

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	NRM2002147574
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

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

Location of Release Source

Latitude 32.5347249 Longitude -103.6989071
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Hat Mesa 32 St #1	Site Type	Well Location
Date Release Discovered	11/04/2019	API# (if applicable)	30-025-34704 (Mesa 32 State # 001)

Unit Letter	Section	Township	Range	County
B	31	20S	33E	LEA

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) 6.14	Volume Recovered (bbls) 3.10
☒ Produced Water	Volume Released (bbls) 3.76	Volume Recovered (bbls) 1.90
	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: A Flowline leak was discovered and a vacuum truck was called out and recovered 5 bbls of Total Fluid. Additional third party resources have been retained to assist in the remediation.

State of New Mexico
Oil Conservation Division

Incident ID	NRM2002147574
District RP	
Facility ID	
Application ID	

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

Initial Response

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

☒ The source of the release has been stopped.	
☒ The impacted area has been secured to protect human health and the environment.	
☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.	
☒ All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why: N/A	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: <u>Kyle Littrell</u>	Title: <u>SH&E Supervisor</u>
Signature: 	Date: <u>11/20/2019</u>
email: <u>Kyle.Littrell@xtoenergy.com</u>	Telephone: _____
<u>OCD Only</u>	
Received by: <u>Ramona Marcus</u>	Date: <u>1/21/2020</u>

Location:	Hat Mesa 32 State #1	
Spill Date:	11/4/2019	
HEAVY SATURATION AREA		
Approximate Area =	5181.00	sq. ft.
Average Saturation (or depth) of spill =	1.00	inches
Approximate oil % =	62.00	
Average Porosity Factor =	0.03	
Approximate total volume recovered =	5.00	bbls
VOLUME OF LEAK		
Total Oil =	4.53	bbls
Total Produced Water =	2.78	bbls
VOLUME RECOVERED		
Total Oil =	3.10	bbls
Total Produced Water =	1.90	bbls
OVERSPRAY AREA		
Approximate Area =	18606.00	sq. ft.
Average Saturation (or depth) of spill =	0.06	inches
Approximate oil % =	62.00	
Average Porosity Factor =	0.15	
Approximate total volume recovered =	0.00	bbls
VOLUME OF LEAK		
Total Oil =	1.61	bbls
Total Produced Water =	0.98	bbls
VOLUME RECOVERED		
Total Oil =	0.00	bbls
Total Produced Water =	0.00	bbls
TOTAL VOLUME OF LEAK		
Total Oil =	6.14	bbls
Total Produced Water =	3.76	bbls

Incident ID	NRM2002147574
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</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

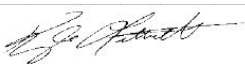
If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, 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	NRM2002147574
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: Kyle Littrell Title: SH&E Supervisor
Signature:  Date: 05/01/2020
email: Kyle_Littrell@xtoenergy.com Telephone: _____

OCD Only

Received by: _____ Date: _____

Incident ID	NRM2002147574
District RP	
Facility ID	
Application ID	

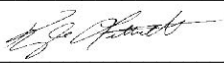
Closure

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: Kyle Littrell Title: SH&E Supervisor
Signature:  Date: 05/01/2020
email: Kyle_Littrell@xtoenergy.com Telephone: _____

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: _____

Printed Name: _____ Title: _____



LT Environmental, Inc.

3300 North "A" Street
Building 1, Unit 222
Midland, Texas 79705
432.704.5178

May 1, 2020

New Mexico Oil Conservation Division
District 1
1625 North French Drive
Hobbs, New Mexico 88240

**RE: Closure Request
Hat Mesa 32 St #1
Incident Number NRM2002147574
Lea County, New Mexico**

To Whom It May Concern:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following Closure Request detailing site assessment, excavation, and soil sampling activities at the Hat Mesa 32 St #1 (Site) located in Unit B, Section 31, Township 20 South, Range 33 East, in Lea County, New Mexico (Figure 1). The purpose of the site assessment and soil sampling activities was to confirm the presence or absence of impacts to soil following the release of crude oil and produced water at the Site. Based on field observations, field screening results, and soil analytical results from site assessment and excavation activities, XTO is submitting this Closure Request and requesting no further action (NFA) for Incident Number NRM2002147574.

RELEASE BACKGROUND

On November 4, 2019 a lease operator discovered a flowline leak due to age, resulting in the release of 6.14 barrels (bbls) of crude oil and 3.76 bbls of produced water onto a lease road, with a limited portion that misted into the northern pasture. A vacuum truck was dispatched to the Site to recover freestanding fluids; approximately 3.1 bbls of crude oil and 1.9 bbls of produced water were recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 on November 20, 2019 and was assigned Incident Number NRM2002147574.

SITE CHARACTERIZATION

LTE characterized the Site according to Table 1, *Closure Criteria for Soils Impacted by a Release*, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Depth to groundwater at the Site is estimated to be less than 50 feet below ground surface (bgs) based on the nearest groundwater well data. The nearest permitted groundwater well with depth to groundwater data is the United States Geological Survey (USGS) well number 323202103425201, located approximately 0.94 miles west from the Site. The groundwater well has a depth to groundwater of 45 feet bgs and a total depth of 65 feet bgs. The closest



continuously flowing water or significant watercourse to the Site is a freshwater emergent wetland located approximately 2,834 feet northeast of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (low potential karst designation area). The Site receptors are identified on Figure 1.

CLOSURE CRITERIA

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

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

SITE ASSESSMENT AND EXCAVATION ACTIVITIES

Immediately following the release, on November 6, 2019, LTE personnel treated the pasture area affected by overspray from the release with MicroBlaze®. Then, on November 12, 2019, LTE personnel inspected the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. LTE personnel collected five preliminary soil samples (SS01 through SS05) from within the release extent at a depth of approximately 0.5 feet bgs to assess the lateral extent of the release. Preliminary soil samples SS01 and SS02 were collected in the pasture to confirm no residual contaminants were present in the pasture after the overspray area was treated with MicroBlaze®. Preliminary soil samples SS03 through SS05 were collected along the lease road. Soil from all preliminary soil samples was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photo-ionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. The release extent and preliminary soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2.

The preliminary 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 transported at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Xenco Laboratories (Xenco) in Carlsbad, New Mexico, for analysis of BTEX following United States Environmental Protection Agency (EPA) Method 8021B, TPH-gasoline range organics (GRO), TPH-diesel range organics (DRO), TPH-oil range organics (ORO) following EPA Method 8015M/D, and chloride following EPA Method 300.0.



Based on laboratory analytical results for preliminary soil samples SS04 and SS05, remedial action, specifically excavation, appeared warranted in and adjacent to the road. From February 25, 2020 to February 28, 2020, LTE personnel were onsite to conduct excavation activities. To direct excavation activities, LTE screened soil for volatile aromatic hydrocarbons and chloride.

Following removal of impacted soil, LTE collected 5-point composite soil samples every 200 square feet from floor of the excavation. Due to the limited depth and dimensions of the excavation, less than 4 feet for width and less than 2.5 feet for depth, floor samples represented soil contained in the floor and sidewalls of the excavation. The total excavation area was approximately 5,047 square feet, and an estimated 241.22 cubic yards of impacted soil was removed. The 5-point composite samples were collected by depositing five aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples FS01 through FS25 were collected from the excavation at depths ranging from approximately 0.5 feet bgs to 2.5 feet bgs. The excavation soil samples were collected, handled, and analyzed as described above and submitted to Xenco in Carlsbad, New Mexico.

LTE personnel returned to site from March 12 to March 17 to address floor samples which exceeded Closure Criteria from the initial excavation event. Following removal of additional impacted soil, LTE collected composite soil samples within the failing areas to represent every 200 square feet. Composite soil samples FS02B, FS03B, FS04B, FS04C, FS05B, FS05C, FS06B, FS14A-FS16A, FS18A, FS20A, FS21A, and FS12B were collected from the excavation at depths ranging from approximately 2.5 feet bgs to 4 feet bgs. The excavation soil samples were collected, handled, and analyzed as described above and submitted to Xenco in Carlsbad, New Mexico. The final excavation extent and excavation soil sample locations are depicted on Figure 3. Photographic documentation was conducted during excavation activities. A photographic log is included in Attachment 1.

ANALYTICAL RESULTS

Laboratory analytical results indicated benzene, BTEX, TPH, and chloride concentrations were compliant with Closure Criteria in preliminary soil samples SS02 and SS03, collected in the pasture after the overspray area was treated with MicroBlaze®, and in preliminary soil sample SS01, collected along the lease road. Soil samples SS04 and SS05 contained TPH concentrations exceeding Closure Criteria at 2,200 mg/kg and 720 mg/kg, respectively.

Following an initial excavation event, LTE collected confirmation soil samples within the excavation extent and determined additional excavation was necessary in some areas. The excavation was further deepened in those locations to depths between 1-foot and 4 feet bgs. Laboratory analytical results indicated benzene, BTEX, TPH, and chloride concentrations were compliant with the Closure Criteria in all confirmation soil samples in the final excavation extent. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Attachment 2.



District 1
Page 4

BACKFILL ACTIVITIES

On March 19, 2020, after reviewing laboratory analytical results to confirm all impacted soil had been removed, the excavation was backfilled with clean backfill material. Photographic documentation was conducted during backfill activities and a photographic log is included in Attachment 1.

CONCLUSIONS

Initial and follow-up response efforts as a result of the crude oil and produced water release included the removal of freestanding fluid by a hydrovac truck, treatment of the overspray area in the northern pasture with MicroBlaze®, and removal of impacted soils along the lease road. Preliminary samples collected from soil in the pasture treated with MicroBlaze® confirmed surface soil was not impacted by misting. Based on the analytical results from preliminary soil samples along the lease road, excavation to remove impacted soils from the surface to depths ranging between approximately 0.5 feet to 4 feet bgs was completed. Laboratory analytical results for the final confirmation soil samples collected within the final excavation extent indicated benzene, BTEX, TPH, and chloride concentrations were compliant with Closure Criteria. Following confirmation that all impacted soil was removed from the Site, the excavation was backfilled with clean backfill material and recontoured to match Site conditions. As such, XTO respectfully requests NFA and closure of for Incident Number NRM2002147574.

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

Sincerely,

LT ENVIRONMENTAL, INC.

A handwritten signature in blue ink, appearing to read 'W. Mather'.

William Mather
Staff Environmental Scientist

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

Ashley L. Ager, P.G.
Senior Geologist

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



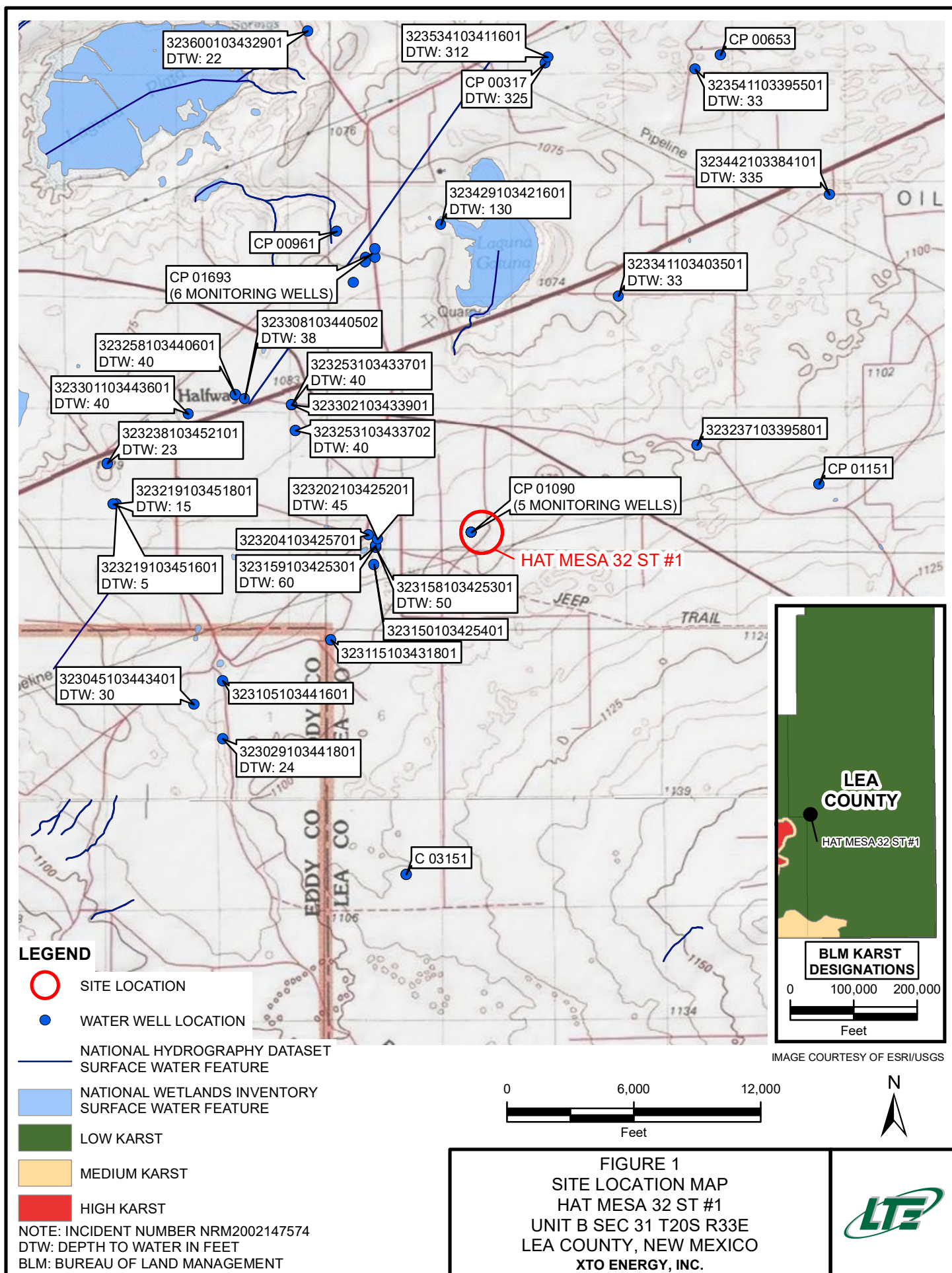
District 1
Page 5

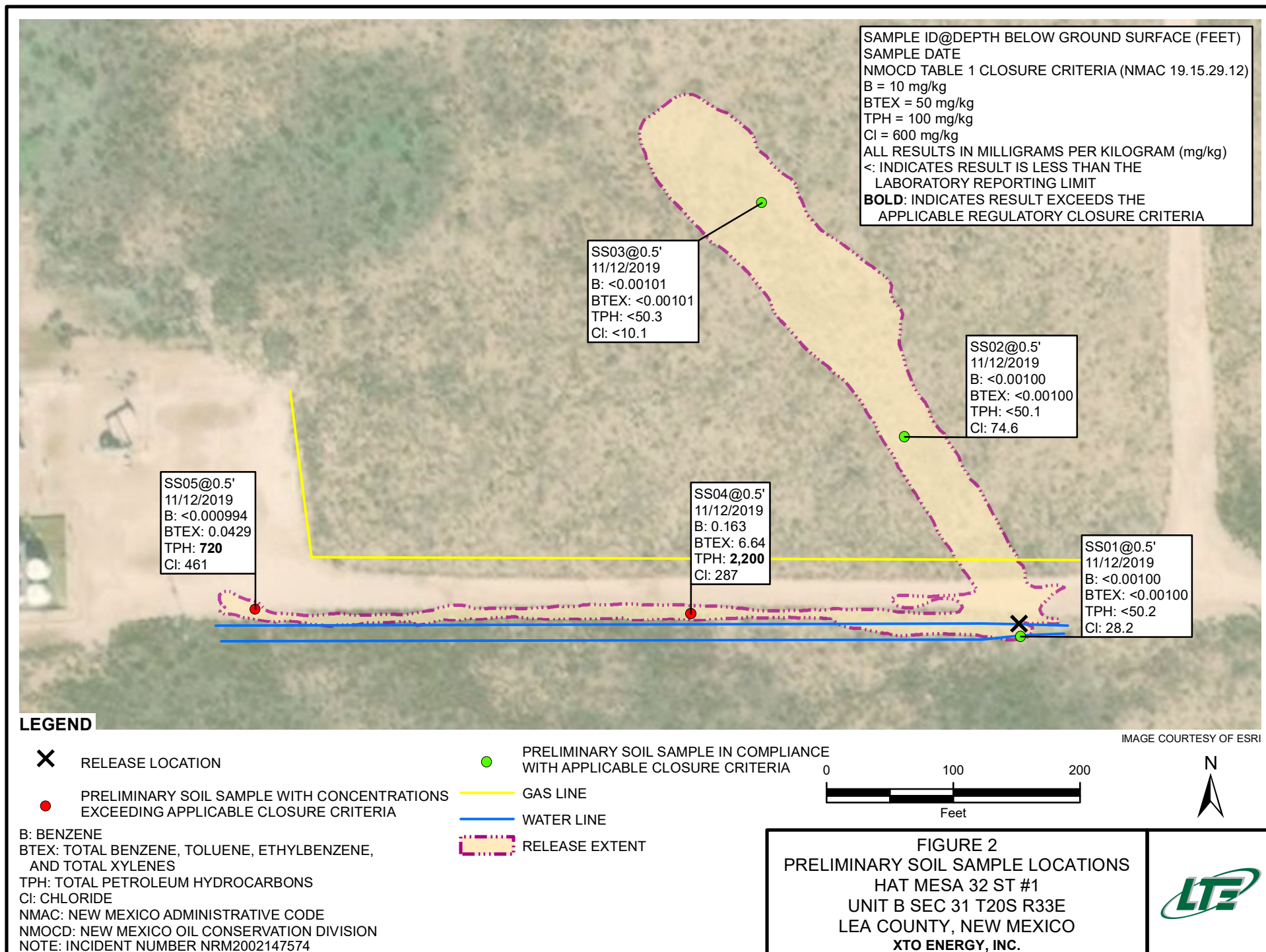
Appendices:

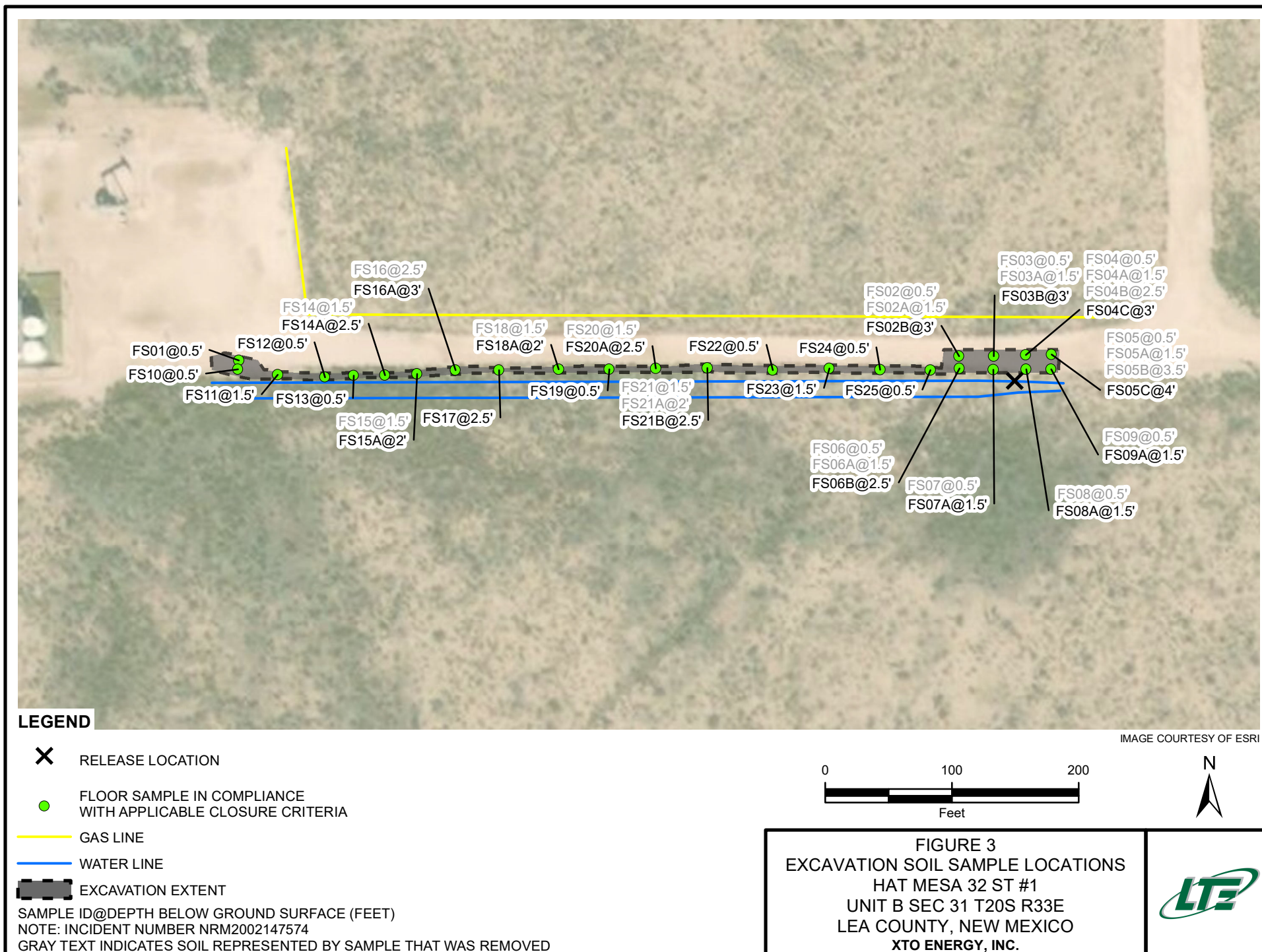
- Figure 1 Site Location Map
- Figure 2 Preliminary Soil Sample Locations
- Figure 3 Excavation Soil Sample Locations
- Table 1 Soil Analytical Results
- Attachment 1 Photographic Log
- Attachment 2 Laboratory Analytical Reports

