental, Inc.

APE FEE #001

Analytical Method: TPH by SW8015 Mod

Seq Number: 3116742

Parent Sample Id: 652566-001

Matrix: Soil

MS Sample Id: 652566-001 S

Prep Method: SW8015P

Date Prep: 02.17.2020

MSD Sample Id: 652566-001 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)	<13.9	998	846	85	809	81	70-135	4	35	mg/kg	02.17.2020 13:12	
Diesel Range Organics (DRO)	<11.4	998	953	95	894	90	70-135	6	35	mg/kg	02.17.2020 13:12	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	107		99		70-135	%	02.17.2020 13:12
o-Terphenyl	106		100		70-135	%	02.17.2020 13:12

Analytical Method: BTEX by EPA 8021B

Seq Number: 3116666

MB Sample Id: 7696733-1-BLK

Matrix: Solid

LCS Sample Id: 7696733-1-BKS

Prep Method: SW5030B

Date Prep: 02.14.2020

LCSD Sample Id: 7696733-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000486	0.100	0.109	109	0.106	106	70-130	3	35	mg/kg	02.14.2020 23:13	
Toluene	<0.000528	0.100	0.0984	98	0.0970	97	70-130	1	35	mg/kg	02.14.2020 23:13	
Ethylbenzene	<0.000406	0.100	0.0934	93	0.0922	92	71-129	1	35	mg/kg	02.14.2020 23:13	
m,p-Xylenes	<0.000754	0.200	0.182	91	0.180	90	70-135	1	35	mg/kg	02.14.2020 23:13	
o-Xylene	<0.000403	0.100	0.0929	93	0.0919	92	71-133	1	35	mg/kg	02.14.2020 23:13	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	110		108		109		70-130	%	02.14.2020 23:13
4-Bromofluorobenzene	94		90		90		70-130	%	02.14.2020 23:13

Analytical Method: BTEX by EPA 8021B

Seq Number: 3116667

MB Sample Id: 7696734-1-BLK

Matrix: Solid

LCS Sample Id: 7696734-1-BKS

Prep Method: SW5030B

Date Prep: 02.14.2020

LCSD Sample Id: 7696734-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000486	0.100	0.107	107	0.100	100	70-130	7	35	mg/kg	02.15.2020 10:04	
Toluene	<0.000528	0.100	0.103	103	0.0969	97	70-130	6	35	mg/kg	02.15.2020 10:04	
Ethylbenzene	<0.000406	0.100	0.0986	99	0.0921	92	71-129	7	35	mg/kg	02.15.2020 10:04	
m,p-Xylenes	<0.000754	0.200	0.202	101	0.188	94	70-135	7	35	mg/kg	02.15.2020 10:04	
o-Xylene	<0.000403	0.100	0.102	102	0.0957	96	71-133	6	35	mg/kg	02.15.2020 10:04	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		104		104		70-130	%	02.15.2020 10:04
4-Bromofluorobenzene	95		92		94		70-130	%	02.15.2020 10:04

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

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

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

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



LT Environmental, Inc.

APE FEE #001

Analytical Method: BTEX by EPA 8021B

Seq Number: 3116796

MB Sample Id: 7696813-1-BLK

Matrix: Solid

LCS Sample Id: 7696813-1-BKS

Prep Method: SW5030B

Date Prep: 02.17.2020

LCSD Sample Id: 7696813-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000486	0.100	0.106	106	0.109	109	70-130	3	35	mg/kg	02.17.2020 14:32	
Toluene	<0.000528	0.100	0.102	102	0.104	104	70-130	2	35	mg/kg	02.17.2020 14:32	
Ethylbenzene	<0.000406	0.100	0.0966	97	0.0976	98	71-129	1	35	mg/kg	02.17.2020 14:32	
m,p-Xylenes	<0.000754	0.200	0.197	99	0.199	100	70-135	1	35	mg/kg	02.17.2020 14:32	
o-Xylene	<0.000403	0.100	0.100	100	0.101	101	71-133	1	35	mg/kg	02.17.2020 14:32	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		104		105		70-130	%	02.17.2020 14:32
4-Bromofluorobenzene	94		93		92		70-130	%	02.17.2020 14:32

Analytical Method: BTEX by EPA 8021B

Seq Number: 3116666

Parent Sample Id: 652450-011

Matrix: Soil

MS Sample Id: 652450-011 S

Prep Method: SW5030B

Date Prep: 02.14.2020

MSD Sample Id: 652450-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000483	0.0994	0.115	116	0.105	105	70-130	9	35	mg/kg	02.14.2020 23:54	
Toluene	<0.000525	0.0994	0.106	107	0.0972	97	70-130	9	35	mg/kg	02.14.2020 23:54	
Ethylbenzene	<0.000404	0.0994	0.102	103	0.0938	94	71-129	8	35	mg/kg	02.14.2020 23:54	
m,p-Xylenes	<0.000749	0.199	0.199	100	0.183	92	70-135	8	35	mg/kg	02.14.2020 23:54	
o-Xylene	<0.000401	0.0994	0.101	102	0.0940	94	71-133	7	35	mg/kg	02.14.2020 23:54	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		108		70-130	%	02.14.2020 23:54
4-Bromofluorobenzene	93		94		70-130	%	02.14.2020 23:54

Analytical Method: BTEX by EPA 8021B

Seq Number: 3116667

Parent Sample Id: 652512-001

Matrix: Soil

MS Sample Id: 652512-001 S

Prep Method: SW5030B

Date Prep: 02.14.2020

MSD Sample Id: 652512-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000487	0.100	0.0973	97	0.0993	100	70-130	2	35	mg/kg	02.15.2020 19:16	
Toluene	<0.000530	0.100	0.0914	91	0.0936	94	70-130	2	35	mg/kg	02.15.2020 19:16	
Ethylbenzene	<0.000408	0.100	0.0853	85	0.0875	88	71-129	3	35	mg/kg	02.15.2020 19:16	
m,p-Xylenes	<0.000757	0.201	0.173	86	0.178	90	70-135	3	35	mg/kg	02.15.2020 19:16	
o-Xylene	<0.000405	0.100	0.0861	86	0.0888	90	71-133	3	35	mg/kg	02.15.2020 19:16	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		104		70-130	%	02.15.2020 19:16
4-Bromofluorobenzene	96		95		70-130	%	02.15.2020 19:16

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

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

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

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



LT Environmental, Inc.

APE FEE #001

Analytical Method: BTEX by EPA 8021B

Seq Number: 3116796

Parent Sample Id: 652514-025

Matrix: Soil

MS Sample Id: 652514-025 S

Prep Method: SW5030B

Date Prep: 02.17.2020

MSD Sample Id: 652514-025 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000485	0.0998	0.0771	77	0.0828	83	70-130	7	35	mg/kg	02.17.2020 15:53	
Toluene	<0.000527	0.0998	0.0734	74	0.0717	72	70-130	2	35	mg/kg	02.17.2020 15:53	
Ethylbenzene	<0.000405	0.0998	0.0866	87	0.0796	80	71-129	8	35	mg/kg	02.17.2020 15:53	
m,p-Xylenes	<0.000752	0.200	0.157	79	0.150	76	70-135	5	35	mg/kg	02.17.2020 15:53	
o-Xylene	<0.000402	0.0998	0.0801	80	0.0818	82	71-133	2	35	mg/kg	02.17.2020 15:53	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		105		70-130	%	02.17.2020 15:53
4-Bromofluorobenzene	93		96		70-130	%	02.17.2020 15:53

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

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

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

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

Chain of Custody

Work Order No.:

652514

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Work Order Comments									
Program: UST/PST ☐ RP ☐ Brownfields ☐ RC ☐ \$perfund ☐									
State of Project:									
Reporting Level II ☐ Level III ☐ PST/UST ☐ RP ☐ Level IV ☐									
Deliverables: EDD ☐ ADAPT ☐ Other:									

Project Name:	AREEE #001	Turn Around
Project Number:	034820008	Routine ☐
P.O. Number:		Rush: 3 DAY
Sampler's Name:	Jeremy Hill	Due Date:
SAMPLE RECEIPT	Temp Blank: Yes No	Well Ice: Yes No
Temperature (°C):	0.4	Thermometer ID
Received Intact:	(Yes) No	TNMO07
Cooler Custody Seals:	Yes (No) N/A	Correction Factor: -0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers: 26
Number of Containers		
EPA 8015)		
EPA 0-8021)		
e (EPA 300.0)		
Work Order Notes		
TAT starts the day received by the lab, if received by 4:30pm		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number	TPH (E)	BTEX (E)	Chloride	Sample Comments
FS01	S	2/14/80	1025	0.5'	1				composite
FS02	S		1033	0.5'	1				
FS03	S		1041	0.5'	1				
FS04	S		1047	0.5'	1				
FS05	S		1054	0.5'	1				
FS06	S		1102	0.5'	1				
FS07	S		1111	0.5'	1				✓
FS08	S		1118	0.5'	1				
FS09	S		1127	0.5'	1				
FS10	S	✓	1136	0.5'	1				

Circle Method(s) and Metal(s) to be analyzed	200.8 / 6020:	200.7 / 6010	Total
TCLP / SPLP 6010: 8RCRA	Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U	Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO ₂ Na Sr Ti Sn U V Zn	8RCRA 13PPM Texas 11
	1631 / 245.1 / 7470 / 7471 : Hg		

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	2/14/20 15:00	<i>[Signature]</i>	<i>[Signature]</i>	3/14/20 16:35



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)

Chain of Custody

Work Order No:

652514

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Page 2 of 3

Project Manager:	Chris McKisson	Bill to: (if different)	Chris McKisson
Company Name:	LT Environmental, Inc.	Company Name:	LT Environmental
Address:	820 Megan Ave, Unit B	Address:	
City, State ZIP:	Rifle, CO 81650	City, State ZIP:	
Phone:	970-285-9985	Email:	jhill@ltenv.com, cmckisson@ltenv.com, abpesc@ltenv.com

Program: ☐ UST/PST ☐ RP ☐ Rowfields ☐ RC ☐ Fundfund ☐	
State of Project:	
Reporting Level II ☐	Level III ☐
Deliverables: EDD ☐	ADAPT ☐
Other: ☐	

Project Name:	ARE FEE #001	Turn Around	
Project Number:	034820008	Routine	☐
P.O. Number:		Rush:	3 DAY
Sampler's Name:	Jeremy Hill	Due Date:	
SAMPLE RECEIPT		Temp Blank:	Yes No
Temperature (°C):		Wet Ice:	Yes No
Received intact:	Yes ☒ No ☐	Thermometer ID	
Cooler Custody Seals:	Yes No	Correction Factor:	
Sample Custody Seals:	Yes No	Total Containers:	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	ANALYSIS REQUEST	Work Order Notes
FS11	S	2/14/20	1147	0.5'	1					
FS12	S		1154	0.5'	1					
FS13	S		1201	0.5'	1					
FS14	S		1209	0.3'	1					
FS15	S		1217	0.3'	1					
FS16	S		1226	0.15'	1					
FS17	S		1236	0.25'	1					
FS18	S		1245	0.25'	1					
FS19	S		1242	0.25'	1					
FS20	S		1309	6.25'	1					

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

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Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		2/14/20 1502			2/14/20 16:35



Chain of Custody

Work Order No: 652514

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

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Project Manager:	Chris Mckisson	Bill to: (if different)	Chris Mckisson
Company Name:	LT Environmental, Inc.,	Company Name:	LT Environmental
Address:	820 Megan Ave, Unit B	Address:	
City, State ZIP:	Rifle, CO 81650	City, State ZIP:	
Phone:	970-285-9985	Email:	jhill@ltenv.com, cmckisson@ltenv.com, jaynes@ltenv.com

Project Name:	AREEE #001	Turn Around	
Project Number:	034820008	Rush:	3024
P.O. Number:		Due Date:	
Sampler's Name:	Jeremy Hill		

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0-8021)	Chloride (EPA 300.0)	ANALYSIS REQUEST	Work Order Notes
FS21	S	2/14/20	1319	0.15'	1					Composite
FS22	S		1327	0.15'	1					Composite
FS23	S		1347	0.15'	1					Composite
FS24	S		1358	0.3'	1					Composite
SS01	S		1411	0-0.25'	1					discrete
SS02	S		1420	0-0.25'	1					discrete
	S									
	S									
	S									
	S									

Received by OCD: 5/6/2020 11:09:49 AM

Total 200.7 / 6010 200.8 / 6020:		8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed		TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U
Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.		
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		2/14/20 1500
		2/14/20 16:35

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 02.14.2020 04.35.00 PM

Work Order #: 652514

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T NM 007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	.4
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	No
#5 Custody Seals intact on sample bottles?	No
#6 *Custody Seals Signed and dated?	No
#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:



Martha Castro

Date: 02.14.2020

Checklist reviewed by:



Jessica Kramer

Date: 02.18.2020



Analytical Report 657334

for

LT Environmental, Inc.

Project Manager: Chris McKisson

APE FEE #001

034820008

04.01.2020

Collected By: Client

**1089 N Canal Street
Carlsbad, NM 88220**

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



04.01.2020

Project Manager: **Chris McKisson**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **657334**

APE FEE #001

Project Address: Eddy County

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) 657334. 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. 657334 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads 'Jessica Kramer'.