FIGURES









TABLES



**TABLE 1
SOIL ANALYTICAL RESULTS**

**HAT MESA 32 ST #1
INCIDENT NUMBER NRM2002147574
LEA COUNTY, NEW MEXICO
XTO ENERGY, INC.**

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCDC Table 1 Closure Criteria			10	NE	NE	NE	50	NE	NE	NE	NE	100	600
SS01	0.5	11/12/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<50.2	<50.2	<50.2	<50.2	<50.2	28.2
SS02	0.5	11/12/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<50.1	<50.1	<50.1	<50.1	<50.1	74.6
SS03	0.5	11/12/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<50.3	<50.3	<50.3	<50.3	<50.3	<10.1
SS04	0.5	11/12/2019	0.163	0.562	1.60	4.31	6.64	199	1,810	191	2,010	2,200	487
SS05	0.5	11/12/2019	<0.000994	0.00256	0.00981	0.0305	0.0429	<50.3	627	92.6	627	720	461
FS01	0.5	02/25/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.0	<50.0	<50.0	<50.0	<50.0	522
FS02	0.5	02/25/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	1,210
FS02A	1.5	02/27/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.2	<50.2	<50.2	<50.2	<50.2	1,060
FS02B	3	03/12/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.1	<50.1	<50.1	<50.1	<50.1	456
FS03	0.5	02/25/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	590
FS03A	1.5	02/27/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.2	<50.2	<50.2	<50.2	<50.2	942
FS03B	3	03/12/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	478
FS04	0.5	02/25/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	458
FS04A	1.5	02/27/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.1	<50.1	<50.1	<50.1	<50.1	1,060
FS04B	2.5	03/12/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	622
FS04C	3	03/16/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<49.8	<49.8	<49.8	<49.8	<49.8	128
FS05	0.5	02/26/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.8	<49.8	<49.8	<49.8	<49.8	1,100
FS05A	1.5	02/27/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.1	<50.1	<50.1	<50.1	<50.1	1,050
FS05B	3.5	03/12/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.8	<49.8	<49.8	<49.8	<49.8	617
FS05C	4	03/16/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.1	<50.1	<50.1	<50.1	<50.1	190



A proud member
of WSP

**TABLE 1
SOIL ANALYTICAL RESULTS**

**HAT MESA 32 ST #1
INCIDENT NUMBER NRM2002147574
LEA COUNTY, NEW MEXICO
XTO ENERGY, INC.**

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCDC Table 1 Closure Criteria			10	NE	NE	NE	50	NE	NE	NE	NE	100	600
FS06	0.5	02/26/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.2	<50.2	<50.2	<50.2	<50.2	1,050
FS06A	1.5	02/27/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.3	<50.3	<50.3	<50.3	<50.3	712
FS06B	2.5	03/12/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.1	<50.1	<50.1	<50.1	<50.1	494
FS07	0.5	02/26/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.2	<50.2	<50.2	<50.2	<50.2	1,210
FS07A	1.5	02/27/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	588
FS08	0.5	02/26/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	913
FS08A	1.5	02/27/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.2	<50.2	<50.2	<50.2	<50.2	256
FS09	0.5	02/26/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.9	82.1	<49.9	82.1	82.1	842
FS09A	1.5	02/27/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.1	<50.1	<50.1	<50.1	<50.1	347
FS10	0.5	02/26/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	77.3	<50.2	77.3	77.3	316
FS11	1.5	02/27/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.3	<50.3	<50.3	<50.3	<50.3	223
FS12	0.5	02/26/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	75.3	<50.2	75.3	75.3	365
FS13	0.5	02/26/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.3	<50.3	<50.3	<50.3	<50.3	526
FS14	1.5	02/27/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	757	111	757	868	272
FS14A	2.5	03/12/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.1	<50.1	<50.1	<50.1	<50.1	537
FS15	1.5	02/27/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	121	<50.1	121	121	476
FS15A	2	03/12/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.1	<50.1	<50.1	<50.1	<50.1	593
FS16	2.5	02/27/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.0	130	<50.0	130	130	530
FS16A	3	03/12/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	308
FS17	2.5	02/27/2020	<0.00201	<0.00201	<0.00201	0.00419	0.00419	<50.2	<50.2	<50.2	<50.2	<50.2	160
FS18	1.5	02/27/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	181	<50.2	181	181	517
FS18A	2	03/13/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.0	<50.0	<50.0	<50.0	<50.0	462
FS19	0.5	02/26/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.8	<49.8	<49.8	<49.8	<49.8	591

TABLE 1
SOIL ANALYTICAL RESULTS

HAT MESA 32 ST #1
INCIDENT NUMBER NRM2002147574
LEA COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria			10	NE	NE	NE	50	NE	NE	NE	NE	100	600
FS20	1.5	02/27/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	751
FS20A	2.5	03/13/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.0	<50.0	<50.0	<50.0	<50.0	236
FS21	1.5	02/27/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.9	292	<49.9	292	292	626
FS21A	2	03/13/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.0	<50.0	<50.0	<50.0	<50.0	633
FS21B	2.5	03/17/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.3	<50.3	<50.3	<50.3	<50.3	541
FS22	0.5	02/26/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.8	90.5	<49.8	90.5	90.5	442
FS23	1.5	02/27/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.2	<50.2	<50.2	<50.2	<50.2	553
FS24	0.5	02/26/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.3	78.8	<50.3	78.8	78.8	534
FS25	0.5	02/26/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	221

Notes:

bgs - below ground surface

BTEX - benzene, toluene, ethylbenzene, and total xylenes

DRO - diesel range organics

GRO - gasoline range organics

mg/kg - milligrams per kilogram

MRO - motor oil range organics

NMAC - New Mexico Administrative Code

NMOCD - New Mexico Oil Conservation Division

NE - not established

TPH - total petroleum hydrocarbons

Bold - indicates result exceeds the applicable regulatory standard

Gray - indicates sample was removed from excavation area

< - indicates result is below laboratory reporting limits

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

ATTACHMENT 1: PHOTOGRAPHIC LOG



PHOTOGRAPHIC LOG



Photograph 1: View of pooling along lease road and release extent facing west



Photograph 2: View of pooling on lease road and overspray in pasture facing northwest.

PHOTOGRAPHIC LOG



Photograph 3: View of excavation along lease road facing west.



Photograph 4: View of excavation along lease road facing east.

PHOTOGRAPHIC LOG



Photograph 5: View of pre-compacted backfill on lease road facing west.



Photograph 6: View of post-compacted backfill on lease road facing west.

ATTACHMENT 2: LABORATORY ANALYTICAL REPORTS



Analytical Report 653719

for
LT Environmental, Inc.

Project Manager: Dan Moir

Hat Mesa 32 St 1

012919267

02-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)



02-MAR-20

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

Reference: XENCO Report No(s): **653719**
Hat Mesa 32 St 1
Project Address: Lea

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 653719. 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. 653719 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 653719****LT Environmental, Inc., Arvada, CO**

Hat Mesa 32 St 1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	02-25-20 09:18	0.5 ft	653719-001
FS02	S	02-25-20 15:09	0.5 ft	653719-002
FS03	S	02-25-20 15:14	0.5 ft	653719-003
FS04	S	02-25-20 15:17	0.5 ft	653719-004



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *Hat Mesa 32 St 1*

Project ID: 012919267

Work Order Number(s): 653719

Report Date: 02-MAR-20

Date Received: 02/26/2020

Sample receipt non conformances and comments:

V1.001 - Revision (client email) Corrected project name on report and invoice. JK 03/02/20

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3117847 BTEX by EPA 8021B

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



Certificate of Analysis Summary 653719

LT Environmental, Inc., Arvada, CO

Project Name: Hat Mesa 32 St 1

Project Id: 012919267

Contact: Dan Moir

Project Location: Lea

Date Received in Lab: Wed Feb-26-20 08:55 am

Report Date: 02-MAR-20

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	653719-001	653719-002	653719-003	653719-004		
	<i>Field Id:</i>	FS01	FS02	FS03	FS04		
	<i>Depth:</i>	0.5- ft	0.5- ft	0.5- ft	0.5- ft		
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	Feb-25-20 09:18	Feb-25-20 15:09	Feb-25-20 15:14	Feb-25-20 15:17		
BTEX by EPA 8021B	<i>Extracted:</i>	Feb-26-20 11:00	Feb-26-20 11:00	Feb-26-20 11:00	Feb-26-20 11:00		
	<i>Analyzed:</i>	Feb-26-20 15:03	Feb-26-20 15:23	Feb-26-20 15:44	Feb-26-20 16:04		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Benzene		<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200		
Toluene		<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200		
Ethylbenzene		<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200		
m,p-Xylenes		<0.00402 0.00402	<0.00400 0.00400	<0.00401 0.00401	<0.00401 0.00401		
o-Xylene		<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200		
Total Xylenes		<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200		
Total BTEX		<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200		
Chloride by EPA 300	<i>Extracted:</i>	Feb-26-20 11:00	Feb-26-20 11:00	Feb-26-20 11:00	Feb-26-20 11:00		
	<i>Analyzed:</i>	Feb-26-20 11:46	Feb-26-20 12:10	Feb-26-20 12:17	Feb-26-20 12:25		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		522 10.0	1210 50.4	590 10.0	458 10.1		
TPH by SW8015 Mod	<i>Extracted:</i>	Feb-26-20 12:00	Feb-26-20 12:00	Feb-26-20 12:00	Feb-26-20 12:00		
	<i>Analyzed:</i>	Feb-26-20 18:55	Feb-26-20 19:15	Feb-26-20 19:35	Feb-26-20 19:35		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<49.8 49.8	<50.2 50.2	<50.2 50.2		
Diesel Range Organics (DRO)		<50.0 50.0	<49.8 49.8	<50.2 50.2	<50.2 50.2		
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<49.8 49.8	<50.2 50.2	<50.2 50.2		
Total GRO-DRO		<50.0 50.0	<49.8 49.8	<50.2 50.2	<50.2 50.2		
Total TPH		<50.0 50.0	<49.8 49.8	<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

Version: 1.9%

Jessica Kramer
Project Assistant



Certificate of Analytical Results 653719

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS01**
Lab Sample Id: 653719-001

Matrix: Soil
Date Collected: 02.25.20 09.18

Date Received: 02.26.20 08.55
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117745

Date Prep: 02.26.20 11.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	522	10.0	mg/kg	02.26.20 11.46		1

Analytical Method: TPH by SW8015 Mod

Tech: MAB

Analyst: CAC

Seq Number: 3117835

Date Prep: 02.26.20 12.00

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	02.26.20 18.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	02.26.20 18.55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	02.26.20 18.55	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	02.26.20 18.55	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	02.26.20 18.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	02.26.20 18.55	
o-Terphenyl	84-15-1	118	%	70-135	02.26.20 18.55	



Certificate of Analytical Results 653719

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS01**
Lab Sample Id: 653719-001

Matrix: Soil
Date Collected: 02.25.20 09.18

Date Received: 02.26.20 08.55
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117847

Date Prep: 02.26.20 11.00

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	02.26.20 15.03	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	02.26.20 15.03	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	02.26.20 15.03	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	02.26.20 15.03	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	02.26.20 15.03	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	02.26.20 15.03	U	1
Total BTEX		<0.00201	0.00201	mg/kg	02.26.20 15.03	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	99	%	70-130	02.26.20 15.03		
1,4-Difluorobenzene	540-36-3	103	%	70-130	02.26.20 15.03		



Certificate of Analytical Results 653719

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS02**
Lab Sample Id: 653719-002

Matrix: Soil
Date Collected: 02.25.20 15.09

Date Received: 02.26.20 08.55
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117745

Date Prep: 02.26.20 11.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1210	50.4	mg/kg	02.26.20 12.10		5

Analytical Method: TPH by SW8015 Mod

Tech: MAB

Analyst: CAC

Seq Number: 3117835

Date Prep: 02.26.20 12.00

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	02.26.20 19.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	02.26.20 19.15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	02.26.20 19.15	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	02.26.20 19.15	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	02.26.20 19.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	02.26.20 19.15	
o-Terphenyl	84-15-1	102	%	70-135	02.26.20 19.15	



Certificate of Analytical Results 653719

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS02**
Lab Sample Id: 653719-002

Matrix: Soil
Date Collected: 02.25.20 15.09

Date Received: 02.26.20 08.55
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117847

Date Prep: 02.26.20 11.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.26.20 15.23	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.26.20 15.23	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.26.20 15.23	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	02.26.20 15.23	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.26.20 15.23	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.26.20 15.23	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.26.20 15.23	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	02.26.20 15.23		
4-Bromofluorobenzene	460-00-4	101	%	70-130	02.26.20 15.23		



Certificate of Analytical Results 653719

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS03**
Lab Sample Id: 653719-003

Matrix: Soil
Date Collected: 02.25.20 15.14

Date Received: 02.26.20 08.55
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117745

Date Prep: 02.26.20 11.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	590	10.0	mg/kg	02.26.20 12.17		1

Analytical Method: TPH by SW8015 Mod

Tech: MAB

Analyst: CAC

Seq Number: 3117835

Date Prep: 02.26.20 12.00

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	02.26.20 19.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	02.26.20 19.35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	02.26.20 19.35	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	02.26.20 19.35	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	02.26.20 19.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	02.26.20 19.35	
o-Terphenyl	84-15-1	127	%	70-135	02.26.20 19.35	



Certificate of Analytical Results 653719

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS03**
Lab Sample Id: 653719-003

Matrix: Soil
Date Collected: 02.25.20 15.14

Date Received: 02.26.20 08.55
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117847

Date Prep: 02.26.20 11.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.26.20 15.44	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.26.20 15.44	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.26.20 15.44	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	02.26.20 15.44	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.26.20 15.44	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.26.20 15.44	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.26.20 15.44	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	95	%	70-130	02.26.20 15.44		
1,4-Difluorobenzene	540-36-3	102	%	70-130	02.26.20 15.44		



Certificate of Analytical Results 653719

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS04**
Lab Sample Id: 653719-004

Matrix: Soil
Date Collected: 02.25.20 15.17

Date Received: 02.26.20 08.55
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117745

Date Prep: 02.26.20 11.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	458	10.1	mg/kg	02.26.20 12.25		1

Analytical Method: TPH by SW8015 Mod

Tech: MAB

Analyst: CAC

Seq Number: 3117835

Date Prep: 02.26.20 12.00

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	02.26.20 19.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	02.26.20 19.35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	02.26.20 19.35	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	02.26.20 19.35	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	02.26.20 19.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	02.26.20 19.35	
o-Terphenyl	84-15-1	112	%	70-135	02.26.20 19.35	



Certificate of Analytical Results 653719

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS04**
Lab Sample Id: 653719-004

Matrix: Soil
Date Collected: 02.25.20 15.17

Date Received: 02.26.20 08.55
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117847

Date Prep: 02.26.20 11.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.26.20 16.04	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.26.20 16.04	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.26.20 16.04	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	02.26.20 16.04	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.26.20 16.04	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.26.20 16.04	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.26.20 16.04	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	101	%	70-130	02.26.20 16.04		
4-Bromofluorobenzene	460-00-4	103	%	70-130	02.26.20 16.04		



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.

Hat Mesa 32 St 1

Analytical Method: Chloride by EPA 300

Seq Number: 3117745

MB Sample Id: 7697500-1-BLK

Matrix: Solid

LCS Sample Id: 7697500-1-BKS

Prep Method: E300P

Date Prep: 02.26.20

LCSD Sample Id: 7697500-1-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	259	104	90-110	0	20	mg/kg	02.26.20 11:32	

Analytical Method: Chloride by EPA 300

Seq Number: 3117745

Parent Sample Id: 653719-001

Matrix: Soil

MS Sample Id: 653719-001 S

Prep Method: E300P

Date Prep: 02.26.20

MSD Sample Id: 653719-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	522	200	738	108	740	109	90-110	0	20	mg/kg	02.26.20 11:54	

Analytical Method: Chloride by EPA 300

Seq Number: 3117745

Parent Sample Id: 653380-005

Matrix: Soil

MS Sample Id: 653380-005 S

Prep Method: E300P

Date Prep: 02.26.20

MSD Sample Id: 653380-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1100	200	1300	100	1290	95	90-110	1	20	mg/kg	02.26.20 14:22	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3117835

MB Sample Id: 7697510-1-BLK

Matrix: Solid

LCS Sample Id: 7697510-1-BKS

Prep Method: SW8015P

Date Prep: 02.26.20

LCSD Sample Id: 7697510-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1090	109	1040	104	70-135	5	35	mg/kg	02.26.20 17:41	
Diesel Range Organics (DRO)	<50.0	1000	1290	129	1260	126	70-135	2	35	mg/kg	02.26.20 17:41	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	91		125		128		70-135	%	02.26.20 17:41
o-Terphenyl	102		112		110		70-135	%	02.26.20 17:41

Analytical Method: TPH by SW8015 Mod

Seq Number: 3117835

Matrix: Solid

MB Sample Id: 7697510-1-BLK

Prep Method: SW8015P

Date Prep: 02.26.20

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	02.26.20 17:22	

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.

Hat Mesa 32 St 1

Analytical Method: TPH by SW8015 Mod

Seq Number: 3117835

Parent Sample Id: 653719-001

Matrix: Soil

MS Sample Id: 653719-001 S

Prep Method: SW8015P

Date Prep: 02.26.20

MSD Sample Id: 653719-001 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	735	74	946	95	70-135	25	35	mg/kg	02.26.20 18:55	
Diesel Range Organics (DRO)	<50.2	1000	895	90	1090	109	70-135	20	35	mg/kg	02.26.20 18:55	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	92		117		70-135	%	02.26.20 18:55
o-Terphenyl	97		124		70-135	%	02.26.20 18:55

Analytical Method: BTEX by EPA 8021B

Seq Number: 3117847

MB Sample Id: 7697498-1-BLK

Matrix: Solid

LCS Sample Id: 7697498-1-BKS

Prep Method: SW5030B

Date Prep: 02.26.20

LCSD Sample Id: 7697498-1-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	0.108	108	70-130	2	35	mg/kg	02.26.20 13:21	
Toluene	<0.00200	0.100	0.102	102	0.103	103	70-130	1	35	mg/kg	02.26.20 13:21	
Ethylbenzene	<0.00200	0.100	0.0973	97	0.0989	99	71-129	2	35	mg/kg	02.26.20 13:21	
m,p-Xylenes	<0.00400	0.200	0.201	101	0.204	102	70-135	1	35	mg/kg	02.26.20 13:21	
o-Xylene	<0.00200	0.100	0.100	100	0.102	102	71-133	2	35	mg/kg	02.26.20 13:21	

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	%	02.26.20 13:21
4-Bromofluorobenzene	94		94		94		70-130	%	02.26.20 13:21

Analytical Method: BTEX by EPA 8021B

Seq Number: 3117847

Parent Sample Id: 653719-001

Matrix: Soil

MS Sample Id: 653719-001 S

Prep Method: SW5030B

Date Prep: 02.26.20

MSD Sample Id: 653719-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00198	0.0992	0.114	115	0.0885	89	70-130	25	35	mg/kg	02.26.20 14:02	
Toluene	<0.00198	0.0992	0.107	108	0.0822	82	70-130	26	35	mg/kg	02.26.20 14:02	
Ethylbenzene	<0.00198	0.0992	0.0984	99	0.0752	75	71-129	27	35	mg/kg	02.26.20 14:02	
m,p-Xylenes	<0.00397	0.198	0.200	101	0.154	77	70-135	26	35	mg/kg	02.26.20 14:02	
o-Xylene	<0.00198	0.0992	0.0978	99	0.0770	77	71-133	24	35	mg/kg	02.26.20 14:02	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		105		70-130	%	02.26.20 14:02
4-Bromofluorobenzene	92		100		70-130	%	02.26.20 14:02

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

Work Order No: 1053719

Page 1 of 1

[illegible]

SAMPLE RECEIPT		Temp Blank:	Yes	No	Wet Ice:	Yes	No
Temperature (°C):	0.4	Thermometer ID					
Received Intact:	Yes	No	T-NM-307				
Cooler Custody Seals:	Yes	No	-02				
Sample Custody Seals:	Yes	No	N/A				
			Total Containers: 4				

Number of Containers

PA 8015)

PA 0=8021)

(EPA 300.0)

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

[illegible][illegible]

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		2/26/20 8:00am			2/26/20 855

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.**Date/ Time Received:** 02.26.2020 08.55.00 AM**Work Order #:** 653719**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?	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: 02.26.2020

Checklist reviewed by:

Jessica Kramer

Date: 02.26.2020

Analytical Report 653845

for
LT Environmental, Inc.

Project Manager: Dan Moir

Hat Mesa 32 St. 1

012919267

27-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)



27-FEB-20

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **653845**

Hat Mesa 32 St. 1

Project Address: Eddy County

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 653845. 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. 653845 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 653845****LT Environmental, Inc., Arvada, CO**

Hat Mesa 32 St. 1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS05	S	02-26-20 10:09	0.5 ft	653845-001
FS06	S	02-26-20 10:00	0.5 ft	653845-002
FS07	S	02-26-20 10:24	0.5 ft	653845-003
FS08	S	02-26-20 10:27	0.5 ft	653845-004
FS09	S	02-26-20 10:30	0.5 ft	653845-005
PH01	S	02-26-20 12:34	1.5 ft	653845-006
PH01A	S	02-26-20 12:42	2.5 ft	653845-007
FS10	S	02-26-20 13:31	0.5 ft	653845-008
FS12	S	02-26-20 13:24	0.5 ft	653845-009
FS13	S	02-26-20 13:19	0.5 ft	653845-010
FS19	S	02-26-20 12:28	0.5 ft	653845-011
FS22	S	02-26-20 11:41	0.5 ft	653845-012
FS24	S	02-26-20 11:34	0.5 ft	653845-013
FS25	S	02-26-20 11:32	0.5 ft	653845-014



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Hat Mesa 32 St. 1

Project ID: 012919267

Work Order Number(s): 653845

Report Date: 27-FEB-20

Date Received: 02/26/2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3117852 BTEX by EPA 8021B

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

Batch: LBA-3117857 BTEX by EPA 8021B

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



Certificate of Analysis Summary 653845

LT Environmental, Inc., Arvada, CO

Project Name: Hat Mesa 32 St. 1

Project Id: 012919267

Contact: Dan Moir

Project Location: Eddy County

Date Received in Lab: Wed Feb-26-20 04:53 pm

Report Date: 27-FEB-20

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	653845-001	653845-002	653845-003	653845-004	653845-005	653845-006
	Field Id:	FS05	FS06	FS07	FS08	FS09	PH01
	Depth:	0.5- ft	0.5- ft	0.5- ft	0.5- ft	0.5- ft	1.5- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Feb-26-20 10:09	Feb-26-20 10:00	Feb-26-20 10:24	Feb-26-20 10:27	Feb-26-20 10:30	Feb-26-20 12:34
BTEX by EPA 8021B	Extracted:	Feb-26-20 17:30	Feb-26-20 17:30	Feb-26-20 17:30	Feb-26-20 17:30	Feb-26-20 17:30	Feb-26-20 17:30
	Analyzed:	Feb-27-20 05:20	Feb-27-20 05:40	Feb-27-20 06:01	Feb-27-20 06:21	Feb-27-20 06:42	Feb-27-20 07:02
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00202 0.00202	<0.00198 0.00198	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200
Toluene		<0.00202 0.00202	<0.00198 0.00198	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200
Ethylbenzene		<0.00202 0.00202	<0.00198 0.00198	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200
m,p-Xylenes		<0.00403 0.00403	<0.00397 0.00397	<0.00404 0.00404	<0.00399 0.00399	<0.00398 0.00398	<0.00399 0.00399
o-Xylene		<0.00202 0.00202	<0.00198 0.00198	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200
Total Xylenes		<0.00202 0.00202	<0.00198 0.00198	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200
Total BTEX		<0.00202 0.00202	<0.00198 0.00198	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200
Chloride by EPA 300	Extracted:	Feb-26-20 20:19	Feb-26-20 20:19	Feb-26-20 20:19	Feb-26-20 20:19	Feb-26-20 20:19	Feb-26-20 20:19
	Analyzed:	Feb-26-20 23:28	Feb-26-20 23:34	Feb-26-20 23:52	Feb-26-20 23:58	Feb-27-20 00:04	Feb-27-20 00:10
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		1100 20.0	1050 20.0	1210 19.9	913 20.2	842 20.1	1300 20.2
TPH by SW8015 Mod	Extracted:	Feb-26-20 21:29	Feb-26-20 21:29	Feb-26-20 21:29	Feb-26-20 21:29	Feb-26-20 21:29	Feb-26-20 21:29
	Analyzed:	Feb-27-20 07:02	Feb-27-20 07:02	Feb-27-20 07:21	Feb-27-20 07:21	Feb-27-20 07:40	Feb-27-20 07:40
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<49.8 49.8	<50.2 50.2	<50.2 50.2	<50.1 50.1	<49.9 49.9	<50.2 50.2
Diesel Range Organics (DRO)		<49.8 49.8	<50.2 50.2	<50.2 50.2	<50.1 50.1	82.1 49.9	<50.2 50.2
Motor Oil Range Hydrocarbons (MRO)		<49.8 49.8	<50.2 50.2	<50.2 50.2	<50.1 50.1	<49.9 49.9	<50.2 50.2
Total GRO-DRO		<49.8 49.8	<50.2 50.2	<50.2 50.2	<50.1 50.1	82.1 49.9	<50.2 50.2
Total TPH		<49.8 49.8	<50.2 50.2	<50.2 50.2	<50.1 50.1	82.1 49.9	<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 Analysis Summary 653845

LT Environmental, Inc., Arvada, CO

Project Name: Hat Mesa 32 St. 1

Project Id: 012919267

Contact: Dan Moir

Project Location: Eddy County

Date Received in Lab: Wed Feb-26-20 04:53 pm

Report Date: 27-FEB-20

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	653845-007	653845-008	653845-009	653845-010	653845-011	653845-012
	<i>Field Id:</i>	PH01A	FS10	FS12	FS13	FS19	FS22
	<i>Depth:</i>	2.5- 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>	Feb-26-20 12:42	Feb-26-20 13:31	Feb-26-20 13:24	Feb-26-20 13:19	Feb-26-20 12:28	Feb-26-20 11:41
BTEX by EPA 8021B	<i>Extracted:</i>	Feb-26-20 17:30	Feb-26-20 17:30	Feb-26-20 17:30	Feb-26-20 21:09	Feb-26-20 17:30	Feb-26-20 21:09
	<i>Analyzed:</i>	Feb-27-20 07:22	Feb-27-20 07:43	Feb-27-20 08:03	Feb-27-20 06:48	Feb-27-20 08:24	Feb-27-20 07:09
	<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	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00198 0.00198	<0.00202 0.00202
Toluene		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00198 0.00198	<0.00202 0.00202
Ethylbenzene		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00198 0.00198	<0.00202 0.00202
m,p-Xylenes		<0.00398 0.00398	<0.00399 0.00399	<0.00399 0.00399	<0.00404 0.00404	<0.00395 0.00395	<0.00403 0.00403
o-Xylene		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00198 0.00198	<0.00202 0.00202
Total Xylenes		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00198 0.00198	<0.00202 0.00202
Total BTEX		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00198 0.00198	<0.00202 0.00202
Chloride by EPA 300	<i>Extracted:</i>	Feb-26-20 20:19	Feb-27-20 07:22	Feb-27-20 07:22	Feb-27-20 07:22	Feb-27-20 07:22	Feb-27-20 07:22
	<i>Analyzed:</i>	Feb-27-20 00:16	Feb-27-20 08:36	Feb-27-20 08:53	Feb-27-20 08:59	Feb-27-20 09:04	Feb-27-20 09:10
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		1220 20.0	316 9.96	365 10.0	526 10.0	591 10.1	442 9.92
TPH by SW8015 Mod	<i>Extracted:</i>	Feb-26-20 21:29	Feb-26-20 21:29	Feb-26-20 21:29	Feb-26-20 21:29	Feb-26-20 21:29	Feb-26-20 21:29
	<i>Analyzed:</i>	Feb-27-20 08:19	Feb-27-20 08:19	Feb-27-20 08:39	Feb-27-20 08:39	Feb-27-20 08:59	Feb-27-20 08:59
	<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)		<50.0 50.0	<50.2 50.2	<50.2 50.2	<50.3 50.3	<49.8 49.8	<49.8 49.8
Diesel Range Organics (DRO)		<50.0 50.0	77.3 50.2	75.3 50.2	<50.3 50.3	<49.8 49.8	90.5 49.8
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<50.2 50.2	<50.2 50.2	<50.3 50.3	<49.8 49.8	<49.8 49.8
Total GRO-DRO		<50.0 50.0	77.3 50.2	75.3 50.2	<50.3 50.3	<49.8 49.8	90.5 49.8
Total TPH		<50.0 50.0	77.3 50.2	75.3 50.2	<50.3 50.3	<49.8 49.8	90.5 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 Assistant



Certificate of Analysis Summary 653845

LT Environmental, Inc., Arvada, CO

Project Name: Hat Mesa 32 St. 1

Project Id: 012919267

Contact: Dan Moir

Project Location: Eddy County

Date Received in Lab: Wed Feb-26-20 04:53 pm

Report Date: 27-FEB-20

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	653845-013	653845-014				
	Field Id:	FS24	FS25				
	Depth:	0.5- ft	0.5- ft				
	Matrix:	SOIL	SOIL				
	Sampled:	Feb-26-20 11:34	Feb-26-20 11:32				
BTEX by EPA 8021B	Extracted:	Feb-26-20 21:09	Feb-26-20 21:09				
	Analyzed:	Feb-27-20 07:29	Feb-27-20 07:50				
	Units/RL:	mg/kg RL	mg/kg RL				
	Benzene	<0.00200 0.00200	<0.00200 0.00200				
	Toluene	<0.00200 0.00200	<0.00200 0.00200				
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200				
m,p-Xylenes		<0.00400 0.00400	<0.00399 0.00399				
o-Xylene		<0.00200 0.00200	<0.00200 0.00200				
Total Xylenes		<0.00200 0.00200	<0.00200 0.00200				
Total BTEX		<0.00200 0.00200	<0.00200 0.00200				
Chloride by EPA 300	Extracted:	Feb-27-20 07:22	Feb-27-20 07:22				
	Analyzed:	Feb-27-20 09:27	Feb-27-20 09:33				
	Units/RL:	mg/kg RL	mg/kg RL				
	Chloride	534 49.9	221 10.1				
TPH by SW8015 Mod	Extracted:	Feb-26-20 21:29	Feb-26-20 21:29				
	Analyzed:	Feb-27-20 09:18	Feb-27-20 09:18				
	Units/RL:	mg/kg RL	mg/kg RL				
	Gasoline Range Hydrocarbons (GRO)	<50.3 50.3	<50.1 50.1				
	Diesel Range Organics (DRO)	78.8 50.3	<50.1 50.1				
Motor Oil Range Hydrocarbons (MRO)		<50.3 50.3	<50.1 50.1				
Total GRO-DRO		78.8 50.3	<50.1 50.1				
Total TPH		78.8 50.3	<50.1 50.1				

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

Jessica Kramer
Project Assistant



Certificate of Analytical Results 653845

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St. 1

Sample Id: **FS05**
Lab Sample Id: 653845-001

Matrix: Soil
Date Collected: 02.26.20 10.09

Date Received: 02.26.20 16.53
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117863

Date Prep: 02.26.20 20.19

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1100	20.0	mg/kg	02.26.20 23.28		2

Analytical Method: TPH by SW8015 Mod

Tech: MAB

Analyst: CAC

Seq Number: 3117842

Date Prep: 02.26.20 21.29

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	02.27.20 07.02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	02.27.20 07.02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	02.27.20 07.02	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	02.27.20 07.02	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	02.27.20 07.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	119	%	70-135	02.27.20 07.02	
o-Terphenyl	84-15-1	118	%	70-135	02.27.20 07.02	



Certificate of Analytical Results 653845

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St. 1

Sample Id: **FS05**
Lab Sample Id: 653845-001

Matrix: Soil
Date Collected: 02.26.20 10.09

Date Received: 02.26.20 16.53
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.26.20 17.30

Basis: Wet Weight

Seq Number: 3117852

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	02.27.20 05.20	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	02.27.20 05.20	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	02.27.20 05.20	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	02.27.20 05.20	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	02.27.20 05.20	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	02.27.20 05.20	U	1
Total BTEX		<0.00202	0.00202	mg/kg	02.27.20 05.20	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	93	%	70-130	02.27.20 05.20		
1,4-Difluorobenzene	540-36-3	102	%	70-130	02.27.20 05.20		



Certificate of Analytical Results 653845

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St. 1

Sample Id: **FS06** Matrix: Soil Date Received: 02.26.20 16.53
 Lab Sample Id: 653845-002 Date Collected: 02.26.20 10.00 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.26.20 20.19 Basis: Wet Weight
 Seq Number: 3117863

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1050	20.0	mg/kg	02.26.20 23.34		2

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: MAB % Moisture:
 Analyst: CAC Date Prep: 02.26.20 21.29 Basis: Wet Weight
 Seq Number: 3117842

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	02.27.20 07.02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	02.27.20 07.02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	02.27.20 07.02	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	02.27.20 07.02	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	02.27.20 07.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	02.27.20 07.02	
o-Terphenyl	84-15-1	113	%	70-135	02.27.20 07.02	



Certificate of Analytical Results 653845

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St. 1

Sample Id: **FS06**
Lab Sample Id: 653845-002

Matrix: Soil
Date Collected: 02.26.20 10.00

Date Received: 02.26.20 16.53
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117852

Date Prep: 02.26.20 17.30

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	02.27.20 05.40	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	02.27.20 05.40	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	02.27.20 05.40	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	02.27.20 05.40	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	02.27.20 05.40	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	02.27.20 05.40	U	1
Total BTEX		<0.00198	0.00198	mg/kg	02.27.20 05.40	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	103	%	70-130	02.27.20 05.40		
4-Bromofluorobenzene	460-00-4	97	%	70-130	02.27.20 05.40		



Certificate of Analytical Results 653845

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St. 1

Sample Id: **FS07** Matrix: Soil Date Received: 02.26.20 16.53
 Lab Sample Id: 653845-003 Date Collected: 02.26.20 10.24 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.26.20 20.19 Basis: Wet Weight
 Seq Number: 3117863

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1210	19.9	mg/kg	02.26.20 23.52		2

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: MAB % Moisture:
 Analyst: CAC Date Prep: 02.26.20 21.29 Basis: Wet Weight
 Seq Number: 3117842

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	02.27.20 07.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	02.27.20 07.21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	02.27.20 07.21	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	02.27.20 07.21	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	02.27.20 07.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	02.27.20 07.21	
o-Terphenyl	84-15-1	112	%	70-135	02.27.20 07.21	



Certificate of Analytical Results 653845

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St. 1

Sample Id: **FS07**
Lab Sample Id: 653845-003

Matrix: Soil
Date Collected: 02.26.20 10.24

Date Received: 02.26.20 16.53
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117852

Date Prep: 02.26.20 17.30

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	02.27.20 06.01	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	02.27.20 06.01	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	02.27.20 06.01	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	02.27.20 06.01	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	02.27.20 06.01	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	02.27.20 06.01	U	1
Total BTEX		<0.00202	0.00202	mg/kg	02.27.20 06.01	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	98	%	70-130	02.27.20 06.01		
1,4-Difluorobenzene	540-36-3	100	%	70-130	02.27.20 06.01		



Certificate of Analytical Results 653845

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St. 1

Sample Id: **FS08**
Lab Sample Id: 653845-004

Matrix: Soil
Date Collected: 02.26.20 10.27

Date Received: 02.26.20 16.53
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117863

Date Prep: 02.26.20 20.19

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	913	20.2	mg/kg	02.26.20 23.58		2

Analytical Method: TPH by SW8015 Mod

Tech: MAB

Analyst: CAC

Seq Number: 3117842

Date Prep: 02.26.20 21.29

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	02.27.20 07.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	02.27.20 07.21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	02.27.20 07.21	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	02.27.20 07.21	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	02.27.20 07.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	02.27.20 07.21	
o-Terphenyl	84-15-1	123	%	70-135	02.27.20 07.21	



Certificate of Analytical Results 653845

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St. 1

Sample Id: **FS08**
Lab Sample Id: 653845-004

Matrix: Soil
Date Collected: 02.26.20 10.27

Date Received: 02.26.20 16.53
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.26.20 17.30

Basis: Wet Weight

Seq Number: 3117852

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.27.20 06.21	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.27.20 06.21	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.27.20 06.21	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.27.20 06.21	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.27.20 06.21	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.27.20 06.21	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.27.20 06.21	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	103	%	70-130	02.27.20 06.21		
4-Bromofluorobenzene	460-00-4	94	%	70-130	02.27.20 06.21		



Certificate of Analytical Results 653845

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St. 1

Sample Id: **FS09** Matrix: Soil Date Received: 02.26.20 16.53
 Lab Sample Id: 653845-005 Date Collected: 02.26.20 10.30 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.26.20 20.19 Basis: Wet Weight
 Seq Number: 3117863

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	842	20.1	mg/kg	02.27.20 00.04		2

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: MAB % Moisture:
 Analyst: CAC Date Prep: 02.26.20 21.29 Basis: Wet Weight
 Seq Number: 3117842

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	02.27.20 07.40	U	1
Diesel Range Organics (DRO)	C10C28DRO	82.1	49.9	mg/kg	02.27.20 07.40		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	02.27.20 07.40	U	1
Total GRO-DRO	PHC628	82.1	49.9	mg/kg	02.27.20 07.40		1
Total TPH	PHC635	82.1	49.9	mg/kg	02.27.20 07.40		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	120	%	70-135	02.27.20 07.40	
o-Terphenyl	84-15-1	120	%	70-135	02.27.20 07.40	



Certificate of Analytical Results 653845

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St. 1

Sample Id: **FS09**
Lab Sample Id: 653845-005

Matrix: Soil
Date Collected: 02.26.20 10.30

Date Received: 02.26.20 16.53
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.26.20 17.30

Basis: Wet Weight

Seq Number: 3117852

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.27.20 06.42	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.27.20 06.42	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.27.20 06.42	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.27.20 06.42	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.27.20 06.42	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	02.27.20 06.42	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.27.20 06.42	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	100	%	70-130	02.27.20 06.42		
1,4-Difluorobenzene	540-36-3	103	%	70-130	02.27.20 06.42		



Certificate of Analytical Results 653845

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St. 1

Sample Id: **PH01**
Lab Sample Id: 653845-006

Matrix: Soil
Date Collected: 02.26.20 12.34

Date Received: 02.26.20 16.53
Sample Depth: 1.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117863

Date Prep: 02.26.20 20.19

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1300	20.2	mg/kg	02.27.20 00.10		2

Analytical Method: TPH by SW8015 Mod

Tech: MAB

Analyst: CAC

Seq Number: 3117842

Date Prep: 02.26.20 21.29

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	02.27.20 07.40	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	02.27.20 07.40	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	02.27.20 07.40	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	02.27.20 07.40	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	02.27.20 07.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	02.27.20 07.40	
o-Terphenyl	84-15-1	118	%	70-135	02.27.20 07.40	



Certificate of Analytical Results 653845

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St. 1

Sample Id: **PH01**
Lab Sample Id: 653845-006

Matrix: Soil
Date Collected: 02.26.20 12.34

Date Received: 02.26.20 16.53
Sample Depth: 1.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117852

Date Prep: 02.26.20 17.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.27.20 07.02	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.27.20 07.02	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.27.20 07.02	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.27.20 07.02	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.27.20 07.02	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.27.20 07.02	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.27.20 07.02	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	100	%	70-130	02.27.20 07.02		
4-Bromofluorobenzene	460-00-4	99	%	70-130	02.27.20 07.02		



Certificate of Analytical Results 653845

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St. 1

Sample Id: **PH01A**
Lab Sample Id: 653845-007

Matrix: Soil
Date Collected: 02.26.20 12.42

Date Received: 02.26.20 16.53
Sample Depth: 2.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117863

Date Prep: 02.26.20 20.19

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1220	20.0	mg/kg	02.27.20 00.16		2

Analytical Method: TPH by SW8015 Mod

Tech: MAB

Analyst: CAC

Seq Number: 3117842

Date Prep: 02.26.20 21.29

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	02.27.20 08.19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	02.27.20 08.19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	02.27.20 08.19	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	02.27.20 08.19	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	02.27.20 08.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	02.27.20 08.19	
o-Terphenyl	84-15-1	128	%	70-135	02.27.20 08.19	



Certificate of Analytical Results 653845

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St. 1

Sample Id: **PH01A**
Lab Sample Id: 653845-007

Matrix: Soil
Date Collected: 02.26.20 12.42

Date Received: 02.26.20 16.53
Sample Depth: 2.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.26.20 17.30

Basis: Wet Weight

Seq Number: 3117852

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.27.20 07.22	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.27.20 07.22	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.27.20 07.22	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.27.20 07.22	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.27.20 07.22	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	02.27.20 07.22	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.27.20 07.22	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	02.27.20 07.22		
4-Bromofluorobenzene	460-00-4	96	%	70-130	02.27.20 07.22		



Certificate of Analytical Results 653845

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St. 1

Sample Id: **FS10**
Lab Sample Id: 653845-008

Matrix: Soil
Date Collected: 02.26.20 13.31

Date Received: 02.26.20 16.53
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117872

Date Prep: 02.27.20 07.22

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	316	9.96	mg/kg	02.27.20 08.36		1

Analytical Method: TPH by SW8015 Mod

Tech: MAB

Analyst: CAC

Seq Number: 3117842

Date Prep: 02.26.20 21.29

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	02.27.20 08.19	U	1
Diesel Range Organics (DRO)	C10C28DRO	77.3	50.2	mg/kg	02.27.20 08.19		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	02.27.20 08.19	U	1
Total GRO-DRO	PHC628	77.3	50.2	mg/kg	02.27.20 08.19		1
Total TPH	PHC635	77.3	50.2	mg/kg	02.27.20 08.19		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	02.27.20 08.19	
o-Terphenyl	84-15-1	105	%	70-135	02.27.20 08.19	



Certificate of Analytical Results 653845

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St. 1

Sample Id: **FS10**
Lab Sample Id: 653845-008

Matrix: Soil
Date Collected: 02.26.20 13.31

Date Received: 02.26.20 16.53
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.26.20 17.30

Basis: Wet Weight

Seq Number: 3117852

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.27.20 07.43	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.27.20 07.43	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.27.20 07.43	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.27.20 07.43	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.27.20 07.43	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.27.20 07.43	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.27.20 07.43	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	97	%	70-130	02.27.20 07.43		
1,4-Difluorobenzene	540-36-3	102	%	70-130	02.27.20 07.43		



Certificate of Analytical Results 653845

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St. 1

Sample Id: **FS12**
Lab Sample Id: 653845-009

Matrix: Soil
Date Collected: 02.26.20 13.24

Date Received: 02.26.20 16.53
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117872

Date Prep: 02.27.20 07.22

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	365	10.0	mg/kg	02.27.20 08.53		1

Analytical Method: TPH by SW8015 Mod

Tech: MAB

Analyst: CAC

Seq Number: 3117842

Date Prep: 02.26.20 21.29

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	02.27.20 08.39	U	1
Diesel Range Organics (DRO)	C10C28DRO	75.3	50.2	mg/kg	02.27.20 08.39		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	02.27.20 08.39	U	1
Total GRO-DRO	PHC628	75.3	50.2	mg/kg	02.27.20 08.39		1
Total TPH	PHC635	75.3	50.2	mg/kg	02.27.20 08.39		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	02.27.20 08.39	
o-Terphenyl	84-15-1	120	%	70-135	02.27.20 08.39	



Certificate of Analytical Results 653845

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St. 1

Sample Id: **FS12**
Lab Sample Id: 653845-009

Matrix: Soil
Date Collected: 02.26.20 13.24

Date Received: 02.26.20 16.53
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.26.20 17.30

Basis: Wet Weight

Seq Number: 3117852

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.27.20 08.03	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.27.20 08.03	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.27.20 08.03	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.27.20 08.03	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.27.20 08.03	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.27.20 08.03	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.27.20 08.03	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	102	%	70-130	02.27.20 08.03		
1,4-Difluorobenzene	540-36-3	103	%	70-130	02.27.20 08.03		



Certificate of Analytical Results 653845

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St. 1

Sample Id: **FS13**
Lab Sample Id: 653845-010

Matrix: Soil
Date Collected: 02.26.20 13.19

Date Received: 02.26.20 16.53
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117872

Date Prep: 02.27.20 07.22

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	526	10.0	mg/kg	02.27.20 08.59		1

Analytical Method: TPH by SW8015 Mod

Tech: MAB

Analyst: CAC

Seq Number: 3117842

Date Prep: 02.26.20 21.29

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	02.27.20 08.39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	02.27.20 08.39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	02.27.20 08.39	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	02.27.20 08.39	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	02.27.20 08.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	02.27.20 08.39	
o-Terphenyl	84-15-1	108	%	70-135	02.27.20 08.39	



Certificate of Analytical Results 653845

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St. 1

Sample Id: **FS13**
Lab Sample Id: 653845-010

Matrix: Soil
Date Collected: 02.26.20 13.19

Date Received: 02.26.20 16.53
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.26.20 21.09

Basis: Wet Weight

Seq Number: 3117857

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	02.27.20 06.48	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	02.27.20 06.48	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	02.27.20 06.48	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	02.27.20 06.48	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	02.27.20 06.48	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	02.27.20 06.48	U	1
Total BTEX		<0.00202	0.00202	mg/kg	02.27.20 06.48	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	109	%	70-130	02.27.20 06.48		
4-Bromofluorobenzene	460-00-4	96	%	70-130	02.27.20 06.48		



Certificate of Analytical Results 653845

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St. 1

Sample Id: **FS19**
Lab Sample Id: 653845-011

Matrix: Soil
Date Collected: 02.26.20 12.28

Date Received: 02.26.20 16.53
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117872

Date Prep: 02.27.20 07.22

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	591	10.1	mg/kg	02.27.20 09.04		1

Analytical Method: TPH by SW8015 Mod

Tech: MAB

Analyst: CAC

Seq Number: 3117842

Date Prep: 02.26.20 21.29

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	02.27.20 08.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	02.27.20 08.59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	02.27.20 08.59	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	02.27.20 08.59	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	02.27.20 08.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	02.27.20 08.59	
o-Terphenyl	84-15-1	111	%	70-135	02.27.20 08.59	



Certificate of Analytical Results 653845

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St. 1

Sample Id: **FS19**
Lab Sample Id: 653845-011

Matrix: Soil
Date Collected: 02.26.20 12.28

Date Received: 02.26.20 16.53
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.26.20 17.30