Jessica Kramer

Project Manager

A Small Business and Minority Company

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

**Sample Cross Reference 657334****LT Environmental, Inc., Arvada, CO**

APE FEE #001

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH20	S	03.30.2020 14:05	0 - 2.5 ft	657334-001
BH20A	S	03.30.2020 14:08	0.5 ft	657334-002
BH21	S	03.30.2020 14:20	0 - 2.5 ft	657334-003
BH21A	S	03.30.2020 14:22	0.5 ft	657334-004
BH22	S	03.30.2020 14:28	0 - 2.5 ft	657334-005
BH22A	S	03.30.2020 14:30	0.5 ft	657334-006
BH23	S	03.30.2020 14:39	0 - 2.5 ft	657334-007
BH23A	S	03.30.2020 14:41	0.5 ft	657334-008
BH24	S	03.30.2020 14:51	0 - 2.5 ft	657334-009
BH24A	S	03.30.2020 14:53	0.5 ft	657334-010
BH25	S	03.30.2020 15:03	0 - 2.5 ft	657334-011
BH25A	S	03.30.2020 15:05	0.5 ft	657334-012



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *APE FEE #001*

Project ID: 034820008
Work Order Number(s): 657334

Report Date: 04.01.2020
Date Received: 03.30.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3121413 BTEX by EPA 8021B

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

Batch: LBA-3121562 BTEX by EPA 8021B

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



Certificate of Analysis Summary 657334

LT Environmental, Inc., Arvada, CO

Project Name: APE FEE #001

Project Id: 034820008
Contact: Chris McKisson
Project Location: Eddy County

Date Received in Lab: Mon 03.30.2020 16:15

Report Date: 04.01.2020 11:59

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	657334-001	657334-002	657334-003	657334-004	657334-005	657334-006
	<i>Field Id:</i>	BH20	BH20A	BH21	BH21A	BH22	BH22A
	<i>Depth:</i>	0-2.5 ft	0.5- ft	0-2.5 ft	0.5- ft	0-2.5 ft	0.5- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	03.30.2020 14:05	03.30.2020 14:08	03.30.2020 14:20	03.30.2020 14:22	03.30.2020 14:28	03.30.2020 14:30
BTEX by EPA 8021B	<i>Extracted:</i>	03.30.2020 18:40	03.30.2020 18:40	03.30.2020 18:40	03.30.2020 18:40	03.30.2020 19:47	03.30.2020 19:47
	<i>Analyzed:</i>	03.31.2020 06:25	03.31.2020 06:45	03.31.2020 07:06	03.31.2020 07:26	03.31.2020 09:53	03.31.2020 10:13
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201
Toluene		<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201
Ethylbenzene		<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201
m,p-Xylenes		<0.00402 0.00402	<0.00399 0.00399	<0.00398 0.00398	<0.00398 0.00398	<0.00402 0.00402	<0.00402 0.00402
o-Xylene		<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201
Xylenes, Total		<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201
Total BTEX		<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201
Chloride by EPA 300	<i>Extracted:</i>	03.30.2020 18:00	03.30.2020 18:00	03.30.2020 18:00	03.30.2020 18:00	03.30.2020 18:02	03.30.2020 18:02
	<i>Analyzed:</i>	03.30.2020 23:07	03.30.2020 23:13	03.30.2020 23:20	03.30.2020 23:26	03.31.2020 00:06	03.31.2020 00:26
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		<9.98 9.98	<10.0 10.0	75.5 10.0	81.8 10.1	22.3 9.94	119 9.98
TPH by SW8015 Mod	<i>Extracted:</i>	03.30.2020 17:30	03.30.2020 17:30	03.30.2020 17:30	03.30.2020 17:30	03.30.2020 17:30	03.30.2020 17:30
	<i>Analyzed:</i>	03.31.2020 09:46	03.31.2020 10:06	03.31.2020 10:26	03.31.2020 10:47	03.31.2020 04:21	03.31.2020 04:41
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<49.9 49.9	<49.9 49.9	<50.3 50.3	<50.3 50.3	<50.2 50.2	<50.3 50.3
Diesel Range Organics (DRO)		<49.9 49.9	<49.9 49.9	<50.3 50.3	<50.3 50.3	<50.2 50.2	<50.3 50.3
Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9	<49.9 49.9	<50.3 50.3	<50.3 50.3	<50.2 50.2	<50.3 50.3
Total GRO-DRO		<49.9 49.9	<49.9 49.9	<50.3 50.3	<50.3 50.3	<50.2 50.2	<50.3 50.3
Total TPH		<49.9 49.9	<49.9 49.9	<50.3 50.3	<50.3 50.3	<50.2 50.2	<50.3 50.3

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

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

Jessica Kramer
Project Manager



Certificate of Analysis Summary 657334

LT Environmental, Inc., Arvada, CO

Project Name: APE FEE #001

Project Id: 034820008
Contact: Chris McKisson
Project Location: Eddy County

Date Received in Lab: Mon 03.30.2020 16:15

Report Date: 04.01.2020 11:59

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	657334-007	657334-008	657334-009	657334-010	657334-011	657334-012
	<i>Field Id:</i>	BH23	BH23A	BH24	BH24A	BH25	BH25A
	<i>Depth:</i>	0-2.5 ft	0.5- ft	0-2.5 ft	0.5- ft	0-2.5 ft	0.5- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	03.30.2020 14:39	03.30.2020 14:41	03.30.2020 14:51	03.30.2020 14:53	03.30.2020 15:03	03.30.2020 15:05
BTEX by EPA 8021B	<i>Extracted:</i>	03.30.2020 19:47	03.30.2020 19:47	03.30.2020 19:47	03.30.2020 19:47	03.30.2020 19:47	03.30.2020 19:47
	<i>Analyzed:</i>	03.31.2020 10:33	03.31.2020 10:54	03.31.2020 11:14	03.31.2020 11:35	03.31.2020 11:55	03.31.2020 12:16
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00198 0.00198
Toluene		<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00198 0.00198
Ethylbenzene		<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00198 0.00198
m,p-Xylenes		<0.00399 0.00399	<0.00396 0.00396	<0.00401 0.00401	<0.00401 0.00401	<0.00397 0.00397	<0.00397 0.00397
o-Xylene		<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00198 0.00198
Xylenes, Total		<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00198 0.00198
Total BTEX		<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00198 0.00198
Chloride by EPA 300	<i>Extracted:</i>	03.30.2020 18:02	03.30.2020 18:02	03.30.2020 18:02	03.30.2020 18:02	03.30.2020 18:02	03.30.2020 18:02
	<i>Analyzed:</i>	03.31.2020 00:32	03.31.2020 00:39	03.31.2020 00:46	03.31.2020 01:06	03.31.2020 01:12	03.31.2020 01:19
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		<10.1 10.1	11.7 9.96	<10.0 10.0	10.4 9.98	256 50.5	224 50.1
TPH by SW8015 Mod	<i>Extracted:</i>	03.30.2020 17:30	03.30.2020 17:30	03.30.2020 17:30	03.30.2020 17:30	03.30.2020 17:30	03.30.2020 17:30
	<i>Analyzed:</i>	03.31.2020 03:20	03.31.2020 05:01	03.31.2020 05:21	03.31.2020 05:42	03.31.2020 06:02	03.31.2020 06:22
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<49.9 49.9	<50.2 50.2	<50.3 50.3	<50.3 50.3	<50.1 50.1	<49.8 49.8
Diesel Range Organics (DRO)		<49.9 49.9	<50.2 50.2	<50.3 50.3	<50.3 50.3	<50.1 50.1	<49.8 49.8
Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9	<50.2 50.2	<50.3 50.3	<50.3 50.3	<50.1 50.1	<49.8 49.8
Total GRO-DRO		<49.9 49.9	<50.2 50.2	<50.3 50.3	<50.3 50.3	<50.1 50.1	<49.8 49.8
Total TPH		<49.9 49.9	<50.2 50.2	<50.3 50.3	<50.3 50.3	<50.1 50.1	<49.8 49.8

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

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

Jessica Kramer
Project Manager



Certificate of Analytical Results 657334

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **BH20**
Lab Sample Id: 657334-001

Matrix: Soil
Date Collected: 03.30.2020 14:05

Date Received: 03.30.2020 16:15
Sample Depth: 0 - 2.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3121420

Date Prep: 03.30.2020 18:00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.98	9.98	mg/kg	03.30.2020 23:07	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3121470

Date Prep: 03.30.2020 17:30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	03.31.2020 09:46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	03.31.2020 09:46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	03.31.2020 09:46	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	03.31.2020 09:46	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	03.31.2020 09:46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	03.31.2020 09:46	
o-Terphenyl	84-15-1	109	%	70-135	03.31.2020 09:46	



Certificate of Analytical Results 657334

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **BH20**
Lab Sample Id: 657334-001

Matrix: Soil
Date Collected: 03.30.2020 14:05

Date Received: 03.30.2020 16:15
Sample Depth: 0 - 2.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.30.2020 18:40

Basis: Wet Weight

Seq Number: 3121413

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.31.2020 06:25	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.31.2020 06:25	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.31.2020 06:25	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.31.2020 06:25	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.31.2020 06:25	U	1
Xylenes, Total	1330-20-7	<0.00201	0.00201	mg/kg	03.31.2020 06:25	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.31.2020 06:25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	89	%	70-130	03.31.2020 06:25	
1,4-Difluorobenzene	540-36-3	114	%	70-130	03.31.2020 06:25	



Certificate of Analytical Results 657334

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **BH20A**
Lab Sample Id: 657334-002

Matrix: Soil
Date Collected: 03.30.2020 14:08

Date Received: 03.30.2020 16:15
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3121420

Date Prep: 03.30.2020 18:00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<10.0	10.0	mg/kg	03.30.2020 23:13	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3121470

Date Prep: 03.30.2020 17:30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	03.31.2020 10:06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	03.31.2020 10:06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	03.31.2020 10:06	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	03.31.2020 10:06	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	03.31.2020 10:06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	03.31.2020 10:06	
o-Terphenyl	84-15-1	102	%	70-135	03.31.2020 10:06	



Certificate of Analytical Results 657334

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **BH20A**
Lab Sample Id: 657334-002

Matrix: Soil
Date Collected: 03.30.2020 14:08

Date Received: 03.30.2020 16:15
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3121413

Prep Method: SW5030B

% Moisture:

Date Prep: 03.30.2020 18:40

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.31.2020 06:45	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.31.2020 06:45	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.31.2020 06:45	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	03.31.2020 06:45	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.31.2020 06:45	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	03.31.2020 06:45	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.31.2020 06:45	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	115	%	70-130	03.31.2020 06:45		
4-Bromofluorobenzene	460-00-4	89	%	70-130	03.31.2020 06:45		



Certificate of Analytical Results 657334

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **BH21** Matrix: Soil Date Received: 03.30.2020 16:15
 Lab Sample Id: 657334-003 Date Collected: 03.30.2020 14:20 Sample Depth: 0 - 2.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 03.30.2020 18:00 Basis: Wet Weight
 Seq Number: 3121420

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	75.5	10.0	mg/kg	03.30.2020 23:20		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 03.30.2020 17:30 Basis: Wet Weight
 Seq Number: 3121470

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	03.31.2020 10:26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	03.31.2020 10:26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	03.31.2020 10:26	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	03.31.2020 10:26	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	03.31.2020 10:26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	79	%	70-135	03.31.2020 10:26	
o-Terphenyl	84-15-1	80	%	70-135	03.31.2020 10:26	



Certificate of Analytical Results 657334

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **BH21**
Lab Sample Id: 657334-003

Matrix: Soil
Date Collected: 03.30.2020 14:20

Date Received: 03.30.2020 16:15
Sample Depth: 0 - 2.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.30.2020 18:40

Basis: Wet Weight

Seq Number: 3121413

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.31.2020 07:06	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.31.2020 07:06	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.31.2020 07:06	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.31.2020 07:06	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.31.2020 07:06	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	03.31.2020 07:06	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.31.2020 07:06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	116	%	70-130	03.31.2020 07:06	
4-Bromofluorobenzene	460-00-4	87	%	70-130	03.31.2020 07:06	



Certificate of Analytical Results 657334

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **BH21A**
Lab Sample Id: 657334-004

Matrix: Soil
Date Collected: 03.30.2020 14:22

Date Received: 03.30.2020 16:15
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3121420

Date Prep: 03.30.2020 18:00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	81.8	10.1	mg/kg	03.30.2020 23:26		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3121470

Date Prep: 03.30.2020 17:30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	03.31.2020 10:47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	03.31.2020 10:47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	03.31.2020 10:47	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	03.31.2020 10:47	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	03.31.2020 10:47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	77	%	70-135	03.31.2020 10:47	
o-Terphenyl	84-15-1	77	%	70-135	03.31.2020 10:47	



Certificate of Analytical Results 657334

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **BH21A**
Lab Sample Id: 657334-004

Matrix: Soil
Date Collected: 03.30.2020 14:22

Date Received: 03.30.2020 16:15
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.30.2020 18:40

Basis: Wet Weight

Seq Number: 3121413

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.31.2020 07:26	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.31.2020 07:26	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.31.2020 07:26	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.31.2020 07:26	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.31.2020 07:26	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	03.31.2020 07:26	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.31.2020 07:26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	115	%	70-130	03.31.2020 07:26	
4-Bromofluorobenzene	460-00-4	90	%	70-130	03.31.2020 07:26	



Certificate of Analytical Results 657334

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **BH22**
Lab Sample Id: 657334-005

Matrix: Soil
Date Collected: 03.30.2020 14:28

Date Received: 03.30.2020 16:15
Sample Depth: 0 - 2.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3121421

Date Prep: 03.30.2020 18:02

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	22.3	9.94	mg/kg	03.31.2020 00:06		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3121465

Date Prep: 03.30.2020 17:30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	03.31.2020 04:21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	03.31.2020 04:21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	03.31.2020 04:21	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	03.31.2020 04:21	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	03.31.2020 04:21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	03.31.2020 04:21	
o-Terphenyl	84-15-1	109	%	70-135	03.31.2020 04:21	



Certificate of Analytical Results 657334

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **BH22**
Lab Sample Id: 657334-005

Matrix: Soil
Date Collected: 03.30.2020 14:28

Date Received: 03.30.2020 16:15
Sample Depth: 0 - 2.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.30.2020 19:47

Basis: Wet Weight

Seq Number: 3121562

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.31.2020 09:53	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.31.2020 09:53	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.31.2020 09:53	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.31.2020 09:53	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.31.2020 09:53	U	1
Xylenes, Total	1330-20-7	<0.00201	0.00201	mg/kg	03.31.2020 09:53	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.31.2020 09:53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	111	%	70-130	03.31.2020 09:53	
4-Bromofluorobenzene	460-00-4	90	%	70-130	03.31.2020 09:53	



Certificate of Analytical Results 657334

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **BH22A**
Lab Sample Id: 657334-006

Matrix: Soil
Date Collected: 03.30.2020 14:30

Date Received: 03.30.2020 16:15
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3121421

Date Prep: 03.30.2020 18:02

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	119	9.98	mg/kg	03.31.2020 00:26		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3121465

Date Prep: 03.30.2020 17:30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	03.31.2020 04:41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	03.31.2020 04:41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	03.31.2020 04:41	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	03.31.2020 04:41	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	03.31.2020 04:41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	03.31.2020 04:41	
o-Terphenyl	84-15-1	108	%	70-135	03.31.2020 04:41	



Certificate of Analytical Results 657334

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **BH22A**
Lab Sample Id: 657334-006

Matrix: Soil
Date Collected: 03.30.2020 14:30

Date Received: 03.30.2020 16:15
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.30.2020 19:47

Basis: Wet Weight

Seq Number: 3121562

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.31.2020 10:13	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.31.2020 10:13	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.31.2020 10:13	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.31.2020 10:13	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.31.2020 10:13	U	1
Xylenes, Total	1330-20-7	<0.00201	0.00201	mg/kg	03.31.2020 10:13	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.31.2020 10:13	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	94	%	70-130	03.31.2020 10:13		
1,4-Difluorobenzene	540-36-3	109	%	70-130	03.31.2020 10:13		



Certificate of Analytical Results 657334

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **BH23**
Lab Sample Id: 657334-007

Matrix: Soil
Date Collected: 03.30.2020 14:39

Date Received: 03.30.2020 16:15
Sample Depth: 0 - 2.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3121421

Date Prep: 03.30.2020 18:02

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<10.1	10.1	mg/kg	03.31.2020 00:32	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3121465

Date Prep: 03.30.2020 17:30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	03.31.2020 03:20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	03.31.2020 03:20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	03.31.2020 03:20	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	03.31.2020 03:20	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	03.31.2020 03:20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	03.31.2020 03:20	
o-Terphenyl	84-15-1	109	%	70-135	03.31.2020 03:20	



Certificate of Analytical Results 657334

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **BH23**
Lab Sample Id: 657334-007

Matrix: Soil
Date Collected: 03.30.2020 14:39

Date Received: 03.30.2020 16:15
Sample Depth: 0 - 2.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3121562

Prep Method: SW5030B

% Moisture:

Date Prep: 03.30.2020 19:47

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.31.2020 10:33	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.31.2020 10:33	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.31.2020 10:33	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	03.31.2020 10:33	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.31.2020 10:33	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	03.31.2020 10:33	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.31.2020 10:33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	111	%	70-130	03.31.2020 10:33	
4-Bromofluorobenzene	460-00-4	95	%	70-130	03.31.2020 10:33	



Certificate of Analytical Results 657334

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **BH23A**
Lab Sample Id: 657334-008

Matrix: Soil
Date Collected: 03.30.2020 14:41

Date Received: 03.30.2020 16:15
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3121421

Date Prep: 03.30.2020 18:02

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	11.7	9.96	mg/kg	03.31.2020 00:39		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3121465