Basis: Wet Weight

Seq Number: 3117852

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	02.27.20 08.24	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	02.27.20 08.24	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	02.27.20 08.24	U	1
m,p-Xylenes	179601-23-1	<0.00395	0.00395	mg/kg	02.27.20 08.24	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	02.27.20 08.24	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	02.27.20 08.24	U	1
Total BTEX		<0.00198	0.00198	mg/kg	02.27.20 08.24	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	103	%	70-130	02.27.20 08.24		
4-Bromofluorobenzene	460-00-4	96	%	70-130	02.27.20 08.24		



Certificate of Analytical Results 653845

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St. 1

Sample Id: FS22
Lab Sample Id: 653845-012

Matrix: Soil
Date Collected: 02.26.20 11.41

Date Received: 02.26.20 16.53
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117872

Date Prep: 02.27.20 07.22

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	442	9.92	mg/kg	02.27.20 09.10		1

Analytical Method: TPH by SW8015 Mod

Tech: MAB

Analyst: CAC

Seq Number: 3117842

Date Prep: 02.26.20 21.29

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	02.27.20 08.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	90.5	49.8	mg/kg	02.27.20 08.59		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	02.27.20 08.59	U	1
Total GRO-DRO	PHC628	90.5	49.8	mg/kg	02.27.20 08.59		1
Total TPH	PHC635	90.5	49.8	mg/kg	02.27.20 08.59		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	02.27.20 08.59	
o-Terphenyl	84-15-1	102	%	70-135	02.27.20 08.59	



Certificate of Analytical Results 653845

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St. 1

Sample Id: FS22
Lab Sample Id: 653845-012

Matrix: Soil
Date Collected: 02.26.20 11.41

Date Received: 02.26.20 16.53
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.26.20 21.09

Basis: Wet Weight

Seq Number: 3117857

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	02.27.20 07.09	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	02.27.20 07.09	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	02.27.20 07.09	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	02.27.20 07.09	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	02.27.20 07.09	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	02.27.20 07.09	U	1
Total BTEX		<0.00202	0.00202	mg/kg	02.27.20 07.09	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	110	%	70-130	02.27.20 07.09		
4-Bromofluorobenzene	460-00-4	93	%	70-130	02.27.20 07.09		



Certificate of Analytical Results 653845

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St. 1

Sample Id: **FS24**
Lab Sample Id: 653845-013

Matrix: Soil
Date Collected: 02.26.20 11.34

Date Received: 02.26.20 16.53
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117872

Date Prep: 02.27.20 07.22

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	534	49.9	mg/kg	02.27.20 09.27		5

Analytical Method: TPH by SW8015 Mod

Tech: MAB

Analyst: CAC

Seq Number: 3117842

Date Prep: 02.26.20 21.29

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	02.27.20 09.18	U	1
Diesel Range Organics (DRO)	C10C28DRO	78.8	50.3	mg/kg	02.27.20 09.18		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	02.27.20 09.18	U	1
Total GRO-DRO	PHC628	78.8	50.3	mg/kg	02.27.20 09.18		1
Total TPH	PHC635	78.8	50.3	mg/kg	02.27.20 09.18		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	02.27.20 09.18	
o-Terphenyl	84-15-1	117	%	70-135	02.27.20 09.18	



Certificate of Analytical Results 653845

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St. 1

Sample Id: **FS24**
Lab Sample Id: 653845-013

Matrix: Soil
Date Collected: 02.26.20 11.34

Date Received: 02.26.20 16.53
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117857

Date Prep: 02.26.20 21.09

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.27.20 07.29	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.27.20 07.29	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.27.20 07.29	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	02.27.20 07.29	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.27.20 07.29	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.27.20 07.29	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.27.20 07.29	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	92	%	70-130	02.27.20 07.29		
1,4-Difluorobenzene	540-36-3	111	%	70-130	02.27.20 07.29		



Certificate of Analytical Results 653845

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St. 1

Sample Id: FS25
Lab Sample Id: 653845-014

Matrix: Soil
Date Collected: 02.26.20 11.32

Date Received: 02.26.20 16.53
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117872

Date Prep: 02.27.20 07.22

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	221	10.1	mg/kg	02.27.20 09.33		1

Analytical Method: TPH by SW8015 Mod

Tech: MAB

Analyst: CAC

Seq Number: 3117842

Date Prep: 02.26.20 21.29

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	02.27.20 09.18	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	02.27.20 09.18	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	02.27.20 09.18	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	02.27.20 09.18	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	02.27.20 09.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	02.27.20 09.18	
o-Terphenyl	84-15-1	108	%	70-135	02.27.20 09.18	



Certificate of Analytical Results 653845

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St. 1

Sample Id: **FS25**
Lab Sample Id: 653845-014

Matrix: Soil
Date Collected: 02.26.20 11.32

Date Received: 02.26.20 16.53
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.26.20 21.09

Basis: Wet Weight

Seq Number: 3117857

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.27.20 07.50	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.27.20 07.50	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.27.20 07.50	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.27.20 07.50	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.27.20 07.50	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.27.20 07.50	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.27.20 07.50	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	97	%	70-130	02.27.20 07.50		
1,4-Difluorobenzene	540-36-3	111	%	70-130	02.27.20 07.50		



Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



LT Environmental, Inc.

Hat Mesa 32 St. 1

Analytical Method: Chloride by EPA 300

Seq Number: 3117863

MB Sample Id: 7697573-1-BLK

Matrix: Solid

LCS Sample Id: 7697573-1-BKS

Prep Method: E300P

Date Prep: 02.26.20

LCSD Sample Id: 7697573-1-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	260	104	264	106	90-110	2	20	mg/kg	02.26.20 21:27	

Analytical Method: Chloride by EPA 300

Seq Number: 3117872

MB Sample Id: 7697574-1-BLK

Matrix: Solid

LCS Sample Id: 7697574-1-BKS

Prep Method: E300P

Date Prep: 02.27.20

LCSD Sample Id: 7697574-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2.56	250	259	104	261	104	90-110	1	20	mg/kg	02.27.20 08:22	

Analytical Method: Chloride by EPA 300

Seq Number: 3117863

Parent Sample Id: 653827-019

Matrix: Soil

MS Sample Id: 653827-019 S

Prep Method: E300P

Date Prep: 02.26.20

MSD Sample Id: 653827-019 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	144	200	358	107	359	108	90-110	0	20	mg/kg	02.26.20 21:44	

Analytical Method: Chloride by EPA 300

Seq Number: 3117863

Parent Sample Id: 653827-029

Matrix: Soil

MS Sample Id: 653827-029 S

Prep Method: E300P

Date Prep: 02.26.20

MSD Sample Id: 653827-029 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	232	201	454	110	420	94	90-110	8	20	mg/kg	02.26.20 23:04	

Analytical Method: Chloride by EPA 300

Seq Number: 3117872

Parent Sample Id: 653845-008

Matrix: Soil

MS Sample Id: 653845-008 S

Prep Method: E300P

Date Prep: 02.27.20

MSD Sample Id: 653845-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	316	200	525	105	524	104	90-110	0	20	mg/kg	02.27.20 08:42	

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.

Hat Mesa 32 St. 1

Analytical Method: Chloride by EPA 300

Seq Number: 3117872

Parent Sample Id: 653863-001

Matrix: Soil

MS Sample Id: 653863-001 S

Prep Method: E300P

Date Prep: 02.27.20

MSD Sample Id: 653863-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	28.5	200	244	108	245	108	90-110	0	20	mg/kg	02.27.20 10:21	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3117842

MB Sample Id: 7697576-1-BLK

Matrix: Solid

LCS Sample Id: 7697576-1-BKS

Prep Method: SW8015P

Date Prep: 02.26.20

LCSD Sample Id: 7697576-1-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	1100	110	1050	105	70-135	5	35	mg/kg	02.27.20 05:25	
Diesel Range Organics (DRO)	<50.0	1000	1310	131	1230	123	70-135	6	35	mg/kg	02.27.20 05:25	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	102		113		117		70-135	%	02.27.20 05:25
o-Terphenyl	119		116		108		70-135	%	02.27.20 05:25

Analytical Method: TPH by SW8015 Mod

Seq Number: 3117842

Matrix: Solid

MB Sample Id: 7697576-1-BLK

Prep Method: SW8015P

Date Prep: 02.26.20

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	02.27.20 05:05	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3117842

Matrix: Soil

Parent Sample Id: 653827-028

MS Sample Id: 653827-028 S

Prep Method: SW8015P

Date Prep: 02.26.20

MSD Sample Id: 653827-028 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)	<49.6	992	801	81	887	89	70-135	10	35	mg/kg	02.27.20 06:03	
Diesel Range Organics (DRO)	<49.6	992	923	93	1010	101	70-135	9	35	mg/kg	02.27.20 06:03	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	112		121		70-135	%	02.27.20 06:03
o-Terphenyl	117		131		70-135	%	02.27.20 06:03

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.

Hat Mesa 32 St. 1

Analytical Method: BTEX by EPA 8021B

Seq Number: 3117852

MB Sample Id: 7697569-1-BLK

Matrix: Solid

LCS Sample Id: 7697569-1-BKS

Prep Method: SW5030B

Date Prep: 02.26.20

LCSD Sample Id: 7697569-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.105	105	0.110	110	70-130	5	35	mg/kg	02.26.20 23:33	
Toluene	<0.00200	0.100	0.101	101	0.106	106	70-130	5	35	mg/kg	02.26.20 23:33	
Ethylbenzene	<0.00200	0.100	0.0969	97	0.101	101	71-129	4	35	mg/kg	02.26.20 23:33	
m,p-Xylenes	<0.00400	0.200	0.200	100	0.208	104	70-135	4	35	mg/kg	02.26.20 23:33	
o-Xylene	<0.00200	0.100	0.100	100	0.104	104	71-133	4	35	mg/kg	02.26.20 23:33	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		105		104		70-130	%	02.26.20 23:33
4-Bromofluorobenzene	95		95		92		70-130	%	02.26.20 23:33

Analytical Method: BTEX by EPA 8021B

Seq Number: 3117857

MB Sample Id: 7697571-1-BLK

Matrix: Solid

LCS Sample Id: 7697571-1-BKS

Prep Method: SW5030B

Date Prep: 02.26.20

LCSD Sample Id: 7697571-1-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	0.118	118	70-130	5	35	mg/kg	02.27.20 05:06	
Toluene	<0.00200	0.100	0.113	113	0.108	108	70-130	5	35	mg/kg	02.27.20 05:06	
Ethylbenzene	<0.00200	0.100	0.108	108	0.103	103	71-129	5	35	mg/kg	02.27.20 05:06	
m,p-Xylenes	<0.00400	0.200	0.211	106	0.200	100	70-135	5	35	mg/kg	02.27.20 05:06	
o-Xylene	<0.00200	0.100	0.107	107	0.102	102	71-133	5	35	mg/kg	02.27.20 05:06	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	112		110		110		70-130	%	02.27.20 05:06
4-Bromofluorobenzene	92		91		89		70-130	%	02.27.20 05:06

Analytical Method: BTEX by EPA 8021B

Seq Number: 3117852

Parent Sample Id: 653827-021

Matrix: Soil

MS Sample Id: 653827-021 S

Prep Method: SW5030B

Date Prep: 02.26.20

MSD Sample Id: 653827-021 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	0.108	107	0.121	120	70-130	11	35	mg/kg	02.27.20 00:14	
Toluene	<0.00201	0.101	0.103	102	0.116	115	70-130	12	35	mg/kg	02.27.20 00:14	
Ethylbenzene	<0.00201	0.101	0.0982	97	0.110	109	71-129	11	35	mg/kg	02.27.20 00:14	
m,p-Xylenes	<0.00402	0.201	0.202	100	0.227	112	70-135	12	35	mg/kg	02.27.20 00:14	
o-Xylene	<0.00201	0.101	0.101	100	0.112	111	71-133	10	35	mg/kg	02.27.20 00:14	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		104		70-130	%	02.27.20 00:14
4-Bromofluorobenzene	96		93		70-130	%	02.27.20 00:14

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.

Hat Mesa 32 St. 1

Analytical Method: BTEX by EPA 8021B

Seq Number: 3117857

Parent Sample Id: 653845-010

Matrix: Soil

MS Sample Id: 653845-010 S

Prep Method: SW5030B

Date Prep: 02.26.20

MSD Sample Id: 653845-010 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	0.123	122	70-130	8	35	mg/kg	02.27.20 05:47	
Toluene	<0.00200	0.100	0.0996	100	0.113	112	70-130	13	35	mg/kg	02.27.20 05:47	
Ethylbenzene	<0.00200	0.100	0.0883	88	0.110	109	71-129	22	35	mg/kg	02.27.20 05:47	
m,p-Xylenes	<0.00401	0.200	0.162	81	0.214	106	70-135	28	35	mg/kg	02.27.20 05:47	
o-Xylene	<0.00200	0.100	0.0883	88	0.107	106	71-133	19	35	mg/kg	02.27.20 05:47	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	111		109		70-130	%	02.27.20 05:47
4-Bromofluorobenzene	94		88		70-130	%	02.27.20 05:47

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) 505-3334
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) 281-1111
Hobbs, NM (575) 392-7650

Chain of Custody

Work Order No:

1053845

www.xenco.com

Page _____ of _____

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

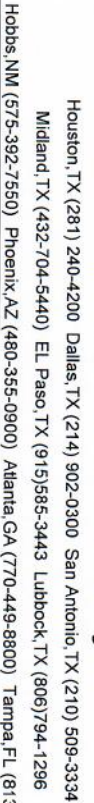
Work Order Comments									
Program: UST/PST ☐ RP ☐ Growfields ☐ RC ☐ Superfund ☐									
State of Project:									
Reporting: Level II ☐ Level III ☐ PST/UST ☐ RP ☐ Level IV ☐									
Deliverables: EDD ☐ ADAPT ☐ Other:									

Project Name:						Turn Around						ANALYSIS REQUEST										Work Order Notes					
Project Number:						Routine																					
P.O. Number:						Rush:																					
Sampler's Name:						Due Date:																					
SAMPLE RECEIPT						Temp Blank:		Yes		No		Wet Ice:		Yes		No											
Temperature (°C):						12						Thermometer ID															
Received In tact:						Yes		No				T-Meter-007															
Cooler Custody Seals:						Yes		No		N/A		Correction Factor:		-0.2													
Sample Custody Seals:						Yes		No		N/A		Total Containers:		14													
Sample Identification				Matrix	Date Sampled	Time Sampled	Depth	Number of Containers																		Sample Comments	
FS05				S	2/26/20	1000	0.5'	1	X	X	X																Composite
FS06						1024			X	X	X																
FS07						1027			X	X	X																
FS08						1030			X	X	X																
FS09						1234	1.5'		X	X	X																
PH01						1242	2.5'		X	X	X																
PH01A						1331	0.5'		X	X	X																
FS10						1324			X	X	X																
FS12						1319			X	X	X																
FS13									X	X	X																
TAT starts the day received by the lab, if received by 4:30pm																											

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xencro. Its affiliates and subcontractors. It assigns standard terms and conditions of service. Xencro 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 Xencro. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xencro, but not analyzed. These terms will be enforced unless previously negotiated.

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			2/22/20 16:53			
3						
5						

Revised Date 05/14/18 Rev. 2018.1



Work Order No.:

653845

[illegible]

Total	200.7 / 6010	200.8 / 6020:	
<i>Circle Method(s) and Metal(s) to be analyzed</i>	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

Received by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Relinquished by: (Signature)			

2007.10.15	2007.10.15
------------	------------

[illegible]

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 02.26.2020 04.53.00 PM

Work Order #: 653845

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.2
#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: 02.26.2020

Checklist reviewed by:



Jessica Kramer

Date: 02.27.2020

Analytical Report 654048

**for
LT Environmental, Inc.**

Project Manager: Dan Moir

Hat Mesa 32 St 1

012918063

02-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)



02-MAR-20

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

Reference: XENCO Report No(s): **654048**
Hat Mesa 32 St 1
Project Address: Lea

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 654048. 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. 654048 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 654048****LT Environmental, Inc., Arvada, CO**

Hat Mesa 32 St 1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS02A	S	02-27-20 09:55	1.5 ft	654048-001
FS03A	S	02-27-20 09:58	1.5 ft	654048-002
FS04A	S	02-27-20 10:01	1.5 ft	654048-003
FS05A	S	02-27-20 10:03	1.5 ft	654048-004
FS06A	S	02-27-20 10:10	1.5 ft	654048-005
FS07A	S	02-27-20 10:12	1.5 ft	654048-006
FS08A	S	02-27-20 10:14	1.5 ft	654048-007
FS09A	S	02-27-20 10:22	1.5 ft	654048-008
FS11	S	02-27-20 13:33	1.5 ft	654048-009
FS14	S	02-27-20 13:40	1.5 ft	654048-010
FS15	S	02-27-20 13:31	1.5 ft	654048-011
FS16	S	02-27-20 14:34	2.5 ft	654048-012
FS17	S	02-27-20 14:30	2.5 ft	654048-013
FS18	S	02-27-20 13:19	1.5 ft	654048-014
FS20	S	02-27-20 12:27	1.5 ft	654048-015
FS21	S	02-27-20 12:24	1.5 ft	654048-016
FS23	S	02-27-20 12:21	1.5 ft	654048-017



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Hat Mesa 32 St 1

Project ID: 012918063

Work Order Number(s): 654048

Report Date: 02-MAR-20

Date Received: 02/28/2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3118143 BTEX by EPA 8021B

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



Certificate of Analysis Summary 654048

LT Environmental, Inc., Arvada, CO

Project Name: Hat Mesa 32 St 1

Project Id: 012918063

Contact: Dan Moir

Project Location: Lea

Date Received in Lab: Fri Feb-28-20 08:45 am

Report Date: 02-MAR-20

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	654048-001	654048-002	654048-003	654048-004	654048-005	654048-006
	<i>Field Id:</i>	FS02A	FS03A	FS04A	FS05A	FS06A	FS07A
	<i>Depth:</i>	1.5- ft	1.5- ft	1.5- ft	1.5- ft	1.5- ft	1.5- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Feb-27-20 09:55	Feb-27-20 09:58	Feb-27-20 10:01	Feb-27-20 10:03	Feb-27-20 10:10	Feb-27-20 10:12
BTEX by EPA 8021B	<i>Extracted:</i>	Feb-28-20 11:00	Feb-28-20 11:00	Feb-28-20 11:00	Feb-28-20 11:00	Feb-28-20 11:00	Feb-28-20 11:00
	<i>Analyzed:</i>	Feb-28-20 13:50	Feb-28-20 14:10	Feb-28-20 14:30	Feb-28-20 14:51	Feb-28-20 15:11	Feb-28-20 15:31
	<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	<0.00201 0.00201	<0.00202 0.00202	<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200
Toluene		<0.00201 0.00201	<0.00201 0.00201	<0.00202 0.00202	<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200
Ethylbenzene		<0.00201 0.00201	<0.00201 0.00201	<0.00202 0.00202	<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200
m,p-Xylenes		<0.00402 0.00402	<0.00402 0.00402	<0.00403 0.00403	<0.00396 0.00396	<0.00397 0.00397	<0.00401 0.00401
o-Xylene		<0.00201 0.00201	<0.00201 0.00201	<0.00202 0.00202	<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200
Total Xylenes		<0.00201 0.00201	<0.00201 0.00201	<0.00202 0.00202	<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200
Total BTEX		<0.00201 0.00201	<0.00201 0.00201	<0.00202 0.00202	<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200
Chloride by EPA 300	<i>Extracted:</i>	Feb-28-20 10:30	Feb-28-20 10:30	Feb-28-20 10:30	Feb-28-20 10:30	Feb-28-20 10:30	Feb-28-20 12:30
	<i>Analyzed:</i>	Feb-28-20 13:07	Feb-28-20 13:13	Feb-28-20 13:18	Feb-28-20 13:24	Feb-28-20 13:30	Feb-28-20 14:22
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		1060 50.4	942 50.1	1060 49.9	1050 50.4	712 49.8	588 10.0
TPH by SW8015 Mod	<i>Extracted:</i>	Feb-28-20 10:00	Feb-28-20 10:00	Feb-28-20 10:00	Feb-28-20 10:00	Feb-28-20 10:00	Feb-28-20 15:05
	<i>Analyzed:</i>	Feb-28-20 17:19	Feb-28-20 17:39	Feb-28-20 17:39	Feb-28-20 17:59	Feb-28-20 17:59	Feb-28-20 19:51
	<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)		<50.2 50.2	<50.2 50.2	<50.1 50.1	<50.1 50.1	<50.3 50.3	<50.2 50.2
Diesel Range Organics (DRO)		<50.2 50.2	<50.2 50.2	<50.1 50.1	<50.1 50.1	<50.3 50.3	<50.2 50.2
Motor Oil Range Hydrocarbons (MRO)		<50.2 50.2	<50.2 50.2	<50.1 50.1	<50.1 50.1	<50.3 50.3	<50.2 50.2
Total GRO-DRO		<50.2 50.2	<50.2 50.2	<50.1 50.1	<50.1 50.1	<50.3 50.3	<50.2 50.2
Total TPH		<50.2 50.2	<50.2 50.2	<50.1 50.1	<50.1 50.1	<50.3 50.3	<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 Analysis Summary 654048

LT Environmental, Inc., Arvada, CO

Project Name: Hat Mesa 32 St 1

Project Id: 012918063

Contact: Dan Moir

Project Location: Lea

Date Received in Lab: Fri Feb-28-20 08:45 am

Report Date: 02-MAR-20

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	654048-007	654048-008	654048-009	654048-010	654048-011	654048-012
	<i>Field Id:</i>	FS08A	FS09A	FS11	FS14	FS15	FS16
	<i>Depth:</i>	1.5- ft	1.5- ft	1.5- ft	1.5- ft	1.5- ft	2.5- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Feb-27-20 10:14	Feb-27-20 10:22	Feb-27-20 13:33	Feb-27-20 13:40	Feb-27-20 13:31	Feb-27-20 14:34
BTEX by EPA 8021B	<i>Extracted:</i>	Feb-28-20 11:00	Feb-28-20 11:00	Feb-28-20 11:00	Feb-28-20 11:00	Feb-28-20 11:00	Feb-28-20 11:00
	<i>Analyzed:</i>	Feb-28-20 15:52	Feb-28-20 16:12	Feb-28-20 16:33	Feb-28-20 16:53	Feb-28-20 17:54	Feb-28-20 18:14
	<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	<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198
Toluene		<0.00201 0.00201	<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198
Ethylbenzene		<0.00201 0.00201	<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198
m,p-Xylenes		<0.00402 0.00402	<0.00398 0.00398	<0.00397 0.00397	<0.00400 0.00400	<0.00401 0.00401	<0.00397 0.00397
o-Xylene		<0.00201 0.00201	<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198
Total Xylenes		<0.00201 0.00201	<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198
Total BTEX		<0.00201 0.00201	<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198
Chloride by EPA 300	<i>Extracted:</i>	Feb-28-20 12:30	Feb-28-20 12:30	Feb-28-20 12:30	Feb-28-20 12:30	Feb-28-20 12:30	Feb-28-20 12:30
	<i>Analyzed:</i>	Feb-28-20 14:39	Feb-28-20 14:45	Feb-28-20 14:51	Feb-28-20 14:56	Feb-28-20 15:13	Feb-28-20 15:19
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		256 9.98	347 9.92	223 10.1	272 10.0	476 10.0	530 10.1
TPH by SW8015 Mod	<i>Extracted:</i>	Feb-28-20 15:05	Feb-28-20 15:05	Feb-28-20 15:05	Feb-28-20 15:05	Feb-28-20 15:05	Feb-28-20 15:05
	<i>Analyzed:</i>	Feb-28-20 20:11	Feb-28-20 20:31	Feb-28-20 20:31	Feb-28-20 20:51	Feb-28-20 20:51	Feb-28-20 21:10
	<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)		<50.2 50.2	<50.1 50.1	<50.3 50.3	<50.0 50.0	<50.1 50.1	<50.0 50.0
Diesel Range Organics (DRO)		<50.2 50.2	<50.1 50.1	<50.3 50.3	757 50.0	121 50.1	130 50.0
Motor Oil Range Hydrocarbons (MRO)		<50.2 50.2	<50.1 50.1	<50.3 50.3	111 50.0	<50.1 50.1	<50.0 50.0
Total GRO-DRO		<50.2 50.2	<50.1 50.1	<50.3 50.3	757 50.0	121 50.1	130 50.0
Total TPH		<50.2 50.2	<50.1 50.1	<50.3 50.3	868 50.0	121 50.1	130 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

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 654048

LT Environmental, Inc., Arvada, CO

Project Name: Hat Mesa 32 St 1

Project Id: 012918063

Contact: Dan Moir

Project Location: Lea

Date Received in Lab: Fri Feb-28-20 08:45 am

Report Date: 02-MAR-20

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	654048-013	654048-014	654048-015	654048-016	654048-017	
	<i>Field Id:</i>	FS17	FS18	FS20	FS21	FS23	
	<i>Depth:</i>	2.5- ft	1.5- ft	1.5- ft	1.5- ft	1.5- ft	
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	
	<i>Sampled:</i>	Feb-27-20 14:30	Feb-27-20 13:19	Feb-27-20 12:27	Feb-27-20 12:24	Feb-27-20 12:21	
BTEX by EPA 8021B	<i>Extracted:</i>	Feb-28-20 11:00	Feb-28-20 11:00	Feb-28-20 11:00	Feb-28-20 11:00	Feb-28-20 11:00	
	<i>Analyzed:</i>	Feb-28-20 18:35	Feb-28-20 18:55	Feb-28-20 19:16	Feb-28-20 19:36	Feb-28-20 19:56	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Benzene		<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00201 0.00201	
Toluene		<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00201 0.00201	
Ethylbenzene		<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00201 0.00201	
m,p-Xylenes		<0.00402 0.00402	<0.00401 0.00401	<0.00400 0.00400	<0.00403 0.00403	<0.00402 0.00402	
o-Xylene		0.00419 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00201 0.00201	
Total Xylenes		0.00419 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00201 0.00201	
Total BTEX		0.00419 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00201 0.00201	
Chloride by EPA 300	<i>Extracted:</i>	Feb-28-20 12:30	Feb-28-20 12:30	Feb-28-20 12:30	Feb-28-20 12:30	Feb-28-20 12:30	
	<i>Analyzed:</i>	Feb-28-20 15:25	Feb-28-20 15:30	Feb-28-20 15:36	Feb-28-20 15:43	Feb-28-20 16:01	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		160 10.1	517 10.0	751 9.92	626 9.98	553 9.94	
TPH by SW8015 Mod	<i>Extracted:</i>	Feb-28-20 15:05	Feb-28-20 15:05	Feb-28-20 15:05	Feb-28-20 15:05	Feb-28-20 15:05	
	<i>Analyzed:</i>	Feb-28-20 21:10	Feb-28-20 21:30	Feb-28-20 21:30	Feb-28-20 22:29	Feb-28-20 22:29	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Gasoline Range Hydrocarbons (GRO)		<50.2 50.2	<50.2 50.2	<50.2 50.2	<49.9 49.9	<50.2 50.2	
Diesel Range Organics (DRO)		<50.2 50.2	181 50.2	<50.2 50.2	292 49.9	<50.2 50.2	
Motor Oil Range Hydrocarbons (MRO)		<50.2 50.2	<50.2 50.2	<50.2 50.2	<49.9 49.9	<50.2 50.2	
Total GRO-DRO		<50.2 50.2	181 50.2	<50.2 50.2	292 49.9	<50.2 50.2	
Total TPH		<50.2 50.2	181 50.2	<50.2 50.2	292 49.9	<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 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS02A**
Lab Sample Id: 654048-001

Matrix: Soil
Date Collected: 02.27.20 09.55

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118156

Date Prep: 02.28.20 10.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1060	50.4	mg/kg	02.28.20 13.07		5

Analytical Method: TPH by SW8015 Mod

Tech: MAB

Analyst: CAC

Seq Number: 3118137

Date Prep: 02.28.20 10.00

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	02.28.20 17.19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	02.28.20 17.19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	02.28.20 17.19	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	02.28.20 17.19	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	02.28.20 17.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-135	02.28.20 17.19	
o-Terphenyl	84-15-1	129	%	70-135	02.28.20 17.19	



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS02A**
Lab Sample Id: 654048-001

Matrix: Soil
Date Collected: 02.27.20 09.55

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3118143

Date Prep: 02.28.20 11.00

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	02.28.20 13.50	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	02.28.20 13.50	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	02.28.20 13.50	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	02.28.20 13.50	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	02.28.20 13.50	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	02.28.20 13.50	U	1
Total BTEX		<0.00201	0.00201	mg/kg	02.28.20 13.50	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	112	%	70-130	02.28.20 13.50		
4-Bromofluorobenzene	460-00-4	91	%	70-130	02.28.20 13.50		



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS03A**
Lab Sample Id: 654048-002

Matrix: Soil
Date Collected: 02.27.20 09.58

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118156

Date Prep: 02.28.20 10.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	942	50.1	mg/kg	02.28.20 13.13		5

Analytical Method: TPH by SW8015 Mod

Tech: MAB

Analyst: CAC

Seq Number: 3118137

Date Prep: 02.28.20 10.00

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	02.28.20 17.39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	02.28.20 17.39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	02.28.20 17.39	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	02.28.20 17.39	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	02.28.20 17.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	02.28.20 17.39	
o-Terphenyl	84-15-1	122	%	70-135	02.28.20 17.39	



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS03A**
Lab Sample Id: 654048-002

Matrix: Soil
Date Collected: 02.27.20 09.58

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3118143

Date Prep: 02.28.20 11.00

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	02.28.20 14.10	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	02.28.20 14.10	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	02.28.20 14.10	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	02.28.20 14.10	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	02.28.20 14.10	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	02.28.20 14.10	U	1
Total BTEX		<0.00201	0.00201	mg/kg	02.28.20 14.10	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	112	%	70-130	02.28.20 14.10		
4-Bromofluorobenzene	460-00-4	92	%	70-130	02.28.20 14.10		



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS04A**
Lab Sample Id: 654048-003

Matrix: Soil
Date Collected: 02.27.20 10.01

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118156

Date Prep: 02.28.20 10.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1060	49.9	mg/kg	02.28.20 13.18		5

Analytical Method: TPH by SW8015 Mod

Tech: MAB

Analyst: CAC

Seq Number: 3118137

Date Prep: 02.28.20 10.00

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	02.28.20 17.39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	02.28.20 17.39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	02.28.20 17.39	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	02.28.20 17.39	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	02.28.20 17.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	02.28.20 17.39	
o-Terphenyl	84-15-1	112	%	70-135	02.28.20 17.39	



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS04A**
Lab Sample Id: 654048-003

Matrix: Soil
Date Collected: 02.27.20 10.01

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3118143

Date Prep: 02.28.20 11.00

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	02.28.20 14.30	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	02.28.20 14.30	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	02.28.20 14.30	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	02.28.20 14.30	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	02.28.20 14.30	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	02.28.20 14.30	U	1
Total BTEX		<0.00202	0.00202	mg/kg	02.28.20 14.30	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	113	%	70-130	02.28.20 14.30		
4-Bromofluorobenzene	460-00-4	93	%	70-130	02.28.20 14.30		



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS05A**
Lab Sample Id: 654048-004

Matrix: Soil
Date Collected: 02.27.20 10.03

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118156

Date Prep: 02.28.20 10.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1050	50.4	mg/kg	02.28.20 13.24		5

Analytical Method: TPH by SW8015 Mod

Tech: MAB

Analyst: CAC

Seq Number: 3118137

Date Prep: 02.28.20 10.00

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	02.28.20 17.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	02.28.20 17.59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	02.28.20 17.59	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	02.28.20 17.59	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	02.28.20 17.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	02.28.20 17.59	
o-Terphenyl	84-15-1	117	%	70-135	02.28.20 17.59	



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS05A**
Lab Sample Id: 654048-004

Matrix: Soil
Date Collected: 02.27.20 10.03

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3118143

Date Prep: 02.28.20 11.00

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	02.28.20 14.51	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	02.28.20 14.51	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	02.28.20 14.51	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	02.28.20 14.51	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	02.28.20 14.51	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	02.28.20 14.51	U	1
Total BTEX		<0.00198	0.00198	mg/kg	02.28.20 14.51	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	92	%	70-130	02.28.20 14.51		
1,4-Difluorobenzene	540-36-3	113	%	70-130	02.28.20 14.51		



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS06A**
Lab Sample Id: 654048-005

Matrix: Soil
Date Collected: 02.27.20 10.10

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118156

Date Prep: 02.28.20 10.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	712	49.8	mg/kg	02.28.20 13.30		5

Analytical Method: TPH by SW8015 Mod

Tech: MAB

Analyst: CAC

Seq Number: 3118137

Date Prep: 02.28.20 10.00

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	02.28.20 17.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	02.28.20 17.59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	02.28.20 17.59	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	02.28.20 17.59	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	02.28.20 17.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	121	%	70-135	02.28.20 17.59	
o-Terphenyl	84-15-1	133	%	70-135	02.28.20 17.59	



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS06A**
Lab Sample Id: 654048-005

Matrix: Soil
Date Collected: 02.27.20 10.10

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3118143

Date Prep: 02.28.20 11.00

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	02.28.20 15.11	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	02.28.20 15.11	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	02.28.20 15.11	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	02.28.20 15.11	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	02.28.20 15.11	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	02.28.20 15.11	U	1
Total BTEX		<0.00198	0.00198	mg/kg	02.28.20 15.11	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	91	%	70-130	02.28.20 15.11		
1,4-Difluorobenzene	540-36-3	111	%	70-130	02.28.20 15.11		



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS07A**
Lab Sample Id: 654048-006

Matrix: Soil
Date Collected: 02.27.20 10.12

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118166

Date Prep: 02.28.20 12.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	588	10.0	mg/kg	02.28.20 14.22		1

Analytical Method: TPH by SW8015 Mod

Tech: MAB

Analyst: MAB

Seq Number: 3118180

Date Prep: 02.28.20 15.05

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	02.28.20 19.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	02.28.20 19.51	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	02.28.20 19.51	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	02.28.20 19.51	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	02.28.20 19.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	126	%	70-135	02.28.20 19.51	
o-Terphenyl	84-15-1	122	%	70-135	02.28.20 19.51	



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS07A**
Lab Sample Id: 654048-006

Matrix: Soil
Date Collected: 02.27.20 10.12

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.28.20 11.00

Basis: Wet Weight

Seq Number: 3118143

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.28.20 15.31	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.28.20 15.31	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.28.20 15.31	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	02.28.20 15.31	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.28.20 15.31	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.28.20 15.31	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.28.20 15.31	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	112	%	70-130	02.28.20 15.31		
4-Bromofluorobenzene	460-00-4	91	%	70-130	02.28.20 15.31		



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS08A**
Lab Sample Id: 654048-007

Matrix: Soil
Date Collected: 02.27.20 10.14

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118166

Date Prep: 02.28.20 12.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	256	9.98	mg/kg	02.28.20 14.39		1

Analytical Method: TPH by SW8015 Mod

Tech: MAB

Analyst: MAB

Seq Number: 3118180

Date Prep: 02.28.20 15.05

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	02.28.20 20.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	02.28.20 20.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	02.28.20 20.11	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	02.28.20 20.11	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	02.28.20 20.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	02.28.20 20.11	
o-Terphenyl	84-15-1	117	%	70-135	02.28.20 20.11	



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS08A**
Lab Sample Id: 654048-007

Matrix: Soil
Date Collected: 02.27.20 10.14

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.28.20 11.00

Basis: Wet Weight

Seq Number: 3118143

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	02.28.20 15.52	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	02.28.20 15.52	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	02.28.20 15.52	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	02.28.20 15.52	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	02.28.20 15.52	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	02.28.20 15.52	U	1
Total BTEX		<0.00201	0.00201	mg/kg	02.28.20 15.52	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	93	%	70-130	02.28.20 15.52		
1,4-Difluorobenzene	540-36-3	112	%	70-130	02.28.20 15.52		



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS09A**
Lab Sample Id: 654048-008

Matrix: Soil
Date Collected: 02.27.20 10.22

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118166

Date Prep: 02.28.20 12.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	347	9.92	mg/kg	02.28.20 14.45		1

Analytical Method: TPH by SW8015 Mod

Tech: MAB

Analyst: MAB

Seq Number: 3118180

Date Prep: 02.28.20 15.05

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	02.28.20 20.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	02.28.20 20.31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	02.28.20 20.31	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	02.28.20 20.31	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	02.28.20 20.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	02.28.20 20.31	
o-Terphenyl	84-15-1	127	%	70-135	02.28.20 20.31	



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS09A**
Lab Sample Id: 654048-008

Matrix: Soil
Date Collected: 02.27.20 10.22

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3118143

Date Prep: 02.28.20 11.00

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	02.28.20 16.12	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.28.20 16.12	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.28.20 16.12	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.28.20 16.12	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.28.20 16.12	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	02.28.20 16.12	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.28.20 16.12	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	112	%	70-130	02.28.20 16.12		
4-Bromofluorobenzene	460-00-4	91	%	70-130	02.28.20 16.12		



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS11**
Lab Sample Id: 654048-009

Matrix: Soil
Date Collected: 02.27.20 13.33

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118166

Date Prep: 02.28.20 12.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	223	10.1	mg/kg	02.28.20 14.51		1

Analytical Method: TPH by SW8015 Mod

Tech: MAB

Analyst: MAB

Seq Number: 3118180

Date Prep: 02.28.20 15.05

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	02.28.20 20.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	02.28.20 20.31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	02.28.20 20.31	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	02.28.20 20.31	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	02.28.20 20.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	02.28.20 20.31	
o-Terphenyl	84-15-1	123	%	70-135	02.28.20 20.31	



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS11**
Lab Sample Id: 654048-009

Matrix: Soil
Date Collected: 02.27.20 13.33

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.28.20 11.00

Basis: Wet Weight

Seq Number: 3118143

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	02.28.20 16.33	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	02.28.20 16.33	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	02.28.20 16.33	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	02.28.20 16.33	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	02.28.20 16.33	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	02.28.20 16.33	U	1
Total BTEX		<0.00198	0.00198	mg/kg	02.28.20 16.33	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	111	%	70-130	02.28.20 16.33		
4-Bromofluorobenzene	460-00-4	94	%	70-130	02.28.20 16.33		



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS14**
Lab Sample Id: 654048-010

Matrix: Soil
Date Collected: 02.27.20 13.40

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118166

Date Prep: 02.28.20 12.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	272	10.0	mg/kg	02.28.20 14.56		1

Analytical Method: TPH by SW8015 Mod

Tech: MAB

Analyst: MAB

Seq Number: 3118180

Date Prep: 02.28.20 15.05

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	02.28.20 20.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	757	50.0	mg/kg	02.28.20 20.51		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	111	50.0	mg/kg	02.28.20 20.51		1
Total GRO-DRO	PHC628	757	50.0	mg/kg	02.28.20 20.51		1
Total TPH	PHC635	868	50.0	mg/kg	02.28.20 20.51		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	02.28.20 20.51	
o-Terphenyl	84-15-1	126	%	70-135	02.28.20 20.51	



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS14**
Lab Sample Id: 654048-010

Matrix: Soil
Date Collected: 02.27.20 13.40

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.28.20 11.00

Basis: Wet Weight

Seq Number: 3118143

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.28.20 16.53	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.28.20 16.53	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.28.20 16.53	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	02.28.20 16.53	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.28.20 16.53	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.28.20 16.53	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.28.20 16.53	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	77	%	70-130	02.28.20 16.53		
1,4-Difluorobenzene	540-36-3	87	%	70-130	02.28.20 16.53		



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS15**
Lab Sample Id: 654048-011

Matrix: Soil
Date Collected: 02.27.20 13.31

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118166

Date Prep: 02.28.20 12.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	476	10.0	mg/kg	02.28.20 15.13		1

Analytical Method: TPH by SW8015 Mod

Tech: MAB

Analyst: MAB

Seq Number: 3118180

Date Prep: 02.28.20 15.05

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	02.28.20 20.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	121	50.1	mg/kg	02.28.20 20.51		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	02.28.20 20.51	U	1
Total GRO-DRO	PHC628	121	50.1	mg/kg	02.28.20 20.51		1
Total TPH	PHC635	121	50.1	mg/kg	02.28.20 20.51		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	120	%	70-135	02.28.20 20.51	
o-Terphenyl	84-15-1	134	%	70-135	02.28.20 20.51	



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS15**
Lab Sample Id: 654048-011

Matrix: Soil
Date Collected: 02.27.20 13.31

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3118143

Date Prep: 02.28.20 11.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.28.20 17.54	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.28.20 17.54	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.28.20 17.54	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	02.28.20 17.54	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.28.20 17.54	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.28.20 17.54	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.28.20 17.54	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	112	%	70-130	02.28.20 17.54		
4-Bromofluorobenzene	460-00-4	93	%	70-130	02.28.20 17.54		



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS16**
Lab Sample Id: 654048-012

Matrix: Soil
Date Collected: 02.27.20 14.34

Date Received: 02.28.20 08.45
Sample Depth: 2.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118166

Date Prep: 02.28.20 12.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	530	10.1	mg/kg	02.28.20 15.19		1

Analytical Method: TPH by SW8015 Mod

Tech: MAB

Analyst: MAB

Seq Number: 3118180

Date Prep: 02.28.20 15.05

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	02.28.20 21.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	130	50.0	mg/kg	02.28.20 21.10		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	02.28.20 21.10	U	1
Total GRO-DRO	PHC628	130	50.0	mg/kg	02.28.20 21.10		1
Total TPH	PHC635	130	50.0	mg/kg	02.28.20 21.10		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	02.28.20 21.10	
o-Terphenyl	84-15-1	120	%	70-135	02.28.20 21.10	



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS16**
Lab Sample Id: 654048-012

Matrix: Soil
Date Collected: 02.27.20 14.34

Date Received: 02.28.20 08.45
Sample Depth: 2.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3118143

Date Prep: 02.28.20 11.00

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	02.28.20 18.14	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	02.28.20 18.14	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	02.28.20 18.14	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	02.28.20 18.14	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	02.28.20 18.14	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	02.28.20 18.14	U	1
Total BTEX		<0.00198	0.00198	mg/kg	02.28.20 18.14	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	87	%	70-130	02.28.20 18.14		
1,4-Difluorobenzene	540-36-3	104	%	70-130	02.28.20 18.14		



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS17**
Lab Sample Id: 654048-013

Matrix: Soil
Date Collected: 02.27.20 14.30

Date Received: 02.28.20 08.45
Sample Depth: 2.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118166

Date Prep: 02.28.20 12.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	160	10.1	mg/kg	02.28.20 15.25		1

Analytical Method: TPH by SW8015 Mod

Tech: MAB

Analyst: MAB

Seq Number: 3118180

Date Prep: 02.28.20 15.05

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	02.28.20 21.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	02.28.20 21.10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	02.28.20 21.10	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	02.28.20 21.10	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	02.28.20 21.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	02.28.20 21.10	
o-Terphenyl	84-15-1	123	%	70-135	02.28.20 21.10	



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS17**
Lab Sample Id: 654048-013

Matrix: Soil
Date Collected: 02.27.20 14.30

Date Received: 02.28.20 08.45
Sample Depth: 2.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.28.20 11.00

Basis: Wet Weight

Seq Number: 3118143

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	02.28.20 18.35	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	02.28.20 18.35	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	02.28.20 18.35	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	02.28.20 18.35	U	1
o-Xylene	95-47-6	0.00419	0.00201	mg/kg	02.28.20 18.35		1
Total Xylenes	1330-20-7	0.00419	0.00201	mg/kg	02.28.20 18.35		1
Total BTEX		0.00419	0.00201	mg/kg	02.28.20 18.35		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	95	%	70-130	02.28.20 18.35		
1,4-Difluorobenzene	540-36-3	109	%	70-130	02.28.20 18.35		



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS18**
Lab Sample Id: 654048-014

Matrix: Soil
Date Collected: 02.27.20 13.19

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118166

Date Prep: 02.28.20 12.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	517	10.0	mg/kg	02.28.20 15.30		1

Analytical Method: TPH by SW8015 Mod

Tech: MAB

Analyst: MAB

Seq Number: 3118180

Date Prep: 02.28.20 15.05

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	02.28.20 21.30	U	1
Diesel Range Organics (DRO)	C10C28DRO	181	50.2	mg/kg	02.28.20 21.30		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	02.28.20 21.30	U	1
Total GRO-DRO	PHC628	181	50.2	mg/kg	02.28.20 21.30		1
Total TPH	PHC635	181	50.2	mg/kg	02.28.20 21.30		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	02.28.20 21.30	
o-Terphenyl	84-15-1	122	%	70-135	02.28.20 21.30	



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS18**
Lab Sample Id: 654048-014

Matrix: Soil
Date Collected: 02.27.20 13.19

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.28.20 11.00

Basis: Wet Weight

Seq Number: 3118143

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.28.20 18.55	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.28.20 18.55	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.28.20 18.55	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	02.28.20 18.55	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.28.20 18.55	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.28.20 18.55	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.28.20 18.55	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	99	%	70-130	02.28.20 18.55		
4-Bromofluorobenzene	460-00-4	85	%	70-130	02.28.20 18.55		



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS20**
Lab Sample Id: 654048-015

Matrix: Soil
Date Collected: 02.27.20 12.27

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118166

Date Prep: 02.28.20 12.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	751	9.92	mg/kg	02.28.20 15.36		1

Analytical Method: TPH by SW8015 Mod

Tech: MAB

Analyst: MAB

Seq Number: 3118180

Date Prep: 02.28.20 15.05

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	02.28.20 21.30	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	02.28.20 21.30	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	02.28.20 21.30	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	02.28.20 21.30	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	02.28.20 21.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	02.28.20 21.30	
o-Terphenyl	84-15-1	115	%	70-135	02.28.20 21.30	



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS20**
Lab Sample Id: 654048-015

Matrix: Soil
Date Collected: 02.27.20 12.27

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3118143

Date Prep: 02.28.20 11.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.28.20 19.16	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.28.20 19.16	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.28.20 19.16	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	02.28.20 19.16	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.28.20 19.16	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.28.20 19.16	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.28.20 19.16	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	93	%	70-130	02.28.20 19.16		
1,4-Difluorobenzene	540-36-3	112	%	70-130	02.28.20 19.16		



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS21**
Lab Sample Id: 654048-016

Matrix: Soil
Date Collected: 02.27.20 12.24

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118166

Date Prep: 02.28.20 12.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	626	9.98	mg/kg	02.28.20 15.43		1

Analytical Method: TPH by SW8015 Mod

Tech: MAB

Analyst: MAB

Seq Number: 3118180

Date Prep: 02.28.20 15.05

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	02.28.20 22.29	U	1
Diesel Range Organics (DRO)	C10C28DRO	292	49.9	mg/kg	02.28.20 22.29		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	02.28.20 22.29	U	1
Total GRO-DRO	PHC628	292	49.9	mg/kg	02.28.20 22.29		1
Total TPH	PHC635	292	49.9	mg/kg	02.28.20 22.29		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	02.28.20 22.29	
o-Terphenyl	84-15-1	129	%	70-135	02.28.20 22.29	



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS21**
Lab Sample Id: 654048-016

Matrix: Soil
Date Collected: 02.27.20 12.24

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3118143

Date Prep: 02.28.20 11.00

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	02.28.20 19.36	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	02.28.20 19.36	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	02.28.20 19.36	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	02.28.20 19.36	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	02.28.20 19.36	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	02.28.20 19.36	U	1
Total BTEX		<0.00202	0.00202	mg/kg	02.28.20 19.36	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	91	%	70-130	02.28.20 19.36		
1,4-Difluorobenzene	540-36-3	111	%	70-130	02.28.20 19.36		



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: FS23
Lab Sample Id: 654048-017

Matrix: Soil
Date Collected: 02.27.20 12.21

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118166

Date Prep: 02.28.20 12.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	553	9.94	mg/kg	02.28.20 16.01		1

Analytical Method: TPH by SW8015 Mod

Tech: MAB

Analyst: MAB

Seq Number: 3118180

Date Prep: 02.28.20 15.05

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	02.28.20 22.29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	02.28.20 22.29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	02.28.20 22.29	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	02.28.20 22.29	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	02.28.20 22.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	02.28.20 22.29	
o-Terphenyl	84-15-1	111	%	70-135	02.28.20 22.29	



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS23**
Lab Sample Id: 654048-017

Matrix: Soil
Date Collected: 02.27.20 12.21

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3118143

Date Prep: 02.28.20 11.00

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	02.28.20 19.56	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	02.28.20 19.56	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	02.28.20 19.56	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	02.28.20 19.56	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	02.28.20 19.56	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	02.28.20 19.56	U	1
Total BTEX		<0.00201	0.00201	mg/kg	02.28.20 19.56	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	87	%	70-130	02.28.20 19.56		
1,4-Difluorobenzene	540-36-3	100	%	70-130	02.28.20 19.56		



Flagging Criteria

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

****** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



LT Environmental, Inc.