Date Prep: 03.30.2020 17:30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	03.31.2020 05:01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	03.31.2020 05:01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	03.31.2020 05:01	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	03.31.2020 05:01	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	03.31.2020 05:01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	03.31.2020 05:01	
o-Terphenyl	84-15-1	110	%	70-135	03.31.2020 05:01	



Certificate of Analytical Results 657334

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **BH23A**
Lab Sample Id: 657334-008

Matrix: Soil
Date Collected: 03.30.2020 14:41

Date Received: 03.30.2020 16:15
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.30.2020 19:47

Basis: Wet Weight

Seq Number: 3121562

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	03.31.2020 10:54	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	03.31.2020 10:54	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	03.31.2020 10:54	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	03.31.2020 10:54	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	03.31.2020 10:54	U	1
Xylenes, Total	1330-20-7	<0.00198	0.00198	mg/kg	03.31.2020 10:54	U	1
Total BTEX		<0.00198	0.00198	mg/kg	03.31.2020 10:54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	109	%	70-130	03.31.2020 10:54	
4-Bromofluorobenzene	460-00-4	94	%	70-130	03.31.2020 10:54	



Certificate of Analytical Results 657334

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **BH24**
Lab Sample Id: 657334-009

Matrix: Soil
Date Collected: 03.30.2020 14:51

Date Received: 03.30.2020 16:15
Sample Depth: 0 - 2.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3121421

Date Prep: 03.30.2020 18:02

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<10.0	10.0	mg/kg	03.31.2020 00:46	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3121465

Date Prep: 03.30.2020 17:30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	03.31.2020 05:21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	03.31.2020 05:21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	03.31.2020 05:21	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	03.31.2020 05:21	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	03.31.2020 05:21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	03.31.2020 05:21	
o-Terphenyl	84-15-1	113	%	70-135	03.31.2020 05:21	



Certificate of Analytical Results 657334

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **BH24**
Lab Sample Id: 657334-009

Matrix: Soil
Date Collected: 03.30.2020 14:51

Date Received: 03.30.2020 16:15
Sample Depth: 0 - 2.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.30.2020 19:47

Basis: Wet Weight

Seq Number: 3121562

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.31.2020 11:14	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.31.2020 11:14	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.31.2020 11:14	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	03.31.2020 11:14	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.31.2020 11:14	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	03.31.2020 11:14	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.31.2020 11:14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	92	%	70-130	03.31.2020 11:14	
1,4-Difluorobenzene	540-36-3	110	%	70-130	03.31.2020 11:14	



Certificate of Analytical Results 657334

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **BH24A**
Lab Sample Id: 657334-010

Matrix: Soil
Date Collected: 03.30.2020 14:53

Date Received: 03.30.2020 16:15
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3121421

Date Prep: 03.30.2020 18:02

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	10.4	9.98	mg/kg	03.31.2020 01:06		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3121465

Date Prep: 03.30.2020 17:30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	03.31.2020 05:42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	03.31.2020 05:42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	03.31.2020 05:42	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	03.31.2020 05:42	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	03.31.2020 05:42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	03.31.2020 05:42	
o-Terphenyl	84-15-1	108	%	70-135	03.31.2020 05:42	



Certificate of Analytical Results 657334

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **BH24A**
Lab Sample Id: 657334-010

Matrix: Soil
Date Collected: 03.30.2020 14:53

Date Received: 03.30.2020 16:15
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.30.2020 19:47

Basis: Wet Weight

Seq Number: 3121562

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.31.2020 11:35	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.31.2020 11:35	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.31.2020 11:35	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	03.31.2020 11:35	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.31.2020 11:35	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	03.31.2020 11:35	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.31.2020 11:35	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	94	%	70-130	03.31.2020 11:35		
1,4-Difluorobenzene	540-36-3	109	%	70-130	03.31.2020 11:35		



Certificate of Analytical Results 657334

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **BH25** Matrix: Soil Date Received: 03.30.2020 16:15
 Lab Sample Id: 657334-011 Date Collected: 03.30.2020 15:03 Sample Depth: 0 - 2.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 03.30.2020 18:02 Basis: Wet Weight
 Seq Number: 3121421

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	256	50.5	mg/kg	03.31.2020 01:12		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 03.30.2020 17:30 Basis: Wet Weight
 Seq Number: 3121465

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	03.31.2020 06:02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	03.31.2020 06:02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	03.31.2020 06:02	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	03.31.2020 06:02	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	03.31.2020 06:02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	03.31.2020 06:02	
o-Terphenyl	84-15-1	112	%	70-135	03.31.2020 06:02	



Certificate of Analytical Results 657334

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **BH25**
Lab Sample Id: 657334-011

Matrix: Soil
Date Collected: 03.30.2020 15:03

Date Received: 03.30.2020 16:15
Sample Depth: 0 - 2.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3121562

Prep Method: SW5030B

% Moisture:

Date Prep: 03.30.2020 19:47

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	03.31.2020 11:55	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	03.31.2020 11:55	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	03.31.2020 11:55	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	03.31.2020 11:55	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	03.31.2020 11:55	U	1
Xylenes, Total	1330-20-7	<0.00198	0.00198	mg/kg	03.31.2020 11:55	U	1
Total BTEX		<0.00198	0.00198	mg/kg	03.31.2020 11:55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	110	%	70-130	03.31.2020 11:55	
4-Bromofluorobenzene	460-00-4	92	%	70-130	03.31.2020 11:55	



Certificate of Analytical Results 657334

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **BH25A**
Lab Sample Id: 657334-012

Matrix: Soil
Date Collected: 03.30.2020 15:05

Date Received: 03.30.2020 16:15
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3121421

Date Prep: 03.30.2020 18:02

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	224	50.1	mg/kg	03.31.2020 01:19		5

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3121465

Date Prep: 03.30.2020 17:30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	03.31.2020 06:22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	03.31.2020 06:22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	03.31.2020 06:22	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	03.31.2020 06:22	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	03.31.2020 06:22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	03.31.2020 06:22	
o-Terphenyl	84-15-1	115	%	70-135	03.31.2020 06:22	



Certificate of Analytical Results 657334

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **BH25A**
Lab Sample Id: 657334-012

Matrix: Soil
Date Collected: 03.30.2020 15:05

Date Received: 03.30.2020 16:15
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.30.2020 19:47

Basis: Wet Weight

Seq Number: 3121562

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	03.31.2020 12:16	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	03.31.2020 12:16	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	03.31.2020 12:16	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	03.31.2020 12:16	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	03.31.2020 12:16	U	1
Xylenes, Total	1330-20-7	<0.00198	0.00198	mg/kg	03.31.2020 12:16	U	1
Total BTEX		<0.00198	0.00198	mg/kg	03.31.2020 12:16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	109	%	70-130	03.31.2020 12:16	
4-Bromofluorobenzene	460-00-4	89	%	70-130	03.31.2020 12:16	



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. **ND** Not Detected.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



LT Environmental, Inc.

APE FEE #001

Analytical Method: Chloride by EPA 300

Seq Number: 3121420

MB Sample Id: 7700117-1-BLK

Matrix: Solid

LCS Sample Id: 7700117-1-BKS

Prep Method: E300P

Date Prep: 03.30.2020

LCSD Sample Id: 7700117-1-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	263	105	264	106	90-110	0	20	mg/kg	03.30.2020 20:28	

Analytical Method: Chloride by EPA 300

Seq Number: 3121421

MB Sample Id: 7700118-1-BLK

Matrix: Solid

LCS Sample Id: 7700118-1-BKS

Prep Method: E300P

Date Prep: 03.30.2020

LCSD Sample Id: 7700118-1-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	238	95	241	96	90-110	1	20	mg/kg	03.30.2020 23:53	

Analytical Method: Chloride by EPA 300

Seq Number: 3121420

Parent Sample Id: 657333-001

Matrix: Soil

MS Sample Id: 657333-001 S

Prep Method: E300P

Date Prep: 03.30.2020

MSD Sample Id: 657333-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	289	199	485	98	497	105	90-110	2	20	mg/kg	03.30.2020 20:48	

Analytical Method: Chloride by EPA 300

Seq Number: 3121420

Parent Sample Id: 657333-011

Matrix: Soil

MS Sample Id: 657333-011 S

Prep Method: E300P

Date Prep: 03.30.2020

MSD Sample Id: 657333-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	372	200	572	100	574	102	90-110	0	20	mg/kg	03.30.2020 22:07	

Analytical Method: Chloride by EPA 300

Seq Number: 3121421

Parent Sample Id: 657334-005

Matrix: Soil

MS Sample Id: 657334-005 S

Prep Method: E300P

Date Prep: 03.30.2020

MSD Sample Id: 657334-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	22.3	199	226	102	228	103	90-110	1	20	mg/kg	03.31.2020 00:13	

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



LT Environmental, Inc.

APE FEE #001

Analytical Method: TPH by SW8015 Mod

Seq Number: 3121465

MB Sample Id: 7700158-1-BLK

Matrix: Solid

LCS Sample Id: 7700158-1-BKS

Prep Method: SW8015P

Date Prep: 03.30.2020

LCSD Sample Id: 7700158-1-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	926	93	868	87	70-135	6	35	mg/kg	03.31.2020 02:40	
Diesel Range Organics (DRO)	<50.0	1000	873	87	826	83	70-135	6	35	mg/kg	03.31.2020 02:40	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	89		107		102		70-135	%	03.31.2020 02:40
o-Terphenyl	96		105		101		70-135	%	03.31.2020 02:40

Analytical Method: TPH by SW8015 Mod

Seq Number: 3121470

MB Sample Id: 7700149-1-BLK

Matrix: Solid

LCS Sample Id: 7700149-1-BKS

Prep Method: SW8015P

Date Prep: 03.30.2020

LCSD Sample Id: 7700149-1-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	886	89	938	94	70-135	6	35	mg/kg	03.31.2020 02:40	
Diesel Range Organics (DRO)	<50.0	1000	838	84	882	88	70-135	5	35	mg/kg	03.31.2020 02:40	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	89		116		123		70-135	%	03.31.2020 02:40
o-Terphenyl	94		102		109		70-135	%	03.31.2020 02:40

Analytical Method: TPH by SW8015 Mod

Seq Number: 3121465

Matrix: Solid

MB Sample Id: 7700158-1-BLK

Prep Method: SW8015P

Date Prep: 03.30.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	03.31.2020 02:19	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3121470

Matrix: Solid

MB Sample Id: 7700149-1-BLK

Prep Method: SW8015P

Date Prep: 03.30.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	03.31.2020 02:19	

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

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

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

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



LT Environmental, Inc.

APE FEE #001

Analytical Method: TPH by SW8015 Mod

Seq Number: 3121465

Parent Sample Id: 657334-007

Matrix: Soil

MS Sample Id: 657334-007 S

Prep Method: SW8015P

Date Prep: 03.30.2020

MSD Sample Id: 657334-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.2	1000	1140	114	1040	104	70-135	9	35	mg/kg	03.31.2020 03:40	
Diesel Range Organics (DRO)	<50.2	1000	1150	115	1050	105	70-135	9	35	mg/kg	03.31.2020 03:40	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	123		119		70-135	%	03.31.2020 03:40
o-Terphenyl	125		114		70-135	%	03.31.2020 03:40

Analytical Method: TPH by SW8015 Mod

Seq Number: 3121470

Parent Sample Id: 657333-001

Matrix: Soil

MS Sample Id: 657333-001 S

Prep Method: SW8015P

Date Prep: 03.30.2020

MSD Sample Id: 657333-001 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)	<49.8	996	1050	105	1120	112	70-135	6	35	mg/kg	03.31.2020 03:40	
Diesel Range Organics (DRO)	<49.8	996	1220	122	1310	131	70-135	7	35	mg/kg	03.31.2020 03:40	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	117		118		70-135	%	03.31.2020 03:40
o-Terphenyl	119		120		70-135	%	03.31.2020 03:40

Analytical Method: BTEX by EPA 8021B

Seq Number: 3121413

MB Sample Id: 7700096-1-BLK

Matrix: Solid

LCS Sample Id: 7700096-1-BKS

Prep Method: SW5030B

Date Prep: 03.30.2020

LCSD Sample Id: 7700096-1-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	0.122	122	0.121	121	70-130	1	35	mg/kg	03.30.2020 21:55	
Toluene	<0.00200	0.100	0.120	120	0.119	119	70-130	1	35	mg/kg	03.30.2020 21:55	
Ethylbenzene	<0.00200	0.100	0.111	111	0.111	111	71-129	0	35	mg/kg	03.30.2020 21:55	
m,p-Xylenes	<0.00400	0.200	0.215	108	0.216	108	70-135	0	35	mg/kg	03.30.2020 21:55	
o-Xylene	<0.00200	0.100	0.110	110	0.111	111	71-133	1	35	mg/kg	03.30.2020 21:55	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	116		110		109		70-130	%	03.30.2020 21:55
4-Bromofluorobenzene	90		85		84		70-130	%	03.30.2020 21:55

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

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

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

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



LT Environmental, Inc.

APE FEE #001

Analytical Method: BTEX by EPA 8021B

Seq Number: 3121562

MB Sample Id: 7700098-1-BLK

Matrix: Solid

LCS Sample Id: 7700098-1-BKS

Prep Method: SW5030B

Date Prep: 03.30.2020

LCSD Sample Id: 7700098-1-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	0.113	113	0.109	109	70-130	4	35	mg/kg	03.31.2020 07:50	
Toluene	<0.00200	0.100	0.107	107	0.102	102	70-130	5	35	mg/kg	03.31.2020 07:50	
Ethylbenzene	<0.00200	0.100	0.101	101	0.0943	94	71-129	7	35	mg/kg	03.31.2020 07:50	
m,p-Xylenes	<0.00400	0.200	0.206	103	0.193	97	70-135	7	35	mg/kg	03.31.2020 07:50	
o-Xylene	<0.00200	0.100	0.105	105	0.0991	99	71-133	6	35	mg/kg	03.31.2020 07:50	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	111		107		108		70-130	%	03.31.2020 07:50
4-Bromofluorobenzene	96		90		93		70-130	%	03.31.2020 07:50

Analytical Method: BTEX by EPA 8021B

Seq Number: 3121413

Parent Sample Id: 657333-001

Matrix: Soil

MS Sample Id: 657333-001 S

Prep Method: SW5030B

Date Prep: 03.30.2020

MSD Sample Id: 657333-001 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	0.114	114	0.110	111	70-130	4	35	mg/kg	03.30.2020 22:36	
Toluene	<0.00200	0.100	0.103	103	0.0989	100	70-130	4	35	mg/kg	03.30.2020 22:36	
Ethylbenzene	<0.00200	0.100	0.0956	96	0.0916	93	71-129	4	35	mg/kg	03.30.2020 22:36	
m,p-Xylenes	<0.00401	0.200	0.185	93	0.178	90	70-135	4	35	mg/kg	03.30.2020 22:36	
o-Xylene	<0.00200	0.100	0.0949	95	0.0905	91	71-133	5	35	mg/kg	03.30.2020 22:36	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	111		111		70-130	%	03.30.2020 22:36
4-Bromofluorobenzene	90		88		70-130	%	03.30.2020 22:36

Analytical Method: BTEX by EPA 8021B

Seq Number: 3121562

Parent Sample Id: 657244-009

Matrix: Soil

MS Sample Id: 657244-009 S

Prep Method: SW5030B

Date Prep: 03.30.2020

MSD Sample Id: 657244-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.104	103	0.103	102	70-130	1	35	mg/kg	03.31.2020 08:31	
Toluene	<0.00202	0.101	0.0991	98	0.0978	97	70-130	1	35	mg/kg	03.31.2020 08:31	
Ethylbenzene	<0.00202	0.101	0.0926	92	0.0925	92	71-129	0	35	mg/kg	03.31.2020 08:31	
m,p-Xylenes	<0.00404	0.202	0.191	95	0.189	94	70-135	1	35	mg/kg	03.31.2020 08:31	
o-Xylene	<0.00202	0.101	0.0962	95	0.0966	96	71-133	0	35	mg/kg	03.31.2020 08:31	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		108		70-130	%	03.31.2020 08:31
4-Bromofluorobenzene	94		95		70-130	%	03.31.2020 08:31

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

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

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

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



Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334
Midland, TX (432) 704-5440 EL Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296
Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000 West Palm Beach, FL (561) 699-6701

Chain of Custody

Work Order No:

057334

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Page 1 of 2

Project Manager:	Chris McKisson	Bill to: (if different)	
Company Name:	LT Environmental	Company Name:	
Address:	820 Megan Ave, Unit 118	Address:	
City, State ZIP:	Rifle, CO 81650	City, State ZIP:	
Phone:	970 285 9985	Email:	cmckisson@ltenv.com abyers@ltenv.com

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

Project Name:	APE FEE #001	Turn Around	☐
Project Number:	034820008	Routine	☐
Project Location:	Eddy County	Rush:	3 DAY
Sampler's Name:	Anna Byers	Due Date:	
PO #:		Quote #:	

SAMPLE RECEIPT		Temp Blank:	☒ Yes ☐ No	Wet Ice:	☒ Yes ☐ No
Temperature (°C):	0.8	Thermometer ID	TN0007		
Received Intact:	☒ Yes ☐ No	Correction Factor:	-0.2		
Cooler Custody Seals:	☒ Yes ☐ No	Total Containers:	12		
Sample Custody Seals:	☒ Yes ☐ No				

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	ANALYSIS REQUEST	Preservative Codes	Sample Comments
BH20		S	3/30/20	1405	0-0.25'	1	TAT (EPA 8015)	MeOH: Me	
BH20 A				1408	0.5'	1	BTEX (EPA 8021)	None: NO	
BH21				1420	0-0.25'	1	Chloride (EPA 300.0)	HNO3: HN	
BH21 A				1422	0.5'	1		H2SO4: H2	
BH22				1428	0-0.25'	1		HCL: HL	
BH22 A				1430	0.5'	1		NaOH: Na	
BH23				1439	0-0.25'	1		Zn Acetate+ NaOH: Zn	
BH23 A				1441	0.5'	1		TAT starts the day received by the lab, if received by 4:00pm	
BH24				1451	0-0.25'	1			
BH24 A				1453	0.5'	1			

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Anna Byers		3/30/20 16:15			



Chain of Custody

Work Order No.:

65-7334

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 Crasbad, NM (432) 704-5440

Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000 West Palm Beach, FL (561) 665-0100

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Page 4 of 4

Project Manager:	Chris McKisson	Bit to (it different)	→
Company Name:	LT Environmental	Company Name:	→
Address:	820 Megan Ave, Unit B	Address:	
City, State ZIP:	Rifle, CO 81650	City, State ZIP:	
Phone:	970 285 9985	Email:	cmckisson@lten.com & akyc@lten.com

Work Order Comments	
Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐ State of Project: Reporting Level I ☐ Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐ Deliverables: EDD ☐ ADAPT ☐ Other:	Prescriptive Codes

[illegible][illegible]

Total	200.7 / 6010	200.8 / 6020:
-------	--------------	---------------

Circle Method(s) and Metal(s) to be analyzed

[illegible]

1631 / 245.1 / 7470 / 7471 : Hg

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xencio, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xencio will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xencio. A minimum charge of \$7500 will be applied to each project and a charge of \$5 for each sample submitted to Xencio, but not analyzed. These terms will be effective unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>Denise Byers</i>	<i>[Signature]</i>	3/30/20 16:15			

Revised Date 022619 Rev. 2019

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 03.30.2020 04.15.00 PM

Work Order #: 657334

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T NM 007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	.8
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	No
#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:



Martha Castro

Date: 03.30.2020

Checklist reviewed by:



Jessica Kramer

Date: 03.31.2020



Analytical Report 659662

for

LT Environmental, Inc.

Project Manager: Chris McKisson

APE FEE #001

034820008

04.27.2020

Collected By: Client

**1089 N Canal Street
Carlsbad, NM 88220**

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



04.27.2020

Project Manager: **Chris McKisson**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **659662**

APE FEE #001

Project Address: Eddy County

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) 659662. 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. 659662 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads 'Jessica Kramer'.

Jessica Kramer

Project Manager

A Small Business and Minority Company

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



Sample Cross Reference 659662

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS09	S	04.23.2020 12:13	0 - 0.3 ft	659662-001
SS09A	S	04.23.2020 12:20	0.6 - 1 ft	659662-002



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *APE FEE #001*

Project ID: 034820008
Work Order Number(s): 659662

Report Date: 04.27.2020
Date Received: 04.23.2020

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None



Certificate of Analysis Summary 659662

LT Environmental, Inc., Arvada, CO

Project Name: APE FEE #001

Project Id: 034820008
Contact: Chris McKisson
Project Location: Eddy County

Date Received in Lab: Thu 04.23.2020 13:10
Report Date: 04.27.2020 11:59
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	659662-001	659662-002				
	Field Id:	SS09	SS09A				
	Depth:	0-0.3 ft	0.6-1 ft				
	Matrix:	SOIL	SOIL				
	Sampled:	04.23.2020 12:13	04.23.2020 12:20				
BTEX by EPA 8021B	Extracted:	04.23.2020 16:00	04.23.2020 16:00				
	Analyzed:	04.23.2020 19:43	04.23.2020 20:03				
	Units/RL:	mg/kg RL	mg/kg RL				
Benzene		<0.00199 0.00199	<0.00202 0.00202				
Toluene		<0.00199 0.00199	<0.00202 0.00202				
Ethylbenzene		<0.00199 0.00199	<0.00202 0.00202				
m,p-Xylenes		<0.00398 0.00398	<0.00403 0.00403				
o-Xylene		<0.00199 0.00199	<0.00202 0.00202				
Xylenes, Total		<0.00199 0.00199	<0.00202 0.00202				
Total BTEX		<0.00199 0.00199	<0.00202 0.00202				
Chloride by EPA 300	Extracted:	04.23.2020 15:00	04.23.2020 15:00				
	Analyzed:	04.23.2020 16:03	04.23.2020 16:09				
	Units/RL:	mg/kg RL	mg/kg RL				
Chloride		132 10.1	48.1 10.1				
TPH by SW8015 Mod	Extracted:	04.23.2020 17:00	04.23.2020 17:00				
	Analyzed:	04.24.2020 17:07	04.23.2020 21:43				
	Units/RL:	mg/kg RL	mg/kg RL				
Gasoline Range Hydrocarbons (GRO)		<50.2 50.2	<49.9 49.9				
Diesel Range Organics (DRO)		<50.2 50.2	<49.9 49.9				
Motor Oil Range Hydrocarbons (MRO)		<50.2 50.2	<49.9 49.9				
Total GRO-DRO		<50.2 50.2	<49.9 49.9				
Total TPH		<50.2 50.2	<49.9 49.9				

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

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

Jessica Kramer
Project Manager



Certificate of Analytical Results 659662

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **SS09** Matrix: Soil Date Received: 04.23.2020 13:10
 Lab Sample Id: 659662-001 Date Collected: 04.23.2020 12:13 Sample Depth: 0 - 0.3 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 04.23.2020 15:00 Basis: Wet Weight
 Seq Number: 3124031

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	132	10.1	mg/kg	04.23.2020 16:03		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 04.23.2020 17:00 Basis: Wet Weight
 Seq Number: 3124187

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	04.24.2020 17:07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	04.24.2020 17:07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	04.24.2020 17:07	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	04.24.2020 17:07	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	04.24.2020 17:07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	04.24.2020 17:07	
o-Terphenyl	84-15-1	95	%	70-135	04.24.2020 17:07	



Certificate of Analytical Results 659662

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **SS09**
Lab Sample Id: 659662-001

Matrix: Soil
Date Collected: 04.23.2020 12:13

Date Received: 04.23.2020 13:10
Sample Depth: 0 - 0.3 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.23.2020 16:00

Basis: Wet Weight

Seq Number: 3124024

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.23.2020 19:43	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.23.2020 19:43	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.23.2020 19:43	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.23.2020 19:43	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.23.2020 19:43	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	04.23.2020 19:43	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.23.2020 19:43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	92	%	70-130	04.23.2020 19:43	
1,4-Difluorobenzene	540-36-3	106	%	70-130	04.23.2020 19:43	



Certificate of Analytical Results 659662

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **SS09A**
Lab Sample Id: 659662-002

Matrix: Soil
Date Collected: 04.23.2020 12:20

Date Received: 04.23.2020 13:10
Sample Depth: 0.6 - 1 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3124031

Date Prep: 04.23.2020 15:00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	48.1	10.1	mg/kg	04.23.2020 16:09		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3124046

Date Prep: 04.23.2020 17:00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	04.23.2020 21:43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	04.23.2020 21:43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	04.23.2020 21:43	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	04.23.2020 21:43	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	04.23.2020 21:43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	04.23.2020 21:43	
o-Terphenyl	84-15-1	123	%	70-135	04.23.2020 21:43	



Certificate of Analytical Results 659662

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **SS09A**
Lab Sample Id: 659662-002

Matrix: Soil
Date Collected: 04.23.2020 12:20

Date Received: 04.23.2020 13:10
Sample Depth: 0.6 - 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.23.2020 16:00

Basis: Wet Weight

Seq Number: 3124024

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	04.23.2020 20:03	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	04.23.2020 20:03	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	04.23.2020 20:03	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	04.23.2020 20:03	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	04.23.2020 20:03	U	1
Xylenes, Total	1330-20-7	<0.00202	0.00202	mg/kg	04.23.2020 20:03	U	1
Total BTEX		<0.00202	0.00202	mg/kg	04.23.2020 20:03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	04.23.2020 20:03	
4-Bromofluorobenzene	460-00-4	94	%	70-130	04.23.2020 20:03	



Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



LT Environmental, Inc.

APE FEE #001

Analytical Method: Chloride by EPA 300

Seq Number: 3124031

MB Sample Id: 7701931-1-BLK

Matrix: Solid

LCS Sample Id: 7701931-1-BKS

Prep Method: E300P

Date Prep: 04.23.2020

LCSD Sample Id: 7701931-1-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	254	102	256	102	90-110	1	20	mg/kg	04.23.2020 15:19	

Analytical Method: Chloride by EPA 300

Seq Number: 3124031

Parent Sample Id: 659618-001

Matrix: Soil

MS Sample Id: 659618-001 S

Prep Method: E300P

Date Prep: 04.23.2020

MSD Sample Id: 659618-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	14100	250	14400	120	14400	120	90-110	0	20	mg/kg	04.23.2020 15:41	X

Analytical Method: Chloride by EPA 300

Seq Number: 3124031

Parent Sample Id: 659681-001

Matrix: Soil

MS Sample Id: 659681-001 S

Prep Method: E300P

Date Prep: 04.23.2020

MSD Sample Id: 659681-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	287	200	469	91	469	91	90-110	0	20	mg/kg	04.23.2020 16:58	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3124046

MB Sample Id: 7701997-1-BLK

Matrix: Solid

LCS Sample Id: 7701997-1-BKS

Prep Method: SW8015P

Date Prep: 04.23.2020

LCSD Sample Id: 7701997-1-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	838	84	889	89	70-135	6	35	mg/kg	04.23.2020 19:20	
Diesel Range Organics (DRO)	<50.0	1000	925	93	978	98	70-135	6	35	mg/kg	04.23.2020 19:20	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	99		107		131		70-135	%	04.23.2020 19:20
o-Terphenyl	108		106		118		70-135	%	04.23.2020 19:20

Analytical Method: TPH by SW8015 Mod

Seq Number: 3124187

MB Sample Id: 7701983-1-BLK

Matrix: Solid

LCS Sample Id: 7701983-1-BKS

Prep Method: SW8015P

Date Prep: 04.23.2020

LCSD Sample Id: 7701983-1-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	876	88	723	72	70-135	19	35	mg/kg	04.24.2020 20:30	
Diesel Range Organics (DRO)	<50.0	1000	985	99	785	79	70-135	23	35	mg/kg	04.24.2020 20:30	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	108		116		94		70-135	%	04.24.2020 20:30
o-Terphenyl	120		117		93		70-135	%	04.24.2020 20:30

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

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

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

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



LT Environmental, Inc.

APE FEE #001

Analytical Method: TPH by SW8015 Mod

Seq Number: 3124046

Matrix: Solid

Prep Method: SW8015P

Date Prep: 04.23.2020

MB Sample Id: 7701997-1-BLK

Parameter

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	04.23.2020 18:59	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3124187

Matrix: Solid

Prep Method: SW8015P

Date Prep: 04.23.2020

MB Sample Id: 7701983-1-BLK

Parameter

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	04.24.2020 14:03	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3124046

Matrix: Soil

Prep Method: SW8015P

Date Prep: 04.23.2020

Parent Sample Id: 659618-002

MS Sample Id: 659618-002 S

MSD Sample Id: 659618-002 SD

Parameter

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	813	81	1050	105	70-135	25	35	mg/kg	04.23.2020 20:21	
Diesel Range Organics (DRO)	<50.0	1000	879	88	1200	120	70-135	31	35	mg/kg	04.23.2020 20:21	

Surrogate

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	122		134		70-135	%	04.23.2020 20:21
o-Terphenyl	110		125		70-135	%	04.23.2020 20:21

Analytical Method: TPH by SW8015 Mod

Seq Number: 3124187

Matrix: Soil

Prep Method: SW8015P

Date Prep: 04.23.2020

Parent Sample Id: 659618-001

MS Sample Id: 659618-001 S

MSD Sample Id: 659618-001 SD

Parameter

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.1	1000	985	99	810	81	70-135	19	35	mg/kg	04.24.2020 20:50	
Diesel Range Organics (DRO)	<50.1	1000	1110	111	871	87	70-135	24	35	mg/kg	04.24.2020 20:50	

Surrogate

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	124		113		70-135	%	04.24.2020 20:50
o-Terphenyl	122		97		70-135	%	04.24.2020 20:50

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

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

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

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



LT Environmental, Inc.