Hat Mesa 32 St 1

Analytical Method: Chloride by EPA 300

Seq Number: 3118156

MB Sample Id: 7697721-1-BLK

Matrix: Solid

LCS Sample Id: 7697721-1-BKS

Prep Method: E300P

Date Prep: 02.28.20

LCSD Sample Id: 7697721-1-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	260	104	260	104	90-110	0	20	mg/kg	02.28.20 10:45	

Analytical Method: Chloride by EPA 300

Seq Number: 3118156

MB Sample Id: 7697742-1-BLK

Matrix: Solid

LCS Sample Id: 7697742-1-BKS

Prep Method: E300P

Date Prep: 02.28.20

LCSD Sample Id: 7697742-1-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	02.28.20 13:52	

Analytical Method: Chloride by EPA 300

Seq Number: 3118156

Parent Sample Id: 654041-001

Matrix: Soil

MS Sample Id: 654041-001 S

Prep Method: E300P

Date Prep: 02.28.20

MSD Sample Id: 654041-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	41.7	200	257	108	256	107	90-110	0	20	mg/kg	02.28.20 11:02	

Analytical Method: Chloride by EPA 300

Seq Number: 3118156

Parent Sample Id: 654041-011

Matrix: Soil

MS Sample Id: 654041-011 S

Prep Method: E300P

Date Prep: 02.28.20

MSD Sample Id: 654041-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	43.1	200	241	99	240	99	90-110	0	20	mg/kg	02.28.20 12:21	

Analytical Method: Chloride by EPA 300

Seq Number: 3118166

Parent Sample Id: 654048-006

Matrix: Soil

MS Sample Id: 654048-006 S

Prep Method: E300P

Date Prep: 02.28.20

MSD Sample Id: 654048-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	588	201	799	105	792	102	90-110	1	20	mg/kg	02.28.20 14:28	

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.

Hat Mesa 32 St 1

Analytical Method: Chloride by EPA 300

Seq Number: 3118166

Parent Sample Id: 654048-016

Matrix: Soil

MS Sample Id: 654048-016 S

Prep Method: E300P

Date Prep: 02.28.20

MSD Sample Id: 654048-016 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	626	201	838	105	839	105	90-110	0	20	mg/kg	02.28.20 15:49	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3118137

MB Sample Id: 7697709-1-BLK

Matrix: Solid

LCS Sample Id: 7697709-1-BKS

Prep Method: SW8015P

Date Prep: 02.28.20

LCSD Sample Id: 7697709-1-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	967	97	907	91	70-135	6	35	mg/kg	02.28.20 12:51	
Diesel Range Organics (DRO)	<50.0	1000	950	95	882	88	70-135	7	35	mg/kg	02.28.20 12:51	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	106		108		114		70-135	%	02.28.20 12:51
o-Terphenyl	120		112		107		70-135	%	02.28.20 12:51

Analytical Method: TPH by SW8015 Mod

Seq Number: 3118180

MB Sample Id: 7697770-1-BLK

Matrix: Solid

LCS Sample Id: 7697770-1-BKS

Prep Method: SW8015P

Date Prep: 02.28.20

LCSD Sample Id: 7697770-1-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	1110	111	996	100	70-135	11	35	mg/kg	02.28.20 19:12	
Diesel Range Organics (DRO)	<50.0	1000	1110	111	1030	103	70-135	7	35	mg/kg	02.28.20 19:12	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	91		127		114		70-135	%	02.28.20 19:12
o-Terphenyl	101		129		120		70-135	%	02.28.20 19:12

Analytical Method: TPH by SW8015 Mod

Seq Number: 3118137

Matrix: Solid

MB Sample Id: 7697709-1-BLK

Prep Method: SW8015P

Date Prep: 02.28.20

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	02.28.20 12:31	

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



LT Environmental, Inc.

Hat Mesa 32 St 1

Analytical Method: TPH by SW8015 Mod

Seq Number: 3118180

Matrix: Solid

Prep Method: SW8015P

Date Prep: 02.28.20

MB Sample Id: 7697770-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	02.28.20 18:52	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3118137

Matrix: Soil

Prep Method: SW8015P

Date Prep: 02.28.20

Parent Sample Id: 654041-015

MS Sample Id: 654041-015 S

MSD Sample Id: 654041-015 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	735	74	831	83	70-135	12	35	mg/kg	02.28.20 13:31	
Diesel Range Organics (DRO)	95.7	995	902	81	976	88	70-135	8	35	mg/kg	02.28.20 13:31	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	101		106		70-135	%	02.28.20 13:31
o-Terphenyl	108		111		70-135	%	02.28.20 13:31

Analytical Method: TPH by SW8015 Mod

Seq Number: 3118180

Matrix: Soil

Prep Method: SW8015P

Date Prep: 02.28.20

Parent Sample Id: 654048-006

MS Sample Id: 654048-006 S

MSD Sample Id: 654048-006 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)	<49.9	998	846	85	903	89	70-135	7	35	mg/kg	02.28.20 19:51	
Diesel Range Organics (DRO)	<49.9	998	975	98	1010	100	70-135	4	35	mg/kg	02.28.20 19:51	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	111		122		70-135	%	02.28.20 19:51
o-Terphenyl	119		112		70-135	%	02.28.20 19:51

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.

Hat Mesa 32 St 1

Analytical Method: BTEX by EPA 8021B

Seq Number: 3118143

MB Sample Id: 7697714-1-BLK

Matrix: Solid

LCS Sample Id: 7697714-1-BKS

Prep Method: SW5030B

Date Prep: 02.28.20

LCSD Sample Id: 7697714-1-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	0.119	119	0.120	120	70-130	1	35	mg/kg	02.28.20 12:08	
Toluene	<0.00200	0.100	0.110	110	0.111	111	70-130	1	35	mg/kg	02.28.20 12:08	
Ethylbenzene	<0.00200	0.100	0.105	105	0.106	106	71-129	1	35	mg/kg	02.28.20 12:08	
m,p-Xylenes	<0.00400	0.200	0.205	103	0.207	104	70-135	1	35	mg/kg	02.28.20 12:08	
o-Xylene	<0.00200	0.100	0.103	103	0.104	104	71-133	1	35	mg/kg	02.28.20 12:08	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	112		111		110		70-130	%	02.28.20 12:08
4-Bromofluorobenzene	90		88		89		70-130	%	02.28.20 12:08

Analytical Method: BTEX by EPA 8021B

Seq Number: 3118143

Parent Sample Id: 654048-001

Matrix: Soil

MS Sample Id: 654048-001 S

Prep Method: SW5030B

Date Prep: 02.28.20

MSD Sample Id: 654048-001 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	0.125	125	0.126	126	70-130	1	35	mg/kg	02.28.20 12:48	
Toluene	<0.00200	0.100	0.125	125	0.116	116	70-130	7	35	mg/kg	02.28.20 12:48	
Ethylbenzene	<0.00200	0.100	0.119	119	0.108	108	71-129	10	35	mg/kg	02.28.20 12:48	
m,p-Xylenes	<0.00401	0.200	0.231	116	0.210	105	70-135	10	35	mg/kg	02.28.20 12:48	
o-Xylene	<0.00200	0.100	0.115	115	0.107	107	71-133	7	35	mg/kg	02.28.20 12:48	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	110		109		70-130	%	02.28.20 12:48
4-Bromofluorobenzene	89		91		70-130	%	02.28.20 12:48

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



Chain of Custody

Work Order No: 654048

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 2

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

Project Name:	Hat Mesa 32 St 1	Turn Around	
Project Number:	D12918063	Routine	☐
P.O. Number:	Lea	Rush: Aday	
Sampler's Name:	William Mather	Due Date:	

SAMPLE RECEIPT	Temp Blank:	Yes	No	Wet Ice:	Yes	No
	Temperature (°C):	1.8		Thermometer ID		
	Received Intact:	Yes	No	Correction Factor:	-0.2	
	Cooler Custody Seals:	Yes	No	Total Containers:	17	
	Sample Custody Seals:	Yes	No			

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	ANALYSIS REQUEST																Work Order Notes			
FS02A	S	2/27/2020	9:55	1.5'	1	X	X	X																
FS03A	S	2/27/2020	9:58	1.5'	1	X	X	X																
FS04A	S	2/27/2020	10:01	1.5'	1	X	X	X																
FS05A	S	2/27/2020	10:03	1.5'	1	X	X	X																
FS06A	S	2/27/2020	10:10	1.5'	1	X	X	X																
FS07A	S	2/27/2020	10:12	1.5'	1	X	X	X																
FS08A	S	2/27/2020	10:14	1.5'	1	X	X	X																
FS09A	S	2/27/2020	10:22	1.5'	1	X	X	X																
FS11	S	2/27/2020	13:33	1.5'	1	X	X	X																
FS14	S	2/27/2020	13:40	1.5'	1	X	X	X																

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

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>	2/20/20 0835	<i>[Signature]</i>	<i>[Signature]</i>	4/28/20 845



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) 251-1111
Hobbs, NM (575) 392-7550

Page ____ of ____
www.xenco.com

Chain of Custody

Work Order No: 484090

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

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

[illegible]

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

Number of Containers

(EPA 8015)

(EPA 0=8021)

ide (EPA 300.0)

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

[illegible]

Circular Dichroism and Metal/Ions to be analyzed	
Total	200.7 / 6010
	200.8 / 6020:
8RCRA	13PPM Texas 11 A Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb mg mm MW Ni N Se Ag ZnZn Na Cl H OH C S Zn
TCIP / 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
1			2/28/20 0835			2/28/20 845
2						
3						
4						
5						

Revised Date 05/14/18 Rev. 2018

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 02.28.2020 08.45.00 AM

Work Order #: 654048

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.8
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	No
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by:



Elizabeth McClellan

Date: 02.28.2020

Checklist reviewed by:



Jessica Kramer

Date: 02.28.2020

Analytical Report 654048

for
LT Environmental, Inc.

Project Manager: Dan Moir

Hat Mesa 32 St 1

012919267

02-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)



02-MAR-20

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

Reference: XENCO Report No(s): **654048**
Hat Mesa 32 St 1
Project Address: Lea

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 654048. 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. 654048 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 654048****LT Environmental, Inc., Arvada, CO**

Hat Mesa 32 St 1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS02A	S	02-27-20 09:55	1.5 ft	654048-001
FS03A	S	02-27-20 09:58	1.5 ft	654048-002
FS04A	S	02-27-20 10:01	1.5 ft	654048-003
FS05A	S	02-27-20 10:03	1.5 ft	654048-004
FS06A	S	02-27-20 10:10	1.5 ft	654048-005
FS07A	S	02-27-20 10:12	1.5 ft	654048-006
FS08A	S	02-27-20 10:14	1.5 ft	654048-007
FS09A	S	02-27-20 10:22	1.5 ft	654048-008
FS11	S	02-27-20 13:33	1.5 ft	654048-009
FS14	S	02-27-20 13:40	1.5 ft	654048-010
FS15	S	02-27-20 13:31	1.5 ft	654048-011
FS16	S	02-27-20 14:34	2.5 ft	654048-012
FS17	S	02-27-20 14:30	2.5 ft	654048-013
FS18	S	02-27-20 13:19	1.5 ft	654048-014
FS20	S	02-27-20 12:27	1.5 ft	654048-015
FS21	S	02-27-20 12:24	1.5 ft	654048-016
FS23	S	02-27-20 12:21	1.5 ft	654048-017



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *Hat Mesa 32 St 1*

Project ID: 012919267

Work Order Number(s): 654048

Report Date: 02-MAR-20

Date Received: 02/28/2020

Sample receipt non conformances and comments:

V1.001 - Revision (client email) Corrected project number

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3118143 BTEX by EPA 8021B

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



Certificate of Analysis Summary 654048

LT Environmental, Inc., Arvada, CO

Project Name: Hat Mesa 32 St 1

Project Id: 012919267

Contact: Dan Moir

Project Location: Lea

Date Received in Lab: Fri Feb-28-20 08:45 am

Report Date: 02-MAR-20

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	654048-001	654048-002	654048-003	654048-004	654048-005	654048-006
	<i>Field Id:</i>	FS02A	FS03A	FS04A	FS05A	FS06A	FS07A
	<i>Depth:</i>	1.5- ft	1.5- ft	1.5- ft	1.5- ft	1.5- ft	1.5- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Feb-27-20 09:55	Feb-27-20 09:58	Feb-27-20 10:01	Feb-27-20 10:03	Feb-27-20 10:10	Feb-27-20 10:12
BTEX by EPA 8021B	<i>Extracted:</i>	Feb-28-20 11:00	Feb-28-20 11:00	Feb-28-20 11:00	Feb-28-20 11:00	Feb-28-20 11:00	Feb-28-20 11:00
	<i>Analyzed:</i>	Feb-28-20 13:50	Feb-28-20 14:10	Feb-28-20 14:30	Feb-28-20 14:51	Feb-28-20 15:11	Feb-28-20 15:31
	<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	<0.00201 0.00201	<0.00202 0.00202	<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200
Toluene		<0.00201 0.00201	<0.00201 0.00201	<0.00202 0.00202	<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200
Ethylbenzene		<0.00201 0.00201	<0.00201 0.00201	<0.00202 0.00202	<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200
m,p-Xylenes		<0.00402 0.00402	<0.00402 0.00402	<0.00403 0.00403	<0.00396 0.00396	<0.00397 0.00397	<0.00401 0.00401
o-Xylene		<0.00201 0.00201	<0.00201 0.00201	<0.00202 0.00202	<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200
Total Xylenes		<0.00201 0.00201	<0.00201 0.00201	<0.00202 0.00202	<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200
Total BTEX		<0.00201 0.00201	<0.00201 0.00201	<0.00202 0.00202	<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200
Chloride by EPA 300	<i>Extracted:</i>	Feb-28-20 10:30	Feb-28-20 10:30	Feb-28-20 10:30	Feb-28-20 10:30	Feb-28-20 10:30	Feb-28-20 12:30
	<i>Analyzed:</i>	Feb-28-20 13:07	Feb-28-20 13:13	Feb-28-20 13:18	Feb-28-20 13:24	Feb-28-20 13:30	Feb-28-20 14:22
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		1060 50.4	942 50.1	1060 49.9	1050 50.4	712 49.8	588 10.0
TPH by SW8015 Mod	<i>Extracted:</i>	Feb-28-20 10:00	Feb-28-20 10:00	Feb-28-20 10:00	Feb-28-20 10:00	Feb-28-20 10:00	Feb-28-20 15:05
	<i>Analyzed:</i>	Feb-28-20 17:19	Feb-28-20 17:39	Feb-28-20 17:39	Feb-28-20 17:59	Feb-28-20 17:59	Feb-28-20 19:51
	<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)		<50.2 50.2	<50.2 50.2	<50.1 50.1	<50.1 50.1	<50.3 50.3	<50.2 50.2
Diesel Range Organics (DRO)		<50.2 50.2	<50.2 50.2	<50.1 50.1	<50.1 50.1	<50.3 50.3	<50.2 50.2
Motor Oil Range Hydrocarbons (MRO)		<50.2 50.2	<50.2 50.2	<50.1 50.1	<50.1 50.1	<50.3 50.3	<50.2 50.2
Total GRO-DRO		<50.2 50.2	<50.2 50.2	<50.1 50.1	<50.1 50.1	<50.3 50.3	<50.2 50.2
Total TPH		<50.2 50.2	<50.2 50.2	<50.1 50.1	<50.1 50.1	<50.3 50.3	<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

Version: 1.9%

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 654048

LT Environmental, Inc., Arvada, CO

Project Name: Hat Mesa 32 St 1

Project Id: 012919267

Contact: Dan Moir

Project Location: Lea

Date Received in Lab: Fri Feb-28-20 08:45 am

Report Date: 02-MAR-20

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	654048-007	654048-008	654048-009	654048-010	654048-011	654048-012
	<i>Field Id:</i>	FS08A	FS09A	FS11	FS14	FS15	FS16
	<i>Depth:</i>	1.5- ft	1.5- ft	1.5- ft	1.5- ft	1.5- ft	2.5- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Feb-27-20 10:14	Feb-27-20 10:22	Feb-27-20 13:33	Feb-27-20 13:40	Feb-27-20 13:31	Feb-27-20 14:34
BTEX by EPA 8021B	<i>Extracted:</i>	Feb-28-20 11:00	Feb-28-20 11:00	Feb-28-20 11:00	Feb-28-20 11:00	Feb-28-20 11:00	Feb-28-20 11:00
	<i>Analyzed:</i>	Feb-28-20 15:52	Feb-28-20 16:12	Feb-28-20 16:33	Feb-28-20 16:53	Feb-28-20 17:54	Feb-28-20 18:14
	<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	<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198
Toluene		<0.00201 0.00201	<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198
Ethylbenzene		<0.00201 0.00201	<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198
m,p-Xylenes		<0.00402 0.00402	<0.00398 0.00398	<0.00397 0.00397	<0.00400 0.00400	<0.00401 0.00401	<0.00397 0.00397
o-Xylene		<0.00201 0.00201	<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198
Total Xylenes		<0.00201 0.00201	<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198
Total BTEX		<0.00201 0.00201	<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198
Chloride by EPA 300	<i>Extracted:</i>	Feb-28-20 12:30	Feb-28-20 12:30	Feb-28-20 12:30	Feb-28-20 12:30	Feb-28-20 12:30	Feb-28-20 12:30
	<i>Analyzed:</i>	Feb-28-20 14:39	Feb-28-20 14:45	Feb-28-20 14:51	Feb-28-20 14:56	Feb-28-20 15:13	Feb-28-20 15:19
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		256 9.98	347 9.92	223 10.1	272 10.0	476 10.0	530 10.1
TPH by SW8015 Mod	<i>Extracted:</i>	Feb-28-20 15:05	Feb-28-20 15:05	Feb-28-20 15:05	Feb-28-20 15:05	Feb-28-20 15:05	Feb-28-20 15:05
	<i>Analyzed:</i>	Feb-28-20 20:11	Feb-28-20 20:31	Feb-28-20 20:31	Feb-28-20 20:51	Feb-28-20 20:51	Feb-28-20 21:10
	<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)		<50.2 50.2	<50.1 50.1	<50.3 50.3	<50.0 50.0	<50.1 50.1	<50.0 50.0
Diesel Range Organics (DRO)		<50.2 50.2	<50.1 50.1	<50.3 50.3	757 50.0	121 50.1	130 50.0
Motor Oil Range Hydrocarbons (MRO)		<50.2 50.2	<50.1 50.1	<50.3 50.3	111 50.0	<50.1 50.1	<50.0 50.0
Total GRO-DRO		<50.2 50.2	<50.1 50.1	<50.3 50.3	757 50.0	121 50.1	130 50.0
Total TPH		<50.2 50.2	<50.1 50.1	<50.3 50.3	868 50.0	121 50.1	130 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: 1.9%