APE FEE #001

Analytical Method: BTEX by EPA 8021B

Seq Number: 3124024

MB Sample Id: 7701922-1-BLK

Matrix: Solid

LCS Sample Id: 7701922-1-BKS

Prep Method: SW5035A

Date Prep: 04.23.2020

LCSD Sample Id: 7701922-1-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	0.106	106	0.110	110	70-130	4	35	mg/kg	04.23.2020 15:38	
Toluene	<0.00200	0.100	0.101	101	0.105	105	70-130	4	35	mg/kg	04.23.2020 15:38	
Ethylbenzene	<0.00200	0.100	0.0949	95	0.0980	98	71-129	3	35	mg/kg	04.23.2020 15:38	
m,p-Xylenes	<0.00400	0.200	0.197	99	0.203	102	70-135	3	35	mg/kg	04.23.2020 15:38	
o-Xylene	<0.00200	0.100	0.0996	100	0.102	102	71-133	2	35	mg/kg	04.23.2020 15:38	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		103		106		70-130	%	04.23.2020 15:38
4-Bromofluorobenzene	98		93		93		70-130	%	04.23.2020 15:38

Analytical Method: BTEX by EPA 8021B

Seq Number: 3124024

Parent Sample Id: 659586-001

Matrix: Soil

MS Sample Id: 659586-001 S

Prep Method: SW5035A

Date Prep: 04.23.2020

MSD Sample Id: 659586-001 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	0.117	117	0.114	114	70-130	3	35	mg/kg	04.23.2020 16:19	
Toluene	<0.00200	0.100	0.110	110	0.109	109	70-130	1	35	mg/kg	04.23.2020 16:19	
Ethylbenzene	<0.00200	0.100	0.105	105	0.102	102	71-129	3	35	mg/kg	04.23.2020 16:19	
m,p-Xylenes	<0.00401	0.200	0.216	108	0.210	105	70-135	3	35	mg/kg	04.23.2020 16:19	
o-Xylene	<0.00200	0.100	0.108	108	0.105	105	71-133	3	35	mg/kg	04.23.2020 16:19	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		104		70-130	%	04.23.2020 16:19
4-Bromofluorobenzene	93		94		70-130	%	04.23.2020 16:19

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

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

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

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



Chain of Custody

Work Order No.:

12591212

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) 565-3443 Lubbock, TX (806) 794-1296 Casabad, NM (432) 704-5440
Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000 West Palm Beach, FL (561) 999-9999

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Page 1 of 1

Project Manager:	Chris McKisson	Bill To: (if different)	→
Company Name:	LT Environmental	Company Name:	→
Address:	820 Megan Ave, Unit B	Address:	
City, State ZIP:	Rifle, CO 81650	City, State ZIP:	
Phone:	970 285 9985	Email:	cmckisson@ltem.com and apyers@ltem.com
Project Name:	ARE EEE #071		

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐

State of Project:

Reporting Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐

Deliverables: EDD ☐ ADAPT ☐ Other:

Project Name:	ARE FEE #201	Turn Around
Project Number:	034820008	Routine ☐
Project Location	Eddy County	Rush: 48 hr
Sampler's Name:	Anna Byers	Due Date: 4/24/20
PO #:		Quote #:

ANALYSIS REQUEST										Preservative Codes	
										MeOH: Me	
										None: NO	
										HNO ₃ : HN	

SAMPLE RECEIPT		Temp Blank:	Wet Ice:
Temperature (°C):	0.12	Yes No	Yes No
Received Intact:	Yes No	Thermometer ID	
Cooler Custody Seals:	Yes No N/A	J - NM-004	
Sample Custody Seals:	Yes No N/A	Correction Factor: -0.2	
		Total Containers: 1	

H ₂ SO ₄ : H ₂
HCl: HL
NaOH: Na
Zn Acetate+ NaOH: Zn

TAT starts the day received by the ship.

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number	TPH	BTEX	Chloride	Sample Comments
	5509	S	4/24/00	1113	0'-0.3'	1	X	X	X	
	5509A	S	4/23/00	1220	0.6'-1.0'	1	X	X	X	(resample)
Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cl O S Se										

Total 200.7 / 6010 200.8 / 6020:

Circle Method(s) and Metal(s) to be analyzed

[illegible]

1631 / 245.1 / 7470 / 7471 : Hg

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

[illegible]

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,

A handwritten signature in black ink that reads 'Jessica Kramer'.

Jessica Kramer

Project Assistant

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

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

**Sample Cross Reference 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



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: APE Fee #001H

Project ID:

Work Order Number(s): 650125

Report Date: 24-JAN-20

Date Received: 01/23/2020

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

<i>Analysis Requested</i>	<i>Lab Id:</i>	650125-001	650125-002	650125-003	650125-004	650125-005	650125-006
	<i>Field Id:</i>	BH01	BH02	BH03	BH04	BH05	BH06
	<i>Depth:</i>	0-.25 ft	0-.25 ft	0-.25 ft	0-.25 ft	0-.25 ft	0-.25 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	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	<i>Extracted:</i>	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
	<i>Analyzed:</i>	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
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00202 0.00202	<0.00201 0.00201	<0.00201 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	<i>Extracted:</i>	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
	<i>Analyzed:</i>	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
	<i>Units/RL:</i>	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	<i>Extracted:</i>	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
	<i>Analyzed:</i>	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
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<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

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

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

Jessica Kramer
Project Assistant



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				

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

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

Jessica Kramer
Project Assistant



Certificate of Analytical Results 650125

LT Environmental, Inc., Arvada, CO

APE Fee #001H

Sample Id: **BH01**
Lab Sample Id: 650125-001

Matrix: Soil
Date Collected: 01.23.20 12.50

Date Received: 01.23.20 11.45
Sample Depth: 0 - .25 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3114263

Date Prep: 01.23.20 17.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

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

Tech: DTH

Analyst: DTH

Seq Number: 3114260

Date Prep: 01.23.20 17.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

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**
Lab Sample Id: 650125-001

Matrix: Soil
Date Collected: 01.23.20 12.50

Date Received: 01.23.20 11.45
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**
 Lab Sample Id: 650125-002

Matrix: Soil
 Date Collected: 01.23.20 12.55

Date Received: 01.23.20 11.45
 Sample Depth: 0 - .25 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3114263

Date Prep: 01.23.20 17.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

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

Tech: DTH

Analyst: DTH

Seq Number: 3114260

Date Prep: 01.23.20 17.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

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**
Lab Sample Id: 650125-002

Matrix: Soil
Date Collected: 01.23.20 12.55

Date Received: 01.23.20 11.45
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**
Lab Sample Id: 650125-003

Matrix: Soil
Date Collected: 01.23.20 13.05

Date Received: 01.23.20 11.45
Sample Depth: 0 - .25 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3114263

Date Prep: 01.23.20 17.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

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

Tech: DTH

Analyst: DTH

Seq Number: 3114260

Date Prep: 01.23.20 17.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

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**
Lab Sample Id: 650125-003

Matrix: Soil
Date Collected: 01.23.20 13.05

Date Received: 01.23.20 11.45
Sample Depth: 0 - .25 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3114284

Date Prep: 01.23.20 18.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.24.20 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**
Lab Sample Id: 650125-004

Matrix: Soil
Date Collected: 01.23.20 13.10

Date Received: 01.23.20 11.45
Sample Depth: 0 - .25 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3114263

Date Prep: 01.23.20 17.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

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

Tech: DTH

Analyst: DTH

Seq Number: 3114260

Date Prep: 01.23.20 17.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

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**
Lab Sample Id: 650125-004

Matrix: Soil
Date Collected: 01.23.20 13.10

Date Received: 01.23.20 11.45
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**
Lab Sample Id: 650125-005

Matrix: Soil
Date Collected: 01.23.20 13.15

Date Received: 01.23.20 11.45
Sample Depth: 0 - .25 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3114263

Date Prep: 01.23.20 17.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

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

Tech: DTH

Analyst: DTH

Seq Number: 3114260

Date Prep: 01.23.20 17.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

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**
Lab Sample Id: 650125-005

Matrix: Soil
Date Collected: 01.23.20 13.15

Date Received: 01.23.20 11.45
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**
Lab Sample Id: 650125-006

Matrix: Soil
Date Collected: 01.23.20 13.20

Date Received: 01.23.20 11.45
Sample Depth: 0 - .25 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3114263

Date Prep: 01.23.20 17.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

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

Tech: DTH

Analyst: DTH

Seq Number: 3114260

Date Prep: 01.23.20 17.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

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**
Lab Sample Id: 650125-006

Matrix: Soil
Date Collected: 01.23.20 13.20

Date Received: 01.23.20 11.45
Sample Depth: 0 - .25 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3114284

Date Prep: 01.23.20 18.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.24.20 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**
Lab Sample Id: 650125-007

Matrix: Soil
Date Collected: 01.23.20 13.25

Date Received: 01.23.20 11.45
Sample Depth: 0 - .25 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3114263

Date Prep: 01.23.20 17.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

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

Tech: DTH

Analyst: DTH

Seq Number: 3114260

Date Prep: 01.23.20 17.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

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**
Lab Sample Id: 650125-007

Matrix: Soil
Date Collected: 01.23.20 13.25

Date Received: 01.23.20 11.45
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**
 Lab Sample Id: 650125-008

Matrix: Soil
 Date Collected: 01.23.20 13.30

Date Received: 01.23.20 11.45
 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**
Lab Sample Id: 650125-008

Matrix: Soil
Date Collected: 01.23.20 13.30

Date Received: 01.23.20 11.45
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



LT Environmental, Inc.

APE Fee #001H

Analytical Method: Chloride by EPA 300

Seq Number: 3114263

MB Sample Id: 7695075-1-BLK

Matrix: Solid

LCS Sample Id: 7695075-1-BKS

Prep Method: E300P

Date Prep: 01.23.20

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

Seq Number: 3114266

MB Sample Id: 7695076-1-BLK

Matrix: Solid

LCS Sample Id: 7695076-1-BKS

Prep Method: E300P

Date Prep: 01.23.20

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

Seq Number: 3114263

Parent Sample Id: 650111-008

Matrix: Soil

MS Sample Id: 650111-008 S

Prep Method: E300P

Date Prep: 01.23.20

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

Seq Number: 3114263

Parent Sample Id: 650121-004

Matrix: Soil

MS Sample Id: 650121-004 S

Prep Method: E300P

Date Prep: 01.23.20

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

Seq Number: 3114266

Parent Sample Id: 650114-010

Matrix: Soil

MS Sample Id: 650114-010 S

Prep Method: E300P

Date Prep: 01.23.20

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
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

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

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

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



LT Environmental, Inc.

APE Fee #001H

Analytical Method: Chloride by EPA 300

Seq Number: 3114266

Parent Sample Id: 650125-008

Matrix: Soil

MS Sample Id: 650125-008 S

Prep Method: E300P

Date Prep: 01.23.20

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

Seq Number: 3114260

MB Sample Id: 7695067-1-BLK

Matrix: Solid

LCS Sample Id: 7695067-1-BKS

Prep Method: SW8015P

Date Prep: 01.23.20

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

Seq Number: 3114260

Matrix: Solid

MB Sample Id: 7695067-1-BLK

Prep Method: SW8015P

Date Prep: 01.23.20

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

Seq Number: 3114260

Matrix: Soil

Parent Sample Id: 650114-006

MS Sample Id: 650114-006 S

Prep Method: SW8015P

Date Prep: 01.23.20

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
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

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

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

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



LT Environmental, Inc.

APE Fee #001H

Analytical Method: BTEX by EPA 8021B

Seq Number: 3114284

MB Sample Id: 7695071-1-BLK

Matrix: Solid

LCS Sample Id: 7695071-1-BKS

Prep Method: SW5030B

Date Prep: 01.23.20

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

Seq Number: 3114284

Parent Sample Id: 650125-002

Matrix: Soil

MS Sample Id: 650125-002 S

Prep Method: SW5030B

Date Prep: 01.23.20

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	

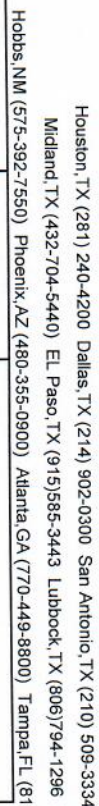
Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		107		70-130	%	01.24.20 01:16
4-Bromofluorobenzene	94		86		70-130	%	01.24.20 01:16

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

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

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

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



Chain of Custody

Work Order No.:

650125

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

Project Name:	APE Fee #001H		Turn Around	ANALYSIS REQUEST	WORK ORDER NOTES
Project Number:		Routine ☐			
P.O. Number:	01/21/2020	Rush: 24Hr			
Sampler's Name:	Garrett Green	Due Date:			
SAMPLE RECEIPT					
Temperature (°C):	2.2	Temp Blank:	☒ Yes ☐ No	Wet Ice:	☒ Yes ☐ No
Received Intact:	☒ Yes ☐ No	Thermometer ID		F-NM-007	
Cooler Custody Seals:	Yes ☒ No ☐ N/A	Correction Factor:		-0.2	
Sample Custody Seals:	Yes ☒ No ☐ N/A	Total Containers:		8	
Number of Containers					
EPA 8015)					
(EPA 0=8021)					
de (EPA 300.0)					
TAT starts the day received by the lab, if received by 4:30pm					

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number	TPH (%)	BTEX	Chloride										Sample Comments
BH01	S	01/23/2008	1256	0'-0.25'	1	X	X	X										
BH02			1255		1													
BH03			1305		1													
BH04			1316		1													
BH05			1315		1													
BH06			1320		1													
BH07			1325		1													
BH08	↖	↗	1330	↖	1	↖	↖	↖										
JES																		

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	11	Sn	U	V	Zn
<i>Circle Method(s) and Metal(s) to be analyzed</i>		TCLP / SPLP	6010:	8RCRA	Sb	As	Ba	Be	Cd	Cr	Co	Cu	Pb	Mn	Mo	Ni	Se	Ag	11	U													
Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.																																	
1631 / 245.1 / 7470 / 7471 : Hg																																	

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		1/23/20 15:45			

Revised Date 05/14/18 Rev. 20/18

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:



Elizabeth McClellan

Date: 01.23.2020

Checklist reviewed by:



Jessica Kramer

Date: 01.24.2020

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,

A handwritten signature in black ink that reads 'Jessica Kramer'. The signature is written in a cursive, flowing style.

Jessica Kramer

Project Assistant

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

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

**Sample Cross Reference 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



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Ape Fee #001H

Project ID:

Work Order Number(s): 650133

Report Date: 27-JAN-20

Date Received: 01/23/2020

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

<i>Analysis Requested</i>	<i>Lab Id:</i>	650133-001	650133-002	650133-003	650133-004	650133-005	650133-006
	<i>Field Id:</i>	BH01A	BH02A	BH03A	BH04A	BH05A	BH06A
	<i>Depth:</i>	0.5- ft	0.5- ft	0.5- ft	0.5- ft	0.5- ft	0.5- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	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	<i>Extracted:</i>	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
	<i>Analyzed:</i>	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
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00199 0.00199	<0.00201 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	<i>Extracted:</i>	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
	<i>Analyzed:</i>	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
	<i>Units/RL:</i>	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	<i>Extracted:</i>	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
	<i>Analyzed:</i>	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
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<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

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Version: 1.9%

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				

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

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Version: 1.0%

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analytical Results 650133

LT Environmental, Inc., Arvada, CO

Ape Fee #001H

Sample Id: **BH01A**
Lab Sample Id: 650133-001

Matrix: Soil
Date Collected: 01.23.20 12.50

Date Received: 01.23.20 15.45
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3114325

Date Prep: 01.23.20 20.28

Prep Method: E300P

% Moisture:

Basis: Wet Weight

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

Tech: DTH

Analyst: DTH

Seq Number: 3114448

Date Prep: 01.24.20 10.27

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

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**
Lab Sample Id: 650133-001

Matrix: Soil
Date Collected: 01.23.20 12.50

Date Received: 01.23.20 15.45
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3114285

Date Prep: 01.23.20 18.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.24.20 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**
Lab Sample Id: 650133-002

Matrix: Soil
Date Collected: 01.23.20 12.55

Date Received: 01.23.20 15.45
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3114325

Date Prep: 01.23.20 20.28

Prep Method: E300P

% Moisture:

Basis: Wet Weight

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

Tech: DTH

Analyst: DTH

Seq Number: 3114448

Date Prep: 01.24.20 10.27

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

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**
Lab Sample Id: 650133-002

Matrix: Soil
Date Collected: 01.23.20 12.55

Date Received: 01.23.20 15.45
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**
 Lab Sample Id: 650133-003

Matrix: Soil
 Date Collected: 01.23.20 13.05

Date Received: 01.23.20 15.45
 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**
Lab Sample Id: 650133-003

Matrix: Soil
Date Collected: 01.23.20 13.05

Date Received: 01.23.20 15.45
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3114285

Date Prep: 01.23.20 18.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

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**
 Lab Sample Id: 650133-004

Matrix: Soil
 Date Collected: 01.23.20 13.10

Date Received: 01.23.20 15.45
 Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3114325

Date Prep: 01.23.20 20.28

Prep Method: E300P

% Moisture:

Basis: Wet Weight

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

Tech: DTH

Analyst: DTH

Seq Number: 3114448

Date Prep: 01.24.20 10.27

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

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**
Lab Sample Id: 650133-004

Matrix: Soil
Date Collected: 01.23.20 13.10

Date Received: 01.23.20 15.45
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3114285

Date Prep: 01.23.20 18.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.24.20 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**
 Lab Sample Id: 650133-005

Matrix: Soil
 Date Collected: 01.23.20 13.15

Date Received: 01.23.20 15.45
 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**
Lab Sample Id: 650133-005

Matrix: Soil
Date Collected: 01.23.20 13.15

Date Received: 01.23.20 15.45
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**
 Lab Sample Id: 650133-006

Matrix: Soil
 Date Collected: 01.23.20 13.20

Date Received: 01.23.20 15.45
 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**
Lab Sample Id: 650133-006

Matrix: Soil
Date Collected: 01.23.20 13.20

Date Received: 01.23.20 15.45
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3114285

Date Prep: 01.23.20 18.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.24.20 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**
Lab Sample Id: 650133-007

Matrix: Soil
Date Collected: 01.23.20 13.25

Date Received: 01.23.20 15.45
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3114325

Date Prep: 01.23.20 20.28

Prep Method: E300P

% Moisture:

Basis: Wet Weight

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

Tech: DTH

Analyst: DTH

Seq Number: 3114448

Date Prep: 01.24.20 10.27

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

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**
Lab Sample Id: 650133-007

Matrix: Soil
Date Collected: 01.23.20 13.25

Date Received: 01.23.20 15.45
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3114404

Date Prep: 01.24.20 07.14

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.24.20 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**
 Lab Sample Id: 650133-008

Matrix: Soil
 Date Collected: 01.23.20 13.30

Date Received: 01.23.20 15.45
 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**
Lab Sample Id: 650133-008

Matrix: Soil
Date Collected: 01.23.20 13.30

Date Received: 01.23.20 15.45
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



LT Environmental, Inc.

Ape Fee #001H

Analytical Method: Chloride by EPA 300

Seq Number: 3114325

MB Sample Id: 7695077-1-BLK

Matrix: Solid

LCS Sample Id: 7695077-1-BKS

Prep Method: E300P

Date Prep: 01.23.20

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

Seq Number: 3114325

Parent Sample Id: 650130-001

Matrix: Soil

MS Sample Id: 650130-001 S

Prep Method: E300P

Date Prep: 01.23.20

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

Seq Number: 3114448

MB Sample Id: 7695115-1-BLK

Matrix: Solid

LCS Sample Id: 7695115-1-BKS

Prep Method: SW8015P

Date Prep: 01.24.20

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	Flag		
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

Seq Number: 3114448

Matrix: Solid

MB Sample Id: 7695115-1-BLK

Prep Method: SW8015P

Date Prep: 01.24.20

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
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

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

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

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



LT Environmental, Inc.

Ape Fee #001H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3114448

Parent Sample Id: 650133-001

Matrix: Soil

MS Sample Id: 650133-001 S

Prep Method: SW8015P

Date Prep: 01.24.20

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

Seq Number: 3114285

MB Sample Id: 7695072-1-BLK

Matrix: Solid

LCS Sample Id: 7695072-1-BKS

Prep Method: SW5030B

Date Prep: 01.23.20

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

Seq Number: 3114404

MB Sample Id: 7695073-1-BLK

Matrix: Solid

LCS Sample Id: 7695073-1-BKS

Prep Method: SW5030B

Date Prep: 01.24.20

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



LT Environmental, Inc.

Ape Fee #001H

Analytical Method: BTEX by EPA 8021B

Seq Number: 3114285

Parent Sample Id: 650114-001

Matrix: Soil

MS Sample Id: 650114-001 S

Prep Method: SW5030B

Date Prep: 01.23.20

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

Seq Number: 3114404

Parent Sample Id: 650047-001

Matrix: Soil

MS Sample Id: 650047-001 S

Prep Method: SW5030B

Date Prep: 01.24.20

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
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

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

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

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



Chain of Custody

Work Order No:

450133

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

Hobbs, NM (575-392-7550) Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813-620-2000)

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Page 4 of 7

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: ☐ PRP ☐ Brownfields ☐ RC ☐ Superfund State of Project:	
Reporting Level II ☐	Level III ☐
Reporting Level I ☐	IST/UST ☐
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-NUM-007			
Cooler Custody Seals:	Yes	No	Correction Factor:			
Sample Custody Seals:	Yes	No	Total Containers:			

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number	TPH (EPA	BTEX (EP	Chloride											lab, if received by 4:30pm
BH01A	S	01/23/2020	12:50	1.5'	1	X	X	X											Sample Comments
BH02A			12:55		1	X	X	X											
BH03A			13:05		1	X	X	X											
BH04A			13:10		1	X	X	X											
BH05A			13:15		1	X	X	X											
BH06A			13:20		1	X	X	X											
BH07A			13:25		1	X	X	X											
BH08A			13:30		1	X	X	X											
																			

Total 200.7 / 6010 200.8 / 6020:

Circle Method(s) and Metal(s) to be analyzed

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

1631 / 245.1 / 7470 / 7471 : Hg

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	1/23/20 15:45			

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:



Elizabeth McClellan

Date: 01.23.2020

Checklist reviewed by:



Jessica Kramer

Date: 01.24.2020

Analytical Report 651146

for
LT Environmental, Inc.

Project Manager: Chris McKisson

Ape fee

034820008

07-FEB-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)



07-FEB-20

Project Manager: **Chris McKisson**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **651146**

Ape fee

Project Address: Eddy County

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) 651146. 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. 651146 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads 'Jessica Kramer'.

Jessica Kramer

Project Assistant

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

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

**Sample Cross Reference 651146****LT Environmental, Inc., Arvada, CO**

Ape fee

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Seperator	O	02-03-20 12:30		651146-001
Heater treater	W	02-03-20 12:40		651146-002



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Ape fee

Project ID: 034820008
Work Order Number(s): 651146

Report Date: 07-FEB-20
Date Received: 02/03/2020

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3115452 Chloride by EPA 300

Sample 651146-001 analyzed at 50x due to sample matrix (oil).

Batch: LBA-3115507 BTEX by EPA 8021B

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

Batch: LBA-3115854 BTEX by EPA 8021B

Surrogate 1,4-Difluorobenzene, Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.

Samples affected are: 651146-002.



Certificate of Analysis Summary 651146

LT Environmental, Inc., Arvada, CO

Project Name: Ape fee

Project Id: 034820008
Contact: Chris McKisson
Project Location: Eddy County

Date Received in Lab: Mon Feb-03-20 03:00 pm
Report Date: 07-FEB-20
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	651146-001	651146-002				
	Field Id:	Seperator	Heater treater				
	Depth:						
	Matrix:	OIL	WASTE WATER				
	Sampled:	Feb-03-20 12:30	Feb-03-20 12:40				
BTEX by EPA 8021B SUB: T104704400-19-19	Extracted:	Feb-03-20 16:41	Feb-06-20 14:30				
	Analyzed:	Feb-04-20 12:23	Feb-06-20 21:05				
	Units/RL:	mg/kg RL	mg/L RL				
Benzene		830 10.0	3.36 D 0.200				
Toluene		1960 10.0	2.80 D 0.200				
Ethylbenzene		461 10.0	0.0811 0.00200				
m,p-Xylenes		3220 20.0	0.567 0.00400				
o-Xylene		862 10.0	0.180 0.00200				
Xylenes, Total		4080 10.0	0.747 0.00200				
Total BTEX		7330 10.0	6.99 0.00200				
Chloride by EPA 300	Extracted:	Feb-03-20 17:00	Feb-03-20 17:30				
	Analyzed:	Feb-03-20 21:10	Feb-03-20 21:00				
	Units/RL:	mg/kg RL	mg/L RL				
Chloride		<500 500	92800 1250				
TPH by SW8015 Mod	Extracted:	Feb-04-20 17:35	Feb-04-20 16:00				
	Analyzed:	Feb-05-20 07:21	Feb-05-20 02:31				
	Units/RL:	mg/kg RL	mg/L RL				
Gasoline Range Hydrocarbons (GRO)		55200 10000	16.4 2.12				
Diesel Range Organics (DRO)		60600 10000	34.8 2.12				
Motor Oil Range Hydrocarbons (MRO)		3280 2500	2.54 2.12				
Total GRO-DRO		116000 10000	51.2 2.12				
Total TPH		119000 2500	53.7 2.12				

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

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

Jessica Kramer
Project Assistant



Certificate of Analytical Results 651146

LT Environmental, Inc., Arvada, CO

Ape fee

Sample Id: **Seperator**
 Lab Sample Id: 651146-001

Matrix: Oil
 Date Collected: 02.03.20 12.30

Date Received: 02.03.20 15.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.03.20 17.00

Basis: Wet Weight

Seq Number: 3115452

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<500	500	mg/kg	02.03.20 21.10	U	50

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 02.04.20 17.35

Basis: Wet Weight

Seq Number: 3115620

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	55200	10000	mg/kg	02.05.20 07.21		200
Diesel Range Organics (DRO)	C10C28DRO	60600	10000	mg/kg	02.05.20 07.21		200
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	3280	2500	mg/kg	02.05.20 07.21		200
Total GRO-DRO	PHC628	116000	10000	mg/kg	02.05.20 07.21		200
Total TPH	PHC635	119000	2500	mg/kg	02.05.20 07.21		200

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	02.05.20 07.21	
o-Terphenyl	84-15-1	108	%	70-135	02.05.20 07.21	



Certificate of Analytical Results 651146

LT Environmental, Inc., Arvada, CO

Ape fee

Sample Id: **Seperator**
Lab Sample Id: 651146-001

Matrix: Oil
Date Collected: 02.03.20 12.30

Date Received: 02.03.20 15.00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.03.20 16.41

Basis: Wet Weight

Seq Number: 3115507

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	830	10.0	mg/kg	02.04.20 12.23		5000
Toluene	108-88-3	1960	10.0	mg/kg	02.04.20 12.23		5000
Ethylbenzene	100-41-4	461	10.0	mg/kg	02.04.20 12.23		5000
m,p-Xylenes	179601-23-1	3220	20.0	mg/kg	02.04.20 12.23		5000
o-Xylene	95-47-6	862	10.0	mg/kg	02.04.20 12.23		5000
Xylenes, Total	1330-20-7	4080	10.0	mg/kg	02.04.20 12.23		5000
Total BTEX		7330	10.0	mg/kg	02.04.20 12.23		5000
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	100	%	70-130	02.04.20 12.23		
1,4-Difluorobenzene	540-36-3	94	%	70-130	02.04.20 12.23		



Certificate of Analytical Results 651146

LT Environmental, Inc., Arvada, CO

Ape fee

Sample Id: **Heater treater**

Matrix: Waste Water

Date Received: 02.03.20 15.00

Lab Sample Id: 651146-002

Date Collected: 02.03.20 12.40

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.03.20 17.30

Seq Number: 3115453

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	92800	1250	mg/L	02.03.20 21.00		2500

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 02.04.20 16.00

Seq Number: 3115635

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	16.4	2.12	mg/L	02.05.20 02.31		1
Diesel Range Organics (DRO)	C10C28DRO	34.8	2.12	mg/L	02.05.20 02.31		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	2.54	2.12	mg/L	02.05.20 02.31		1
Total GRO-DRO	PHC628	51.2	2.12	mg/L	02.05.20 02.31		1
Total TPH	PHC635	53.7	2.12	mg/L	02.05.20 02.31		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	02.05.20 02.31	
o-Terphenyl	84-15-1	96	%	70-135	02.05.20 02.31	



Certificate of Analytical Results 651146

LT Environmental, Inc., Arvada, CO

Ape fee

Sample Id: **Heater treater**

Matrix: Waste Water

Date Received: 02.03.20 15.00

Lab Sample Id: 651146-002

Date Collected: 02.03.20 12.40

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 02.06.20 14.30

Seq Number: 3115854

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	3.36	0.200	mg/L	02.07.20 09.58	D	100
Toluene	108-88-3	2.80	0.200	mg/L	02.07.20 09.58	D	100
Ethylbenzene	100-41-4	0.0811	0.00200	mg/L	02.06.20 21.05		1
m,p-Xylenes	179601-23-1	0.567	0.00400	mg/L	02.06.20 21.05		1
o-Xylene	95-47-6	0.180	0.00200	mg/L	02.06.20 21.05		1
Total Xylenes	1330-20-7	0.747	0.00200	mg/L	02.06.20 21.05		1
Total BTEX		6.99	0.00200	mg/L	02.07.20 09.58		100
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	137	%	70-130	02.06.20 21.05	**	
4-Bromofluorobenzene	460-00-4	136	%	70-130	02.06.20 21.05	**	



Flagging Criteria

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

****** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



LT Environmental, Inc.

Ape fee

Analytical Method: Chloride by EPA 300

Seq Number: 3115452

MB Sample Id: 7695825-1-BLK

Matrix: Solid

LCS Sample Id: 7695825-1-BKS

Prep Method: E300P

Date Prep: 02.03.20

LCSD Sample Id: 7695825-1-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	259	104	260	104	90-110	0	20	mg/kg	02.03.20 18:55	

Analytical Method: Chloride by EPA 300

Seq Number: 3115453

MB Sample Id: 7695827-1-BLK

Matrix: Water

LCS Sample Id: 7695827-1-BKS

Prep Method: E300P

Date Prep: 02.03.20

LCSD Sample Id: 7695827-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.500	25.0	25.9	104	26.1	104	90-110	1	20	mg/L	02.03.20 19:47	

Analytical Method: Chloride by EPA 300

Seq Number: 3115452

Parent Sample Id: 651053-012

Matrix: Soil

MS Sample Id: 651053-012 S

Prep Method: E300P

Date Prep: 02.03.20

MSD Sample Id: 651053-012 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	128	202	322	96	321	96	90-110	0	20	mg/kg	02.03.20 19:12	

Analytical Method: Chloride by EPA 300

Seq Number: 3115453

Parent Sample Id: 651070-001

Matrix: Water

MS Sample Id: 651070-001 S

Prep Method: E300P

Date Prep: 02.03.20

MSD Sample Id: 651070-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	89000	20.0	75800	0	77100	0	90-110	2	20	mg/L	02.03.20 20:04	X

Analytical Method: TPH by SW8015 Mod

Seq Number: 3115635

MB Sample Id: 7696032-1-BLK

Matrix: Water

LCS Sample Id: 7696032-1-BKS

Prep Method: SW8015P

Date Prep: 02.04.20

LCSD Sample Id: 7696032-1-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)	<2.50	100	115	115	114	114	70-135	1	35	mg/L	02.05.20 02:12	
Diesel Range Organics (DRO)	<2.50	100	114	114	117	117	70-135	3	35	mg/L	02.05.20 02:12	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	133		111		123		70-135	%	02.05.20 02:12
o-Terphenyl	118		99		116		70-135	%	02.05.20 02:12

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

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

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

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



LT Environmental, Inc.