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 654048

LT Environmental, Inc., Arvada, CO

Project Name: Hat Mesa 32 St 1

Project Id: 012919267

Contact: Dan Moir

Project Location: Lea

Date Received in Lab: Fri Feb-28-20 08:45 am

Report Date: 02-MAR-20

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	654048-013	654048-014	654048-015	654048-016	654048-017	
	Field Id:	FS17	FS18	FS20	FS21	FS23	
	Depth:	2.5- ft	1.5- ft	1.5- ft	1.5- ft	1.5- ft	
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	
	Sampled:	Feb-27-20 14:30	Feb-27-20 13:19	Feb-27-20 12:27	Feb-27-20 12:24	Feb-27-20 12:21	
BTEX by EPA 8021B	Extracted:	Feb-28-20 11:00	Feb-28-20 11:00	Feb-28-20 11:00	Feb-28-20 11:00	Feb-28-20 11:00	
	Analyzed:	Feb-28-20 18:35	Feb-28-20 18:55	Feb-28-20 19:16	Feb-28-20 19:36	Feb-28-20 19:56	
	Units/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	<0.00200 0.00200	<0.00202 0.00202	<0.00201 0.00201	
Toluene		<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00201 0.00201	
Ethylbenzene		<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00201 0.00201	
m,p-Xylenes		<0.00402 0.00402	<0.00401 0.00401	<0.00400 0.00400	<0.00403 0.00403	<0.00402 0.00402	
o-Xylene		0.00419 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00201 0.00201	
Total Xylenes		0.00419 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00201 0.00201	
Total BTEX		0.00419 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00201 0.00201	
Chloride by EPA 300	Extracted:	Feb-28-20 12:30	Feb-28-20 12:30	Feb-28-20 12:30	Feb-28-20 12:30	Feb-28-20 12:30	
	Analyzed:	Feb-28-20 15:25	Feb-28-20 15:30	Feb-28-20 15:36	Feb-28-20 15:43	Feb-28-20 16:01	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		160 10.1	517 10.0	751 9.92	626 9.98	553 9.94	
TPH by SW8015 Mod	Extracted:	Feb-28-20 15:05	Feb-28-20 15:05	Feb-28-20 15:05	Feb-28-20 15:05	Feb-28-20 15:05	
	Analyzed:	Feb-28-20 21:10	Feb-28-20 21:30	Feb-28-20 21:30	Feb-28-20 22:29	Feb-28-20 22:29	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Gasoline Range Hydrocarbons (GRO)		<50.2 50.2	<50.2 50.2	<50.2 50.2	<49.9 49.9	<50.2 50.2	
Diesel Range Organics (DRO)		<50.2 50.2	181 50.2	<50.2 50.2	292 49.9	<50.2 50.2	
Motor Oil Range Hydrocarbons (MRO)		<50.2 50.2	<50.2 50.2	<50.2 50.2	<49.9 49.9	<50.2 50.2	
Total GRO-DRO		<50.2 50.2	181 50.2	<50.2 50.2	292 49.9	<50.2 50.2	
Total TPH		<50.2 50.2	181 50.2	<50.2 50.2	292 49.9	<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

Version: 1.9%

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS02A**
Lab Sample Id: 654048-001

Matrix: Soil
Date Collected: 02.27.20 09.55

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118156

Date Prep: 02.28.20 10.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1060	50.4	mg/kg	02.28.20 13.07		5

Analytical Method: TPH by SW8015 Mod

Tech: MAB

Analyst: CAC

Seq Number: 3118137

Date Prep: 02.28.20 10.00

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	02.28.20 17.19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	02.28.20 17.19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	02.28.20 17.19	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	02.28.20 17.19	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	02.28.20 17.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-135	02.28.20 17.19	
o-Terphenyl	84-15-1	129	%	70-135	02.28.20 17.19	



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS02A**
Lab Sample Id: 654048-001

Matrix: Soil
Date Collected: 02.27.20 09.55

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3118143

Date Prep: 02.28.20 11.00

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	02.28.20 13.50	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	02.28.20 13.50	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	02.28.20 13.50	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	02.28.20 13.50	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	02.28.20 13.50	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	02.28.20 13.50	U	1
Total BTEX		<0.00201	0.00201	mg/kg	02.28.20 13.50	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	112	%	70-130	02.28.20 13.50		
4-Bromofluorobenzene	460-00-4	91	%	70-130	02.28.20 13.50		



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS03A**
Lab Sample Id: 654048-002

Matrix: Soil
Date Collected: 02.27.20 09.58

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118156

Date Prep: 02.28.20 10.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	942	50.1	mg/kg	02.28.20 13.13		5

Analytical Method: TPH by SW8015 Mod

Tech: MAB

Analyst: CAC

Seq Number: 3118137

Date Prep: 02.28.20 10.00

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	02.28.20 17.39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	02.28.20 17.39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	02.28.20 17.39	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	02.28.20 17.39	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	02.28.20 17.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	02.28.20 17.39	
o-Terphenyl	84-15-1	122	%	70-135	02.28.20 17.39	



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS03A**
Lab Sample Id: 654048-002

Matrix: Soil
Date Collected: 02.27.20 09.58

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3118143

Date Prep: 02.28.20 11.00

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	02.28.20 14.10	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	02.28.20 14.10	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	02.28.20 14.10	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	02.28.20 14.10	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	02.28.20 14.10	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	02.28.20 14.10	U	1
Total BTEX		<0.00201	0.00201	mg/kg	02.28.20 14.10	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	112	%	70-130	02.28.20 14.10		
4-Bromofluorobenzene	460-00-4	92	%	70-130	02.28.20 14.10		



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS04A**
Lab Sample Id: 654048-003

Matrix: Soil
Date Collected: 02.27.20 10.01

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118156

Date Prep: 02.28.20 10.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1060	49.9	mg/kg	02.28.20 13.18		5

Analytical Method: TPH by SW8015 Mod

Tech: MAB

Analyst: CAC

Seq Number: 3118137

Date Prep: 02.28.20 10.00

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	02.28.20 17.39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	02.28.20 17.39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	02.28.20 17.39	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	02.28.20 17.39	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	02.28.20 17.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	02.28.20 17.39	
o-Terphenyl	84-15-1	112	%	70-135	02.28.20 17.39	



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS04A**
Lab Sample Id: 654048-003

Matrix: Soil
Date Collected: 02.27.20 10.01

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3118143

Date Prep: 02.28.20 11.00

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	02.28.20 14.30	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	02.28.20 14.30	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	02.28.20 14.30	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	02.28.20 14.30	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	02.28.20 14.30	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	02.28.20 14.30	U	1
Total BTEX		<0.00202	0.00202	mg/kg	02.28.20 14.30	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	113	%	70-130	02.28.20 14.30		
4-Bromofluorobenzene	460-00-4	93	%	70-130	02.28.20 14.30		



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS05A**
Lab Sample Id: 654048-004

Matrix: Soil
Date Collected: 02.27.20 10.03

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118156

Date Prep: 02.28.20 10.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1050	50.4	mg/kg	02.28.20 13.24		5

Analytical Method: TPH by SW8015 Mod

Tech: MAB

Analyst: CAC

Seq Number: 3118137

Date Prep: 02.28.20 10.00

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	02.28.20 17.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	02.28.20 17.59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	02.28.20 17.59	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	02.28.20 17.59	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	02.28.20 17.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	02.28.20 17.59	
o-Terphenyl	84-15-1	117	%	70-135	02.28.20 17.59	



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS05A**
Lab Sample Id: 654048-004

Matrix: Soil
Date Collected: 02.27.20 10.03

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3118143

Date Prep: 02.28.20 11.00

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	02.28.20 14.51	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	02.28.20 14.51	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	02.28.20 14.51	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	02.28.20 14.51	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	02.28.20 14.51	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	02.28.20 14.51	U	1
Total BTEX		<0.00198	0.00198	mg/kg	02.28.20 14.51	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	92	%	70-130	02.28.20 14.51		
1,4-Difluorobenzene	540-36-3	113	%	70-130	02.28.20 14.51		



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS06A**
Lab Sample Id: 654048-005

Matrix: Soil
Date Collected: 02.27.20 10.10

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118156

Date Prep: 02.28.20 10.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	712	49.8	mg/kg	02.28.20 13.30		5

Analytical Method: TPH by SW8015 Mod

Tech: MAB

Analyst: CAC

Seq Number: 3118137

Date Prep: 02.28.20 10.00

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	02.28.20 17.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	02.28.20 17.59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	02.28.20 17.59	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	02.28.20 17.59	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	02.28.20 17.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	121	%	70-135	02.28.20 17.59	
o-Terphenyl	84-15-1	133	%	70-135	02.28.20 17.59	



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS06A**
Lab Sample Id: 654048-005

Matrix: Soil
Date Collected: 02.27.20 10.10

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3118143

Date Prep: 02.28.20 11.00

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	02.28.20 15.11	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	02.28.20 15.11	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	02.28.20 15.11	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	02.28.20 15.11	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	02.28.20 15.11	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	02.28.20 15.11	U	1
Total BTEX		<0.00198	0.00198	mg/kg	02.28.20 15.11	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	91	%	70-130	02.28.20 15.11		
1,4-Difluorobenzene	540-36-3	111	%	70-130	02.28.20 15.11		



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS07A**
Lab Sample Id: 654048-006

Matrix: Soil
Date Collected: 02.27.20 10.12

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118166

Date Prep: 02.28.20 12.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	588	10.0	mg/kg	02.28.20 14.22		1

Analytical Method: TPH by SW8015 Mod

Tech: MAB

Analyst: MAB

Seq Number: 3118180

Date Prep: 02.28.20 15.05

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	02.28.20 19.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	02.28.20 19.51	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	02.28.20 19.51	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	02.28.20 19.51	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	02.28.20 19.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	126	%	70-135	02.28.20 19.51	
o-Terphenyl	84-15-1	122	%	70-135	02.28.20 19.51	



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS07A**
Lab Sample Id: 654048-006

Matrix: Soil
Date Collected: 02.27.20 10.12

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3118143

Date Prep: 02.28.20 11.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.28.20 15.31	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.28.20 15.31	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.28.20 15.31	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	02.28.20 15.31	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.28.20 15.31	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.28.20 15.31	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.28.20 15.31	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	112	%	70-130	02.28.20 15.31		
4-Bromofluorobenzene	460-00-4	91	%	70-130	02.28.20 15.31		



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS08A**
Lab Sample Id: 654048-007

Matrix: Soil
Date Collected: 02.27.20 10.14

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118166

Date Prep: 02.28.20 12.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	256	9.98	mg/kg	02.28.20 14.39		1

Analytical Method: TPH by SW8015 Mod

Tech: MAB

Analyst: MAB

Seq Number: 3118180

Date Prep: 02.28.20 15.05

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	02.28.20 20.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	02.28.20 20.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	02.28.20 20.11	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	02.28.20 20.11	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	02.28.20 20.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	02.28.20 20.11	
o-Terphenyl	84-15-1	117	%	70-135	02.28.20 20.11	



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS08A**
Lab Sample Id: 654048-007

Matrix: Soil
Date Collected: 02.27.20 10.14

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3118143

Date Prep: 02.28.20 11.00

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	02.28.20 15.52	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	02.28.20 15.52	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	02.28.20 15.52	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	02.28.20 15.52	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	02.28.20 15.52	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	02.28.20 15.52	U	1
Total BTEX		<0.00201	0.00201	mg/kg	02.28.20 15.52	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	93	%	70-130	02.28.20 15.52		
1,4-Difluorobenzene	540-36-3	112	%	70-130	02.28.20 15.52		



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS09A**
Lab Sample Id: 654048-008

Matrix: Soil
Date Collected: 02.27.20 10.22

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118166

Date Prep: 02.28.20 12.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	347	9.92	mg/kg	02.28.20 14.45		1

Analytical Method: TPH by SW8015 Mod

Tech: MAB

Analyst: MAB

Seq Number: 3118180

Date Prep: 02.28.20 15.05

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	02.28.20 20.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	02.28.20 20.31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	02.28.20 20.31	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	02.28.20 20.31	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	02.28.20 20.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	02.28.20 20.31	
o-Terphenyl	84-15-1	127	%	70-135	02.28.20 20.31	



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS09A**
Lab Sample Id: 654048-008

Matrix: Soil
Date Collected: 02.27.20 10.22

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3118143

Date Prep: 02.28.20 11.00

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	02.28.20 16.12	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.28.20 16.12	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.28.20 16.12	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.28.20 16.12	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.28.20 16.12	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	02.28.20 16.12	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.28.20 16.12	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	112	%	70-130	02.28.20 16.12		
4-Bromofluorobenzene	460-00-4	91	%	70-130	02.28.20 16.12		



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS11**
Lab Sample Id: 654048-009

Matrix: Soil
Date Collected: 02.27.20 13.33

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118166

Date Prep: 02.28.20 12.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	223	10.1	mg/kg	02.28.20 14.51		1

Analytical Method: TPH by SW8015 Mod

Tech: MAB

Analyst: MAB

Seq Number: 3118180

Date Prep: 02.28.20 15.05

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	02.28.20 20.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	02.28.20 20.31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	02.28.20 20.31	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	02.28.20 20.31	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	02.28.20 20.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	02.28.20 20.31	
o-Terphenyl	84-15-1	123	%	70-135	02.28.20 20.31	



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS11**
Lab Sample Id: 654048-009

Matrix: Soil
Date Collected: 02.27.20 13.33

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3118143

Date Prep: 02.28.20 11.00

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	02.28.20 16.33	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	02.28.20 16.33	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	02.28.20 16.33	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	02.28.20 16.33	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	02.28.20 16.33	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	02.28.20 16.33	U	1
Total BTEX		<0.00198	0.00198	mg/kg	02.28.20 16.33	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	111	%	70-130	02.28.20 16.33		
4-Bromofluorobenzene	460-00-4	94	%	70-130	02.28.20 16.33		



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS14**
Lab Sample Id: 654048-010

Matrix: Soil
Date Collected: 02.27.20 13.40

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118166

Date Prep: 02.28.20 12.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	272	10.0	mg/kg	02.28.20 14.56		1

Analytical Method: TPH by SW8015 Mod

Tech: MAB

Analyst: MAB

Seq Number: 3118180

Date Prep: 02.28.20 15.05

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	02.28.20 20.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	757	50.0	mg/kg	02.28.20 20.51		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	111	50.0	mg/kg	02.28.20 20.51		1
Total GRO-DRO	PHC628	757	50.0	mg/kg	02.28.20 20.51		1
Total TPH	PHC635	868	50.0	mg/kg	02.28.20 20.51		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	02.28.20 20.51	
o-Terphenyl	84-15-1	126	%	70-135	02.28.20 20.51	



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS14**
Lab Sample Id: 654048-010

Matrix: Soil
Date Collected: 02.27.20 13.40

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3118143

Date Prep: 02.28.20 11.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.28.20 16.53	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.28.20 16.53	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.28.20 16.53	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	02.28.20 16.53	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.28.20 16.53	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.28.20 16.53	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.28.20 16.53	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	77	%	70-130	02.28.20 16.53		
1,4-Difluorobenzene	540-36-3	87	%	70-130	02.28.20 16.53		



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS15**
Lab Sample Id: 654048-011

Matrix: Soil
Date Collected: 02.27.20 13.31

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118166

Date Prep: 02.28.20 12.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	476	10.0	mg/kg	02.28.20 15.13		1

Analytical Method: TPH by SW8015 Mod

Tech: MAB

Analyst: MAB

Seq Number: 3118180

Date Prep: 02.28.20 15.05

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	02.28.20 20.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	121	50.1	mg/kg	02.28.20 20.51		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	02.28.20 20.51	U	1
Total GRO-DRO	PHC628	121	50.1	mg/kg	02.28.20 20.51		1
Total TPH	PHC635	121	50.1	mg/kg	02.28.20 20.51		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	120	%	70-135	02.28.20 20.51	
o-Terphenyl	84-15-1	134	%	70-135	02.28.20 20.51	



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS15**
Lab Sample Id: 654048-011

Matrix: Soil
Date Collected: 02.27.20 13.31

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.28.20 11.00

Basis: Wet Weight

Seq Number: 3118143

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.28.20 17.54	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.28.20 17.54	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.28.20 17.54	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	02.28.20 17.54	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.28.20 17.54	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.28.20 17.54	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.28.20 17.54	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	112	%	70-130	02.28.20 17.54		
4-Bromofluorobenzene	460-00-4	93	%	70-130	02.28.20 17.54		



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS16**
Lab Sample Id: 654048-012

Matrix: Soil
Date Collected: 02.27.20 14.34

Date Received: 02.28.20 08.45
Sample Depth: 2.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118166

Date Prep: 02.28.20 12.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	530	10.1	mg/kg	02.28.20 15.19		1

Analytical Method: TPH by SW8015 Mod

Tech: MAB

Analyst: MAB

Seq Number: 3118180

Date Prep: 02.28.20 15.05

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	02.28.20 21.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	130	50.0	mg/kg	02.28.20 21.10		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	02.28.20 21.10	U	1
Total GRO-DRO	PHC628	130	50.0	mg/kg	02.28.20 21.10		1
Total TPH	PHC635	130	50.0	mg/kg	02.28.20 21.10		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	02.28.20 21.10	
o-Terphenyl	84-15-1	120	%	70-135	02.28.20 21.10	



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS16**
Lab Sample Id: 654048-012

Matrix: Soil
Date Collected: 02.27.20 14.34

Date Received: 02.28.20 08.45
Sample Depth: 2.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3118143

Date Prep: 02.28.20 11.00

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	02.28.20 18.14	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	02.28.20 18.14	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	02.28.20 18.14	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	02.28.20 18.14	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	02.28.20 18.14	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	02.28.20 18.14	U	1
Total BTEX		<0.00198	0.00198	mg/kg	02.28.20 18.14	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	87	%	70-130	02.28.20 18.14		
1,4-Difluorobenzene	540-36-3	104	%	70-130	02.28.20 18.14		



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS17**
Lab Sample Id: 654048-013

Matrix: Soil
Date Collected: 02.27.20 14.30

Date Received: 02.28.20 08.45
Sample Depth: 2.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118166

Date Prep: 02.28.20 12.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	160	10.1	mg/kg	02.28.20 15.25		1

Analytical Method: TPH by SW8015 Mod

Tech: MAB

Analyst: MAB

Seq Number: 3118180

Date Prep: 02.28.20 15.05

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	02.28.20 21.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	02.28.20 21.10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	02.28.20 21.10	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	02.28.20 21.10	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	02.28.20 21.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	02.28.20 21.10	
o-Terphenyl	84-15-1	123	%	70-135	02.28.20 21.10	



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS17**
Lab Sample Id: 654048-013

Matrix: Soil
Date Collected: 02.27.20 14.30

Date Received: 02.28.20 08.45
Sample Depth: 2.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3118143

Date Prep: 02.28.20 11.00

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	02.28.20 18.35	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	02.28.20 18.35	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	02.28.20 18.35	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	02.28.20 18.35	U	1
o-Xylene	95-47-6	0.00419	0.00201	mg/kg	02.28.20 18.35		1
Total Xylenes	1330-20-7	0.00419	0.00201	mg/kg	02.28.20 18.35		1
Total BTEX		0.00419	0.00201	mg/kg	02.28.20 18.35		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	95	%	70-130	02.28.20 18.35		
1,4-Difluorobenzene	540-36-3	109	%	70-130	02.28.20 18.35		



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS18**
Lab Sample Id: 654048-014

Matrix: Soil
Date Collected: 02.27.20 13.19

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118166

Date Prep: 02.28.20 12.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	517	10.0	mg/kg	02.28.20 15.30		1

Analytical Method: TPH by SW8015 Mod

Tech: MAB

Analyst: MAB

Seq Number: 3118180

Date Prep: 02.28.20 15.05

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	02.28.20 21.30	U	1
Diesel Range Organics (DRO)	C10C28DRO	181	50.2	mg/kg	02.28.20 21.30		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	02.28.20 21.30	U	1
Total GRO-DRO	PHC628	181	50.2	mg/kg	02.28.20 21.30		1
Total TPH	PHC635	181	50.2	mg/kg	02.28.20 21.30		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	02.28.20 21.30	
o-Terphenyl	84-15-1	122	%	70-135	02.28.20 21.30	



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS18**
Lab Sample Id: 654048-014

Matrix: Soil
Date Collected: 02.27.20 13.19

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3118143

Date Prep: 02.28.20 11.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.28.20 18.55	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.28.20 18.55	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.28.20 18.55	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	02.28.20 18.55	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.28.20 18.55	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.28.20 18.55	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.28.20 18.55	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	99	%	70-130	02.28.20 18.55		
4-Bromofluorobenzene	460-00-4	85	%	70-130	02.28.20 18.55		



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS20**
Lab Sample Id: 654048-015

Matrix: Soil
Date Collected: 02.27.20 12.27

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118166

Date Prep: 02.28.20 12.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	751	9.92	mg/kg	02.28.20 15.36		1

Analytical Method: TPH by SW8015 Mod

Tech: MAB

Analyst: MAB

Seq Number: 3118180

Date Prep: 02.28.20 15.05

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	02.28.20 21.30	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	02.28.20 21.30	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	02.28.20 21.30	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	02.28.20 21.30	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	02.28.20 21.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	02.28.20 21.30	
o-Terphenyl	84-15-1	115	%	70-135	02.28.20 21.30	



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS20**
Lab Sample Id: 654048-015

Matrix: Soil
Date Collected: 02.27.20 12.27

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.28.20 11.00

Basis: Wet Weight

Seq Number: 3118143

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.28.20 19.16	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.28.20 19.16	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.28.20 19.16	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	02.28.20 19.16	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.28.20 19.16	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.28.20 19.16	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.28.20 19.16	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	93	%	70-130	02.28.20 19.16		
1,4-Difluorobenzene	540-36-3	112	%	70-130	02.28.20 19.16		



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS21**
Lab Sample Id: 654048-016

Matrix: Soil
Date Collected: 02.27.20 12.24

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118166

Date Prep: 02.28.20 12.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	626	9.98	mg/kg	02.28.20 15.43		1

Analytical Method: TPH by SW8015 Mod

Tech: MAB

Analyst: MAB

Seq Number: 3118180

Date Prep: 02.28.20 15.05

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	02.28.20 22.29	U	1
Diesel Range Organics (DRO)	C10C28DRO	292	49.9	mg/kg	02.28.20 22.29		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	02.28.20 22.29	U	1
Total GRO-DRO	PHC628	292	49.9	mg/kg	02.28.20 22.29		1
Total TPH	PHC635	292	49.9	mg/kg	02.28.20 22.29		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	02.28.20 22.29	
o-Terphenyl	84-15-1	129	%	70-135	02.28.20 22.29	



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS21**
Lab Sample Id: 654048-016

Matrix: Soil
Date Collected: 02.27.20 12.24

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3118143

Date Prep: 02.28.20 11.00

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	02.28.20 19.36	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	02.28.20 19.36	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	02.28.20 19.36	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	02.28.20 19.36	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	02.28.20 19.36	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	02.28.20 19.36	U	1
Total BTEX		<0.00202	0.00202	mg/kg	02.28.20 19.36	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	91	%	70-130	02.28.20 19.36		
1,4-Difluorobenzene	540-36-3	111	%	70-130	02.28.20 19.36		



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: FS23
Lab Sample Id: 654048-017

Matrix: Soil
Date Collected: 02.27.20 12.21

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118166

Date Prep: 02.28.20 12.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	553	9.94	mg/kg	02.28.20 16.01		1

Analytical Method: TPH by SW8015 Mod

Tech: MAB

Analyst: MAB

Seq Number: 3118180

Date Prep: 02.28.20 15.05

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	02.28.20 22.29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	02.28.20 22.29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	02.28.20 22.29	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	02.28.20 22.29	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	02.28.20 22.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	02.28.20 22.29	
o-Terphenyl	84-15-1	111	%	70-135	02.28.20 22.29	



Certificate of Analytical Results 654048

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 St 1

Sample Id: **FS23**
Lab Sample Id: 654048-017

Matrix: Soil
Date Collected: 02.27.20 12.21

Date Received: 02.28.20 08.45
Sample Depth: 1.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3118143

Date Prep: 02.28.20 11.00

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	02.28.20 19.56	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	02.28.20 19.56	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	02.28.20 19.56	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	02.28.20 19.56	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	02.28.20 19.56	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	02.28.20 19.56	U	1
Total BTEX		<0.00201	0.00201	mg/kg	02.28.20 19.56	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	87	%	70-130	02.28.20 19.56		
1,4-Difluorobenzene	540-36-3	100	%	70-130	02.28.20 19.56		



Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



LT Environmental, Inc.