Ape fee

Analytical Method: TPH by SW8015 Mod

Seq Number: 3115620

MB Sample Id: 7696023-1-BLK

Matrix: Solid

LCS Sample Id: 7696023-1-BKS

Prep Method: SW8015P

Date Prep: 02.04.20

LCSD Sample Id: 7696023-1-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	1150	115	1090	109	70-135	5	35	mg/kg	02.05.20 03:29	
Diesel Range Organics (DRO)	<50.0	1000	1180	118	1080	108	70-135	9	35	mg/kg	02.05.20 03:29	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	98		120		119		70-135	%	02.05.20 03:29
o-Terphenyl	95		115		106		70-135	%	02.05.20 03:29

Analytical Method: TPH by SW8015 Mod

Seq Number: 3115635

Matrix: Water

MB Sample Id: 7696032-1-BLK

Prep Method: SW8015P

Date Prep: 02.04.20

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<2.50	mg/L	02.05.20 02:12	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3115620

Matrix: Solid

MB Sample Id: 7696023-1-BLK

Prep Method: SW8015P

Date Prep: 02.04.20

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	02.05.20 03:10	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3115635

Matrix: Waste Water

Parent Sample Id: 651146-002

MS Sample Id: 651146-002 S

Prep Method: SW8015P

Date Prep: 02.04.20

MSD Sample Id: 651146-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	16.4	84.8	128	132	106	106	70-135	19	35	mg/L	02.05.20 02:50	
Diesel Range Organics (DRO)	34.8	84.8	132	115	105	83	70-135	23	35	mg/L	02.05.20 02:50	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	116		126		70-135	%	02.05.20 02:50
o-Terphenyl	108		113		70-135	%	02.05.20 02:50

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

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

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

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



LT Environmental, Inc.

Ape fee

Analytical Method: TPH by SW8015 Mod

Seq Number: 3115620

Parent Sample Id: 651153-033

Matrix: Soil

MS Sample Id: 651153-033 S

Prep Method: SW8015P

Date Prep: 02.04.20

MSD Sample Id: 651153-033 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.1	1000	1110	111	1200	120	70-135	8	35	mg/kg	02.05.20 03:48	
Diesel Range Organics (DRO)	<50.1	1000	1100	110	1080	108	70-135	2	35	mg/kg	02.05.20 03:48	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	123		125		70-135	%	02.05.20 03:48
o-Terphenyl	108		121		70-135	%	02.05.20 03:48

Analytical Method: BTEX by EPA 8021B

Seq Number: 3115507

MB Sample Id: 7695884-1-BLK

Matrix: Solid

LCS Sample Id: 7695884-1-BKS

Prep Method: SW5030B

Date Prep: 02.03.20

LCSD Sample Id: 7695884-1-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	0.116	116	0.103	103	70-130	12	35	mg/kg	02.04.20 03:32	
Toluene	<0.00200	0.100	0.107	107	0.0936	94	70-130	13	35	mg/kg	02.04.20 03:32	
Ethylbenzene	<0.00200	0.100	0.103	103	0.0888	89	71-129	15	35	mg/kg	02.04.20 03:32	
m,p-Xylenes	<0.00400	0.200	0.202	101	0.174	87	70-135	15	35	mg/kg	02.04.20 03:32	
o-Xylene	<0.00200	0.100	0.103	103	0.0888	89	71-133	15	35	mg/kg	02.04.20 03:32	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	111		109		107		70-130	%	02.04.20 03:32
4-Bromofluorobenzene	95		91		93		70-130	%	02.04.20 03:32

Analytical Method: BTEX by EPA 8021B

Seq Number: 3115854

MB Sample Id: 7696147-1-BLK

Matrix: Water

LCS Sample Id: 7696147-1-BKS

Prep Method: SW5030B

Date Prep: 02.06.20

LCSD Sample Id: 7696147-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000408	0.100	0.118	118	0.116	116	70-130	2	25	mg/L	02.06.20 18:25	
Toluene	<0.000367	0.100	0.107	107	0.105	105	70-130	2	25	mg/L	02.06.20 18:25	
Ethylbenzene	<0.000657	0.100	0.0995	100	0.0980	98	70-130	2	25	mg/L	02.06.20 18:25	
m,p-Xylenes	<0.000630	0.200	0.196	98	0.193	97	70-130	2	25	mg/L	02.06.20 18:25	
o-Xylene	<0.000642	0.100	0.0985	99	0.0954	95	70-130	3	25	mg/L	02.06.20 18:25	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		110		109		70-130	%	02.06.20 18:25
4-Bromofluorobenzene	71		91		86		70-130	%	02.06.20 18:25

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

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

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

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



LT Environmental, Inc.

Ape fee

Analytical Method: BTEX by EPA 8021B

Seq Number: 3115507

Parent Sample Id: 651153-028

Matrix: Soil

MS Sample Id: 651153-028 S

Prep Method: SW5030B

Date Prep: 02.03.20

MSD Sample Id: 651153-028 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.0916	92	0.113	114	70-130	21	35	mg/kg	02.04.20 04:13	
Toluene	<0.00199	0.0996	0.0879	88	0.104	105	70-130	17	35	mg/kg	02.04.20 04:13	
Ethylbenzene	<0.00199	0.0996	0.0887	89	0.101	102	71-129	13	35	mg/kg	02.04.20 04:13	
m,p-Xylenes	<0.00398	0.199	0.177	89	0.197	99	70-135	11	35	mg/kg	02.04.20 04:13	
o-Xylene	<0.00199	0.0996	0.0893	90	0.0986	99	71-133	10	35	mg/kg	02.04.20 04:13	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	111		110		70-130	%	02.04.20 04:13
4-Bromofluorobenzene	96		96		70-130	%	02.04.20 04:13

Analytical Method: BTEX by EPA 8021B

Seq Number: 3115854

Parent Sample Id: 651265-001

Matrix: Ground Water

MS Sample Id: 651265-001 S

Prep Method: SW5030B

Date Prep: 02.06.20

MSD Sample Id: 651265-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000408	0.100	0.111	111	0.115	115	70-130	4	25	mg/L	02.06.20 19:05	
Toluene	<0.000367	0.100	0.102	102	0.103	103	70-130	1	25	mg/L	02.06.20 19:05	
Ethylbenzene	<0.000657	0.100	0.0967	97	0.0967	97	70-130	0	25	mg/L	02.06.20 19:05	
m,p-Xylenes	<0.000630	0.200	0.190	95	0.189	95	70-130	1	25	mg/L	02.06.20 19:05	
o-Xylene	<0.000642	0.100	0.0948	95	0.0941	94	70-130	1	25	mg/L	02.06.20 19:05	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		110		70-130	%	02.06.20 19:05
4-Bromofluorobenzene	86		84		70-130	%	02.06.20 19:05

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

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

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

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



Chain of Custody

Work Order No: 125146

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 Crasbad, NM (432) 704-5440

47 (400) 355-0000 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000 West Palm Beach, FL (561) 689-6100

Page 01
www.xenco.com

Project Manager:	Chris McKisson	Bill to: (if different)	→
Company Name:	LT Environmental	Company Name:	→
Address:	820 Megan Ave, Unit B	Address:	
City, State ZIP:	Rifle, CO 81650	City, State ZIP:	
Phone:	970 285 9985	Email:	cmckisson@tenv.com

ANALYSIS R

Work Order Comments	
Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐	
State of Project:	
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐	
Deliverables: EDD ☐ ADAPT ☐ Other:	

[illegible]

SAMPLE RECEIPT		Temp Blank:	(Yes) (No)	Wet Ice:	(Yes) (No)
Temperature (°C):	0.6			Thermometer ID	
Received intact:	(Yes) (No)			711007	
Cooler Custody Seals:	Yes (No) N/A			Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A			Total Containers:	2/2

Number of Containers

PH (EPA)

STEX (EPA)

chlorides (

NaOH: Na

Zn Acetate+ NaOH: Zn

TAT starts the day received by the lab.
received by 4:00pm

Sample Comments

[illegible]

Total	200.7 / 6010	200.8 / 6020:
-------	--------------	---------------

[illegible]

1631 / 245.1 / 7470 / 7471 : Hg

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 II

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenoco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenoco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of service. Xenoco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of service. Xenoco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of service.

of Xanco. A minimum charge of \$75.00 will be applied to each project with a charge of the fee shown below.				Date/Time
Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)
1 <i>fatlyh</i>	<i>[Signature]</i>	2/3/20 15:00	2	
3			4	
5			6	

Revised Date 02/26/19 Rev. 201



Inter-Office Shipment

Page 1 of 1

IOS Number **57423**

Date/Time: 02/04/20 14:23

Created by: Elizabeth McClellan

Please send report to: Jessica Kramer

Lab# From: **Carlsbad**

Delivery Priority:

Address: 1089 N Canal Street

Lab# To: **Midland**

Air Bill No.:

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
651146-002	W	Heater treater	02/03/20 12:40	SW8021B	BTEX by EPA 8021B	02/05/20	02/17/20	JKR	BR4FBZ BZ BZME EBZ X	

Inter Office Shipment or Sample Comments:

Relinquished By:

Elizabeth McClellan

Date Relinquished: 02/04/2020

Received By:

Brianna Teel

Date Received: 02/02/2020 00:00

Cooler Temperature: 0.6



Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 57423

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

Sent By: Elizabeth McClellan

Date Sent: 02/04/2020 02:23 PM

Received By: Brianna Teel

Date Received: 02/02/2020 12:00 AM

Sample Receipt Checklist

Comments

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

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ Contacted by : _____ Date: _____

Checklist reviewed by:

Brianna Teel

Date: 02/02/2020



Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 02/03/2020 03:00:00 PM

Work Order #: 651146

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)?	.6	
#2 *Shipping container in good condition?	Yes	
#3 *Samples received on ice?	Yes	
#4 *Custody Seals intact on shipping container/ cooler?	Yes	
#5 Custody Seals intact on sample bottles?	Yes	
#6 *Custody Seals Signed and dated?	Yes	
#7 *Chain of Custody present?	Yes	
#8 Any missing/extra samples?	No	
#9 Chain of Custody signed when relinquished/ received?	Yes	
#10 Chain of Custody agrees with sample labels/matrix?	Yes	
#11 Container label(s) legible and intact?	Yes	
#12 Samples in proper container/ bottle?	Yes	
#13 Samples properly preserved?	Yes	
#14 Sample container(s) intact?	Yes	
#15 Sufficient sample amount for indicated test(s)?	Yes	
#16 All samples received within hold time?	Yes	
#17 Subcontract of sample(s)?	Yes	SW8021 Water samples subbed to Midland.
#18 Water VOC samples have zero headspace?	Yes	

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Elizabeth McClellan

Date: 02/03/2020

Checklist reviewed by:

Jessica Kramer

Date: 02/07/2020

Analytical Report 657294

**for
LT Environmental, Inc.**

Project Manager: Chris McKisson

APE FEE #001

034820001

31-MAR-20

Collected By: Client



**1089 N Canal Street
Carlsbad, NM 88220**

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)

Xenco-Carlsbad (LELAP): Louisiana (05092)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)

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

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



31-MAR-20

Project Manager: **Chris McKisson**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **657294**

APE FEE #001

Project Address: Eddy County

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) 657294. 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. 657294 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads 'Jessica Kramer'.

Jessica Kramer

Project Manager

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

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

**Sample Cross Reference 657294****LT Environmental, Inc., Arvada, CO**

APE FEE #001

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01A	S	03-30-20 12:15	1 - 2 ft	657294-001
FS02A	S	03-30-20 09:55	1 ft	657294-002
FS03A	S	03-30-20 10:15	1 ft	657294-003
FS04A	S	03-30-20 10:55	1 ft	657294-004
FS05A	S	03-30-20 10:45	1 ft	657294-005
FS23A	S	03-30-20 10:30	0.5 ft	657294-006



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: APE FEE #001

Project ID: 034820001
Work Order Number(s): 657294

Report Date: 31-MAR-20
Date Received: 03/30/2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3121410 BTEX by EPA 8021B

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



Certificate of Analysis Summary 657294

LT Environmental, Inc., Arvada, CO

Project Name: APE FEE #001

Project Id: 034820001
Contact: Chris McKisson
Project Location: Eddy County

Date Received in Lab: Mon Mar-30-20 01:08 pm
Report Date: 31-MAR-20
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	657294-001	657294-002	657294-003	657294-004	657294-005	657294-006
	<i>Field Id:</i>	FS01A	FS02A	FS03A	FS04A	FS05A	FS23A
	<i>Depth:</i>	1-2 ft	1- ft	1- ft	1- ft	1- ft	0.5- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Mar-30-20 12:15	Mar-30-20 09:55	Mar-30-20 10:15	Mar-30-20 10:55	Mar-30-20 10:45	Mar-30-20 10:30
BTEX by EPA 8021B	<i>Extracted:</i>	*** ** *	*** ** *	*** ** *	*** ** *	*** ** *	*** ** *
	<i>Analyzed:</i>	Mar-30-20 18:34	Mar-30-20 18:54	Mar-30-20 19:15	Mar-30-20 19:35	Mar-30-20 19:56	Mar-30-20 20:16
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198
Toluene		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198
Ethylbenzene		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198
m,p-Xylenes		<0.00399 0.00399	<0.00398 0.00398	<0.00401 0.00401	<0.00398 0.00398	<0.00398 0.00398	<0.00396 0.00396
o-Xylene		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198
Xylenes, Total		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198
Total BTEX		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198
Chloride by EPA 300	<i>Extracted:</i>	Mar-30-20 14:31	Mar-30-20 14:31	Mar-30-20 14:31	Mar-30-20 14:31	Mar-30-20 14:31	Mar-30-20 14:31
	<i>Analyzed:</i>	Mar-30-20 15:50	Mar-30-20 15:56	Mar-30-20 16:02	Mar-30-20 16:09	Mar-30-20 16:15	Mar-30-20 16:21
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		100 9.98	218 9.92	227 9.94	205 9.98	279 9.98	244 9.94
TPH by SW8015 Mod	<i>Extracted:</i>	Mar-30-20 14:00	Mar-30-20 14:00	Mar-30-20 14:00	Mar-30-20 14:00	Mar-30-20 14:00	Mar-30-20 14:00
	<i>Analyzed:</i>	Mar-30-20 17:31	Mar-30-20 18:32	Mar-30-20 18:53	Mar-30-20 19:13	Mar-30-20 19:34	Mar-30-20 19:54
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.3 50.3	<49.8 49.8	<49.8 49.8	<50.2 50.2	<50.1 50.1	<50.0 50.0
Diesel Range Organics (DRO)		<50.3 50.3	<49.8 49.8	<49.8 49.8	<50.2 50.2	<50.1 50.1	<50.0 50.0
Motor Oil Range Hydrocarbons (MRO)		<50.3 50.3	<49.8 49.8	<49.8 49.8	<50.2 50.2	<50.1 50.1	<50.0 50.0
Total GRO-DRO		<50.3 50.3	<49.8 49.8	<49.8 49.8	<50.2 50.2	<50.1 50.1	<50.0 50.0
Total TPH		<50.3 50.3	<49.8 49.8	<49.8 49.8	<50.2 50.2	<50.1 50.1	<50.0 50.0

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

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

Version: 1.0%

Jessica Kramer
Project Manager



Certificate of Analytical Results 657294

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS01A**
Lab Sample Id: 657294-001

Matrix: Soil
Date Collected: 03.30.20 12.15

Date Received: 03.30.20 13.08
Sample Depth: 1 - 2 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3121417

Date Prep: 03.30.20 14.31

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	100	9.98	mg/kg	03.30.20 15.50		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3121443

Date Prep: 03.30.20 14.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	03.30.20 17.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	03.30.20 17.31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	03.30.20 17.31	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	03.30.20 17.31	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	03.30.20 17.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	03.30.20 17.31	
o-Terphenyl	84-15-1	97	%	70-135	03.30.20 17.31	



Certificate of Analytical Results 657294

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS01A**
Lab Sample Id: 657294-001

Matrix: Soil
Date Collected: 03.30.20 12.15

Date Received: 03.30.20 13.08
Sample Depth: 1 - 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.30.20 09.32

Basis: Wet Weight

Seq Number: 3121410

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.30.20 18.34	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.30.20 18.34	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.30.20 18.34	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	03.30.20 18.34	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.30.20 18.34	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	03.30.20 18.34	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.30.20 18.34	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	96	%	70-130	03.30.20 18.34		
1,4-Difluorobenzene	540-36-3	111	%	70-130	03.30.20 18.34		



Certificate of Analytical Results 657294

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS02A** Matrix: Soil Date Received: 03.30.20 13.08
 Lab Sample Id: 657294-002 Date Collected: 03.30.20 09.55 Sample Depth: 1 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 03.30.20 14.31 Basis: Wet Weight
 Seq Number: 3121417

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	218	9.92	mg/kg	03.30.20 15.56		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 03.30.20 14.00 Basis: Wet Weight
 Seq Number: 3121443

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	03.30.20 18.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	03.30.20 18.32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	03.30.20 18.32	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	03.30.20 18.32	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	03.30.20 18.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	03.30.20 18.32	
o-Terphenyl	84-15-1	99	%	70-135	03.30.20 18.32	



Certificate of Analytical Results 657294

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS02A** Matrix: Soil Date Received: 03.30.20 13.08
 Lab Sample Id: 657294-002 Date Collected: 03.30.20 09.55 Sample Depth: 1 ft
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 03.30.20 09.32 Basis: Wet Weight
 Seq Number: 3121410

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.30.20 18.54	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.30.20 18.54	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.30.20 18.54	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.30.20 18.54	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.30.20 18.54	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	03.30.20 18.54	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.30.20 18.54	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	95	%	70-130	03.30.20 18.54		
1,4-Difluorobenzene	540-36-3	110	%	70-130	03.30.20 18.54		



Certificate of Analytical Results 657294

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS03A**
Lab Sample Id: 657294-003

Matrix: Soil
Date Collected: 03.30.20 10.15

Date Received: 03.30.20 13.08
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3121417

Date Prep: 03.30.20 14.31

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	227	9.94	mg/kg	03.30.20 16.02		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3121443

Date Prep: 03.30.20 14.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	03.30.20 18.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	03.30.20 18.53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	03.30.20 18.53	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	03.30.20 18.53	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	03.30.20 18.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	03.30.20 18.53	
o-Terphenyl	84-15-1	109	%	70-135	03.30.20 18.53	



Certificate of Analytical Results 657294

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS03A**
Lab Sample Id: 657294-003

Matrix: Soil
Date Collected: 03.30.20 10.15

Date Received: 03.30.20 13.08
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.30.20 09.32

Basis: Wet Weight

Seq Number: 3121410

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.30.20 19.15	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.30.20 19.15	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.30.20 19.15	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	03.30.20 19.15	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.30.20 19.15	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	03.30.20 19.15	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.30.20 19.15	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	98	%	70-130	03.30.20 19.15		
1,4-Difluorobenzene	540-36-3	109	%	70-130	03.30.20 19.15		



Certificate of Analytical Results 657294

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS04A**
Lab Sample Id: 657294-004

Matrix: Soil
Date Collected: 03.30.20 10.55

Date Received: 03.30.20 13.08
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3121417

Date Prep: 03.30.20 14.31

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	205	9.98	mg/kg	03.30.20 16.09		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3121443

Date Prep: 03.30.20 14.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	03.30.20 19.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	03.30.20 19.13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	03.30.20 19.13	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	03.30.20 19.13	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	03.30.20 19.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	03.30.20 19.13	
o-Terphenyl	84-15-1	106	%	70-135	03.30.20 19.13	



Certificate of Analytical Results 657294

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS04A**
Lab Sample Id: 657294-004

Matrix: Soil
Date Collected: 03.30.20 10.55

Date Received: 03.30.20 13.08
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3121410

Date Prep: 03.30.20 09.32

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.30.20 19.35	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.30.20 19.35	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.30.20 19.35	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.30.20 19.35	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.30.20 19.35	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	03.30.20 19.35	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.30.20 19.35	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	95	%	70-130	03.30.20 19.35		
1,4-Difluorobenzene	540-36-3	110	%	70-130	03.30.20 19.35		



Certificate of Analytical Results 657294

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS05A** Matrix: Soil Date Received: 03.30.20 13.08
 Lab Sample Id: 657294-005 Date Collected: 03.30.20 10.45 Sample Depth: 1 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 03.30.20 14.31 Basis: Wet Weight
 Seq Number: 3121417

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	279	9.98	mg/kg	03.30.20 16.15		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 03.30.20 14.00 Basis: Wet Weight
 Seq Number: 3121443

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	03.30.20 19.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	03.30.20 19.34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	03.30.20 19.34	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	03.30.20 19.34	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	03.30.20 19.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	03.30.20 19.34	
o-Terphenyl	84-15-1	104	%	70-135	03.30.20 19.34	



Certificate of Analytical Results 657294

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS05A**
 Lab Sample Id: 657294-005

Matrix: Soil
 Date Collected: 03.30.20 10.45

Date Received: 03.30.20 13.08
 Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.30.20 09.32

Basis: Wet Weight

Seq Number: 3121410

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.30.20 19.56	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.30.20 19.56	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.30.20 19.56	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.30.20 19.56	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.30.20 19.56	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	03.30.20 19.56	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.30.20 19.56	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	97	%	70-130	03.30.20 19.56		
1,4-Difluorobenzene	540-36-3	111	%	70-130	03.30.20 19.56		



Certificate of Analytical Results 657294

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS23A**
Lab Sample Id: 657294-006

Matrix: Soil
Date Collected: 03.30.20 10.30

Date Received: 03.30.20 13.08
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3121417

Date Prep: 03.30.20 14.31

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	244	9.94	mg/kg	03.30.20 16.21		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3121443

Date Prep: 03.30.20 14.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.30.20 19.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	03.30.20 19.54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.30.20 19.54	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	03.30.20 19.54	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	03.30.20 19.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	03.30.20 19.54	
o-Terphenyl	84-15-1	100	%	70-135	03.30.20 19.54	



Certificate of Analytical Results 657294

LT Environmental, Inc., Arvada, CO

APE FEE #001

Sample Id: **FS23A**
Lab Sample Id: 657294-006

Matrix: Soil
Date Collected: 03.30.20 10.30

Date Received: 03.30.20 13.08
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3121410

Prep Method: SW5030B

% Moisture:

Date Prep: 03.30.20 09.32

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	03.30.20 20.16	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	03.30.20 20.16	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	03.30.20 20.16	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	03.30.20 20.16	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	03.30.20 20.16	U	1
Xylenes, Total	1330-20-7	<0.00198	0.00198	mg/kg	03.30.20 20.16	U	1
Total BTEX		<0.00198	0.00198	mg/kg	03.30.20 20.16	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	98	%	70-130	03.30.20 20.16		
1,4-Difluorobenzene	540-36-3	111	%	70-130	03.30.20 20.16		



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



LT Environmental, Inc.

APE FEE #001

Analytical Method: Chloride by EPA 300

Seq Number: 3121417

MB Sample Id: 7700056-1-BLK

Matrix: Solid

LCS Sample Id: 7700056-1-BKS

Prep Method: E300P

Date Prep: 03.30.20

LCSD Sample Id: 7700056-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	261	104	262	105	90-110	0	20	mg/kg	03.30.20 13:47	

Analytical Method: Chloride by EPA 300

Seq Number: 3121417

Parent Sample Id: 657203-017

Matrix: Soil

MS Sample Id: 657203-017 S

Prep Method: E300P

Date Prep: 03.30.20

MSD Sample Id: 657203-017 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2250	202	2440	94	2450	99	90-110	0	20	mg/kg	03.30.20 14:04	

Analytical Method: Chloride by EPA 300

Seq Number: 3121417

Parent Sample Id: 657203-027

Matrix: Soil

MS Sample Id: 657203-027 S

Prep Method: E300P

Date Prep: 03.30.20

MSD Sample Id: 657203-027 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	192	200	403	106	403	106	90-110	0	20	mg/kg	03.30.20 15:25	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3121443

MB Sample Id: 7700134-1-BLK

Matrix: Solid

LCS Sample Id: 7700134-1-BKS

Prep Method: SW8015P

Date Prep: 03.30.20

LCSD Sample Id: 7700134-1-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	982	98	1050	105	70-135	7	35	mg/kg	03.30.20 16:50	
Diesel Range Organics (DRO)	<50.0	1000	920	92	993	99	70-135	8	35	mg/kg	03.30.20 16:50	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	112		112		121		70-135	%	03.30.20 16:50
o-Terphenyl	121		112		122		70-135	%	03.30.20 16:50

Analytical Method: TPH by SW8015 Mod

Seq Number: 3121443

Matrix: Solid

MB Sample Id: 7700134-1-BLK

Prep Method: SW8015P

Date Prep: 03.30.20

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	03.30.20 16:29	

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

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

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

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



LT Environmental, Inc.

APE FEE #001

Analytical Method: TPH by SW8015 Mod

Seq Number: 3121443

Parent Sample Id: 657294-001

Matrix: Soil

MS Sample Id: 657294-001 S

Prep Method: SW8015P

Date Prep: 03.30.20

MSD Sample Id: 657294-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.3	1010	937	93	901	90	70-135	4	35	mg/kg	03.30.20 17:51	
Diesel Range Organics (DRO)	<50.3	1010	1080	107	1020	102	70-135	6	35	mg/kg	03.30.20 17:51	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	102		100		70-135	%	03.30.20 17:51
o-Terphenyl	98		95		70-135	%	03.30.20 17:51

Analytical Method: BTEX by EPA 8021B

Seq Number: 3121410

MB Sample Id: 7700094-1-BLK

Matrix: Solid

LCS Sample Id: 7700094-1-BKS

Prep Method: SW5030B

Date Prep: 03.30.20

LCSD Sample Id: 7700094-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.112	112	0.110	110	70-130	2	35	mg/kg	03.30.20 11:26	
Toluene	<0.00200	0.100	0.107	107	0.104	104	70-130	3	35	mg/kg	03.30.20 11:26	
Ethylbenzene	<0.00200	0.100	0.102	102	0.0995	100	71-129	2	35	mg/kg	03.30.20 11:26	
m,p-Xylenes	<0.00400	0.200	0.210	105	0.206	103	70-135	2	35	mg/kg	03.30.20 11:26	
o-Xylene	<0.00200	0.100	0.105	105	0.104	104	71-133	1	35	mg/kg	03.30.20 11:26	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	110		107		107		70-130	%	03.30.20 11:26
4-Bromofluorobenzene	97		91		92		70-130	%	03.30.20 11:26

Analytical Method: BTEX by EPA 8021B

Seq Number: 3121410

Parent Sample Id: 657203-015

Matrix: Soil

MS Sample Id: 657203-015 S

Prep Method: SW5030B

Date Prep: 03.30.20

MSD Sample Id: 657203-015 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.118	118	0.103	103	70-130	14	35	mg/kg	03.30.20 12:07	
Toluene	<0.00200	0.100	0.113	113	0.0997	100	70-130	13	35	mg/kg	03.30.20 12:07	
Ethylbenzene	<0.00200	0.100	0.107	107	0.0950	95	71-129	12	35	mg/kg	03.30.20 12:07	
m,p-Xylenes	<0.00401	0.200	0.221	111	0.197	99	70-135	11	35	mg/kg	03.30.20 12:07	
o-Xylene	<0.00200	0.100	0.110	110	0.0983	98	71-133	11	35	mg/kg	03.30.20 12:07	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		107		70-130	%	03.30.20 12:07
4-Bromofluorobenzene	94		94		70-130	%	03.30.20 12:07

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

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

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

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



Chain of Custody

Work Order No: 1657894

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
 Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000 West Palm Beach, FL (561) 689-6701

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Project Manager:	Chris McKisson	Bill To: (if different)	5
Company Name:	LT Environmental	Company Name:	→
Address:	820 Megan Ave, Unit B	Address:	
City, State ZIP:	El Paso, TX 81650	City, State ZIP:	
Phone:	970 265 9985	Email:	chris@xenco.com & cmckisson@xenco.com

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

Project Name:	ARFEE #201	Turn Around	☐
Project Number:	031820008	Routine	☐
Project Location:	EDDY COUNTY	Rush:	24HR
Sampler's Name:	Anna Reyes	Due Date:	
PO #:		Quote #:	

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

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Analysis Request	Preservative Codes	Sample Comments
F501A		S	3/30/20	12:15	1'-2'	1	TPH (EPA 8015)		
F502A		S		09:55	1'	1	BTEX (EPA 8021)		
F503A		S		10:15	1'	1	Chloride (EPA 300.0)		
F504A		S		10:55	1'	1			
F505A		S		10:45	1'	1			
F523A		S		10:30	0.5'	1			

Total 200.7 / 6010 200.8 / 6020:

Circle Method(s) and Metal(s) to be analyzed

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

1631 / 245.1 / 7470 / 7471 : Hg

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Anna Reyes	[Signature]	3/30/20 13:08			

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 03.30.2020 01.08.00 PM

Work Order #: 657294

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

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

Analyst:

PH Device/Lot#:

Checklist completed by:



Elizabeth McClellan

Date: 03.30.2020

Checklist reviewed by:



Jessica Kramer

Date: 03.31.2020

ATTACHMENT 3: PHOTOGRAPHIC LOG



PHOTOGRAPHIC LOG



Photograph 1: View of point of release.

January 21, 2020 at 15:28



Photograph 2: View of pasture facing west.

January 21, 2020 at 10:30



Photograph 3: View of BH06 sample location on residential property.

January 23, 2020 at 13:32



Photograph 4: View of BH03 sample location along residential fence.

January 23, 2020 at 13:29



Photograph 5: View of eastern excavation along roadside facing southeast.

February 14, 2020 at 17:08



Photograph 6: View facing west of borehole sample locations.

February 18, 2020 at 15:00

PHOTOGRAPHIC LOG



Photograph 7: View of area west of road where microblaze was used.

March 26, 2020 at 09:00



Photograph 8: View of microblaze area in relation to residential property.

March 26, 2020 at 09:00



Photograph 9: View area west of main road to be excavated further.

March 26, 2020 at 09:47



Photograph 10: View of area west of main road after further excavation.

March 26, 2020 at 12:06



Photograph 11: Southwestern view of the affected western pasture post microblaze application.

April 23, 2020 at 12:39



Photograph 12: View west of the road post microblaze application.

April 23, 2020 at 12:39

PHOTOGRAPHIC LOG



Photograph 13: Northern view of SS09 sample area post microblaze application.

April 23, 2020 at 12:40



Photograph 14: Northwestern view of SS09 sample area post microblaze application.

April 23, 2020 at 12:41



Photograph 15: View area west of main road post microblaze application.

April 23, 2020 at 12:41



Photograph 16: Close up view of vegetation post microblaze application.

April 23, 2020 at 12:40