Hat Mesa 32 St 1

Analytical Method: Chloride by EPA 300

Seq Number: 3118156

MB Sample Id: 7697721-1-BLK

Matrix: Solid

LCS Sample Id: 7697721-1-BKS

Prep Method: E300P

Date Prep: 02.28.20

LCSD Sample Id: 7697721-1-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	260	104	260	104	90-110	0	20	mg/kg	02.28.20 10:45	

Analytical Method: Chloride by EPA 300

Seq Number: 3118156

MB Sample Id: 7697742-1-BLK

Matrix: Solid

LCS Sample Id: 7697742-1-BKS

Prep Method: E300P

Date Prep: 02.28.20

LCSD Sample Id: 7697742-1-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	02.28.20 13:52	

Analytical Method: Chloride by EPA 300

Seq Number: 3118156

Parent Sample Id: 654041-001

Matrix: Soil

MS Sample Id: 654041-001 S

Prep Method: E300P

Date Prep: 02.28.20

MSD Sample Id: 654041-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	41.7	200	257	108	256	107	90-110	0	20	mg/kg	02.28.20 11:02	

Analytical Method: Chloride by EPA 300

Seq Number: 3118156

Parent Sample Id: 654041-011

Matrix: Soil

MS Sample Id: 654041-011 S

Prep Method: E300P

Date Prep: 02.28.20

MSD Sample Id: 654041-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	43.1	200	241	99	240	99	90-110	0	20	mg/kg	02.28.20 12:21	

Analytical Method: Chloride by EPA 300

Seq Number: 3118166

Parent Sample Id: 654048-006

Matrix: Soil

MS Sample Id: 654048-006 S

Prep Method: E300P

Date Prep: 02.28.20

MSD Sample Id: 654048-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	588	201	799	105	792	102	90-110	1	20	mg/kg	02.28.20 14:28	

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.

Hat Mesa 32 St 1

Analytical Method: Chloride by EPA 300

Seq Number: 3118166

Parent Sample Id: 654048-016

Matrix: Soil

MS Sample Id: 654048-016 S

Prep Method: E300P

Date Prep: 02.28.20

MSD Sample Id: 654048-016 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	626	201	838	105	839	105	90-110	0	20	mg/kg	02.28.20 15:49	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3118137

MB Sample Id: 7697709-1-BLK

Matrix: Solid

LCS Sample Id: 7697709-1-BKS

Prep Method: SW8015P

Date Prep: 02.28.20

LCSD Sample Id: 7697709-1-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	967	97	907	91	70-135	6	35	mg/kg	02.28.20 12:51	
Diesel Range Organics (DRO)	<50.0	1000	950	95	882	88	70-135	7	35	mg/kg	02.28.20 12:51	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	106		108		114		70-135	%	02.28.20 12:51
o-Terphenyl	120		112		107		70-135	%	02.28.20 12:51

Analytical Method: TPH by SW8015 Mod

Seq Number: 3118180

MB Sample Id: 7697770-1-BLK

Matrix: Solid

LCS Sample Id: 7697770-1-BKS

Prep Method: SW8015P

Date Prep: 02.28.20

LCSD Sample Id: 7697770-1-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	1110	111	996	100	70-135	11	35	mg/kg	02.28.20 19:12	
Diesel Range Organics (DRO)	<50.0	1000	1110	111	1030	103	70-135	7	35	mg/kg	02.28.20 19:12	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	91		127		114		70-135	%	02.28.20 19:12
o-Terphenyl	101		129		120		70-135	%	02.28.20 19:12

Analytical Method: TPH by SW8015 Mod

Seq Number: 3118137

Matrix: Solid

MB Sample Id: 7697709-1-BLK

Prep Method: SW8015P

Date Prep: 02.28.20

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	02.28.20 12:31	

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



LT Environmental, Inc.

Hat Mesa 32 St 1

Analytical Method: TPH by SW8015 Mod

Seq Number: 3118180

Matrix: Solid

Prep Method: SW8015P

Date Prep: 02.28.20

MB Sample Id: 7697770-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	02.28.20 18:52	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3118137

Matrix: Soil

Prep Method: SW8015P

Date Prep: 02.28.20

Parent Sample Id: 654041-015

MS Sample Id: 654041-015 S

MSD Sample Id: 654041-015 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	735	74	831	83	70-135	12	35	mg/kg	02.28.20 13:31	
Diesel Range Organics (DRO)	95.7	995	902	81	976	88	70-135	8	35	mg/kg	02.28.20 13:31	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	101		106		70-135	%	02.28.20 13:31
o-Terphenyl	108		111		70-135	%	02.28.20 13:31

Analytical Method: TPH by SW8015 Mod

Seq Number: 3118180

Matrix: Soil

Prep Method: SW8015P

Date Prep: 02.28.20

Parent Sample Id: 654048-006

MS Sample Id: 654048-006 S

MSD Sample Id: 654048-006 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)	<49.9	998	846	85	903	89	70-135	7	35	mg/kg	02.28.20 19:51	
Diesel Range Organics (DRO)	<49.9	998	975	98	1010	100	70-135	4	35	mg/kg	02.28.20 19:51	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	111		122		70-135	%	02.28.20 19:51
o-Terphenyl	119		112		70-135	%	02.28.20 19:51

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.

Hat Mesa 32 St 1

Analytical Method: BTEX by EPA 8021B

Seq Number: 3118143

MB Sample Id: 7697714-1-BLK

Matrix: Solid

LCS Sample Id: 7697714-1-BKS

Prep Method: SW5030B

Date Prep: 02.28.20

LCSD Sample Id: 7697714-1-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	0.119	119	0.120	120	70-130	1	35	mg/kg	02.28.20 12:08	
Toluene	<0.00200	0.100	0.110	110	0.111	111	70-130	1	35	mg/kg	02.28.20 12:08	
Ethylbenzene	<0.00200	0.100	0.105	105	0.106	106	71-129	1	35	mg/kg	02.28.20 12:08	
m,p-Xylenes	<0.00400	0.200	0.205	103	0.207	104	70-135	1	35	mg/kg	02.28.20 12:08	
o-Xylene	<0.00200	0.100	0.103	103	0.104	104	71-133	1	35	mg/kg	02.28.20 12:08	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	112		111		110		70-130	%	02.28.20 12:08
4-Bromofluorobenzene	90		88		89		70-130	%	02.28.20 12:08

Analytical Method: BTEX by EPA 8021B

Seq Number: 3118143

Parent Sample Id: 654048-001

Matrix: Soil

MS Sample Id: 654048-001 S

Prep Method: SW5030B

Date Prep: 02.28.20

MSD Sample Id: 654048-001 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	0.125	125	0.126	126	70-130	1	35	mg/kg	02.28.20 12:48	
Toluene	<0.00200	0.100	0.125	125	0.116	116	70-130	7	35	mg/kg	02.28.20 12:48	
Ethylbenzene	<0.00200	0.100	0.119	119	0.108	108	71-129	10	35	mg/kg	02.28.20 12:48	
m,p-Xylenes	<0.00401	0.200	0.231	116	0.210	105	70-135	10	35	mg/kg	02.28.20 12:48	
o-Xylene	<0.00200	0.100	0.115	115	0.107	107	71-133	7	35	mg/kg	02.28.20 12:48	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	110		109		70-130	%	02.28.20 12:48
4-Bromofluorobenzene	89		91		70-130	%	02.28.20 12:48

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



Chain of Custody

Work Order No: 654048

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 2

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

ANALYSIS REQUEST

Work Order Notes

Project Name:	Hat Mesa 32 St 1	Turn Around	
Project Number:	D12918063	Routine	☐
P.O. Number:	Lea	Rush: Aday	
Sampler's Name:	William Mather	Due Date:	

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

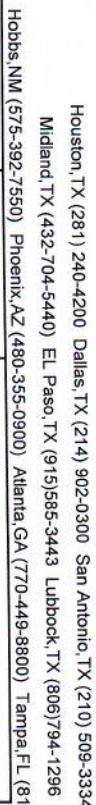
Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0-8021)	Chloride (EPA 300.0)	ANALYSIS REQUEST	Work Order Notes
FS02A	S	2/27/2020	9:55	1.5'	1	X	X	X		composite
FS03A	S	2/27/2020	9:58	1.5'	1	X	X	X		composite
FS04A	S	2/27/2020	10:01	1.5'	1	X	X	X		composite
FS05A	S	2/27/2020	10:03	1.5'	1	X	X	X		composite
FS06A	S	2/27/2020	10:10	1.5'	1	X	X	X		composite
FS07A	S	2/27/2020	10:12	1.5'	1	X	X	X		composite
FS08A	S	2/27/2020	10:14	1.5'	1	X	X	X		composite
FS09A	S	2/27/2020	10:22	1.5'	1	X	X	X		composite
FS11	S	2/27/2020	13:33	1.5'	1	X	X	X		composite
FS14	S	2/27/2020	13:40	1.5'	1	X	X	X		composite

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr 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
<i>[Signature]</i>	<i>[Signature]</i>	2/20/20 0835	<i>[Signature]</i>	<i>[Signature]</i>	4/28/20 845



Chain of Custody

Work Order No:

459048

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

[illegible]

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

Number of Containers

EPA 8015)

(EPA 0=8021)

ide (EPA 300.0)

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

[illegible]

Total	200.7 / 6010
200.8 / 6020:	
8RCRA	Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Ni Pb Se Si Ti V W Zn Zr
13PPM	Sb As Ba Be B Cd Ca Cr Co Cu Fe Ni Pb Se Si Ti V W Zn Zr
1631 / 245.1 / 7470 / 7471 :	Hg

Circle Method(s) and Metal(s) to be analyzed

TC1P / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag H U

— 222 —

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
1			2/28/20 0035
2			2/28/20 845
3			
4			
5			

Revised Date 05/14/18 Rev. 2018

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 02.28.2020 08.45.00 AM

Work Order #: 654048

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.8
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	No
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by:



Elizabeth McClellan

Date: 02.28.2020

Checklist reviewed by:



Jessica Kramer

Date: 02.28.2020

Analytical Report 655540

for
LT Environmental, Inc.

Project Manager: Dan Moir

Hat Mesa 32 State #1

012919267

13-MAR-20

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)

Xenco-Carlsbad (LELAP): Louisiana (05092)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Tampa: Florida (E87429), North Carolina (483)



13-MAR-20

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **655540**

Hat Mesa 32 State #1

Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 655540. 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. 655540 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 655540****LT Environmental, Inc., Arvada, CO**

Hat Mesa 32 State #1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS26	S	03-12-20 09:57	3.5 ft	655540-001
FS27	S	03-12-20 10:30	2.5 ft	655540-002
FS28	S	03-12-20 13:58	3 ft	655540-003
FS29	S	03-12-20 14:01	3 ft	655540-004
FS30	S	03-12-20 10:42	2.5 ft	655540-005
FS31	S	03-12-20 13:09	2.5 ft	655540-006
FS32	S	03-12-20 12:38	2 ft	655540-007
FS33	S	03-12-20 12:41	3 ft	655540-008



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Hat Mesa 32 State #1

Project ID: 012919267

Work Order Number(s): 655540

Report Date: 13-MAR-20

Date Received: 03/12/2020

Sample receipt non conformance and comments:

Sample receipt non conformance and comments per sample:

None

Analytical non conformance and comments:

Batch: LBA-3119459 BTEX by EPA 8021B

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

Batch: LBA-3119461 BTEX by EPA 8021B

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



Certificate of Analysis Summary 655540

LT Environmental, Inc., Arvada, CO

Project Name: Hat Mesa 32 State #1

Project Id: 012919267

Contact: Dan Moir

Project Location:

Date Received in Lab: Thu Mar-12-20 03:26 pm

Report Date: 13-MAR-20

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	655540-001	655540-002	655540-003	655540-004	655540-005	655540-006
	<i>Field Id:</i>	FS26	FS27	FS28	FS29	FS30	FS31
	<i>Depth:</i>	3.5- ft	2.5- ft	3- ft	3- ft	2.5- ft	2.5- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Mar-12-20 09:57	Mar-12-20 10:30	Mar-12-20 13:58	Mar-12-20 14:01	Mar-12-20 10:42	Mar-12-20 13:09
BTEX by EPA 8021B	<i>Extracted:</i>	Mar-12-20 17:00	Mar-12-20 17:00	Mar-12-20 17:00	Mar-12-20 18:00	Mar-12-20 18:00	Mar-12-20 18:00
	<i>Analyzed:</i>	Mar-12-20 20:58	Mar-12-20 21:18	Mar-12-20 21:39	Mar-12-20 23:02	Mar-12-20 23:22	Mar-12-20 23:43
	<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	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00199 0.00199
Toluene		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00199 0.00199
Ethylbenzene		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00199 0.00199
m,p-Xylenes		<0.00398 0.00398	<0.00399 0.00399	<0.00400 0.00400	<0.00398 0.00398	<0.00398 0.00398	<0.00398 0.00398
o-Xylene		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00199 0.00199
Total Xylenes		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00199 0.00199
Total BTEX		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00199 0.00199
Chloride by EPA 300	<i>Extracted:</i>	Mar-12-20 17:00	Mar-12-20 17:00	Mar-12-20 17:00	Mar-12-20 17:00	Mar-12-20 17:00	Mar-12-20 17:00
	<i>Analyzed:</i>	Mar-12-20 18:47	Mar-12-20 19:06	Mar-12-20 19:12	Mar-12-20 19:19	Mar-12-20 19:25	Mar-12-20 19:44
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		617 9.98	622 9.88	478 9.92	456 10.0	494 10.0	537 10.1
TPH by SW8015 Mod	<i>Extracted:</i>	Mar-12-20 16:00	Mar-12-20 16:00	Mar-12-20 16:00	Mar-12-20 18:00	Mar-12-20 18:00	Mar-12-20 18:00
	<i>Analyzed:</i>	Mar-12-20 19:06	Mar-12-20 19:26	Mar-12-20 19:46	Mar-12-20 21:28	Mar-12-20 22:29	Mar-12-20 22:50
	<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	<50.1 50.1	<49.9 49.9	<50.1 50.1	<50.1 50.1	<50.1 50.1
Diesel Range Organics (DRO)		<49.8 49.8	<50.1 50.1	<49.9 49.9	<50.1 50.1	<50.1 50.1	<50.1 50.1
Motor Oil Range Hydrocarbons (MRO)		<49.8 49.8	<50.1 50.1	<49.9 49.9	<50.1 50.1	<50.1 50.1	<50.1 50.1
Total GRO-DRO		<49.8 49.8	<50.1 50.1	<49.9 49.9	<50.1 50.1	<50.1 50.1	<50.1 50.1
Total TPH		<49.8 49.8	<50.1 50.1	<49.9 49.9	<50.1 50.1	<50.1 50.1	<50.1 50.1

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 655540

LT Environmental, Inc., Arvada, CO

Project Name: Hat Mesa 32 State #1

Project Id: 012919267

Contact: Dan Moir

Project Location:

Date Received in Lab: Thu Mar-12-20 03:26 pm

Report Date: 13-MAR-20

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	655540-007	655540-008				
	Field Id:	FS32	FS33				
	Depth:	2- ft	3- ft				
	Matrix:	SOIL	SOIL				
	Sampled:	Mar-12-20 12:38	Mar-12-20 12:41				
BTEX by EPA 8021B	Extracted:	Mar-12-20 18:00	Mar-12-20 18:00				
	Analyzed:	Mar-13-20 00:03	Mar-13-20 00:24				
	Units/RL:	mg/kg RL	mg/kg RL				
Benzene		<0.00199 0.00199	<0.00200 0.00200				
Toluene		<0.00199 0.00199	<0.00200 0.00200				
Ethylbenzene		<0.00199 0.00199	<0.00200 0.00200				
m,p-Xylenes		<0.00398 0.00398	<0.00399 0.00399				
o-Xylene		<0.00199 0.00199	<0.00200 0.00200				
Total Xylenes		<0.00199 0.00199	<0.00200 0.00200				
Total BTEX		<0.00199 0.00199	<0.00200 0.00200				
Chloride by EPA 300	Extracted:	Mar-12-20 17:00	Mar-12-20 17:00				
	Analyzed:	Mar-12-20 19:51	Mar-12-20 19:57				
	Units/RL:	mg/kg RL	mg/kg RL				
Chloride		593 9.96	308 9.94				
TPH by SW8015 Mod	Extracted:	Mar-12-20 18:00	Mar-12-20 18:00				
	Analyzed:	Mar-12-20 23:10	Mar-12-20 21:28				
	Units/RL:	mg/kg RL	mg/kg RL				
Gasoline Range Hydrocarbons (GRO)		<50.1 50.1	<50.1 50.1				
Diesel Range Organics (DRO)		<50.1 50.1	<50.1 50.1				
Motor Oil Range Hydrocarbons (MRO)		<50.1 50.1	<50.1 50.1				
Total GRO-DRO		<50.1 50.1	<50.1 50.1				
Total TPH		<50.1 50.1	<50.1 50.1				

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 655540

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 State #1

Sample Id: **FS26**
Lab Sample Id: 655540-001

Matrix: Soil
Date Collected: 03.12.20 09.57

Date Received: 03.12.20 15.26
Sample Depth: 3.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3119475

Date Prep: 03.12.20 17.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	617	9.98	mg/kg	03.12.20 18.47		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3119516

Date Prep: 03.12.20 16.00

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	03.12.20 19.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	03.12.20 19.06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	03.12.20 19.06	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	03.12.20 19.06	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	03.12.20 19.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	03.12.20 19.06	
o-Terphenyl	84-15-1	117	%	70-135	03.12.20 19.06	



Certificate of Analytical Results 655540

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 State #1

Sample Id: **FS26**
Lab Sample Id: 655540-001

Matrix: Soil
Date Collected: 03.12.20 09.57

Date Received: 03.12.20 15.26
Sample Depth: 3.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3119459

Date Prep: 03.12.20 17.00

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	03.12.20 20.58	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.12.20 20.58	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.12.20 20.58	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.12.20 20.58	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.12.20 20.58	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.12.20 20.58	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.12.20 20.58	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	93	%	70-130	03.12.20 20.58		
1,4-Difluorobenzene	540-36-3	118	%	70-130	03.12.20 20.58		



Certificate of Analytical Results 655540

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 State #1

Sample Id: FS27
Lab Sample Id: 655540-002

Matrix: Soil
Date Collected: 03.12.20 10.30

Date Received: 03.12.20 15.26
Sample Depth: 2.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3119475

Date Prep: 03.12.20 17.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	622	9.88	mg/kg	03.12.20 19.06		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3119516

Date Prep: 03.12.20 16.00

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	03.12.20 19.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	03.12.20 19.26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	03.12.20 19.26	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	03.12.20 19.26	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	03.12.20 19.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	03.12.20 19.26	
o-Terphenyl	84-15-1	111	%	70-135	03.12.20 19.26	



Certificate of Analytical Results 655540

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 State #1

Sample Id: **FS27**
Lab Sample Id: 655540-002

Matrix: Soil
Date Collected: 03.12.20 10.30

Date Received: 03.12.20 15.26
Sample Depth: 2.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.12.20 17.00

Basis: Wet Weight

Seq Number: 3119459

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.12.20 21.18	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.12.20 21.18	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.12.20 21.18	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	03.12.20 21.18	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.12.20 21.18	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.12.20 21.18	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.12.20 21.18	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	94	%	70-130	03.12.20 21.18		
1,4-Difluorobenzene	540-36-3	119	%	70-130	03.12.20 21.18		



Certificate of Analytical Results 655540

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 State #1

Sample Id: **FS28**
Lab Sample Id: 655540-003

Matrix: Soil
Date Collected: 03.12.20 13.58

Date Received: 03.12.20 15.26
Sample Depth: 3 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3119475

Date Prep: 03.12.20 17.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	478	9.92	mg/kg	03.12.20 19.12		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3119516

Date Prep: 03.12.20 16.00

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	03.12.20 19.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	03.12.20 19.46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	03.12.20 19.46	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	03.12.20 19.46	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	03.12.20 19.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	03.12.20 19.46	
o-Terphenyl	84-15-1	116	%	70-135	03.12.20 19.46	



Certificate of Analytical Results 655540

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 State #1

Sample Id: **FS28**
Lab Sample Id: 655540-003

Matrix: Soil
Date Collected: 03.12.20 13.58

Date Received: 03.12.20 15.26
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3119459

Date Prep: 03.12.20 17.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.12.20 21.39	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.12.20 21.39	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.12.20 21.39	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	03.12.20 21.39	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.12.20 21.39	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.12.20 21.39	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.12.20 21.39	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	94	%	70-130	03.12.20 21.39		
1,4-Difluorobenzene	540-36-3	118	%	70-130	03.12.20 21.39		



Certificate of Analytical Results 655540

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 State #1

Sample Id: **FS29**
Lab Sample Id: 655540-004

Matrix: Soil
Date Collected: 03.12.20 14.01

Date Received: 03.12.20 15.26
Sample Depth: 3 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3119475

Date Prep: 03.12.20 17.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	456	10.0	mg/kg	03.12.20 19.19		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3119530

Date Prep: 03.12.20 18.00

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	03.12.20 21.28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	03.12.20 21.28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	03.12.20 21.28	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	03.12.20 21.28	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	03.12.20 21.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	122	%	70-135	03.12.20 21.28	
o-Terphenyl	84-15-1	132	%	70-135	03.12.20 21.28	



Certificate of Analytical Results 655540

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 State #1

Sample Id: **FS29**
Lab Sample Id: 655540-004

Matrix: Soil
Date Collected: 03.12.20 14.01

Date Received: 03.12.20 15.26
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.12.20 18.00

Basis: Wet Weight

Seq Number: 3119461

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.12.20 23.02	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.12.20 23.02	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.12.20 23.02	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.12.20 23.02	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.12.20 23.02	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.12.20 23.02	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.12.20 23.02	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	109	%	70-130	03.12.20 23.02		
4-Bromofluorobenzene	460-00-4	94	%	70-130	03.12.20 23.02		



Certificate of Analytical Results 655540

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 State #1

Sample Id: **FS30**
Lab Sample Id: 655540-005

Matrix: Soil
Date Collected: 03.12.20 10.42

Date Received: 03.12.20 15.26
Sample Depth: 2.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3119475

Date Prep: 03.12.20 17.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	494	10.0	mg/kg	03.12.20 19.25		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3119530

Date Prep: 03.12.20 18.00

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	03.12.20 22.29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	03.12.20 22.29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	03.12.20 22.29	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	03.12.20 22.29	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	03.12.20 22.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	03.12.20 22.29	
o-Terphenyl	84-15-1	106	%	70-135	03.12.20 22.29	



Certificate of Analytical Results 655540

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 State #1

Sample Id: **FS30**
Lab Sample Id: 655540-005

Matrix: Soil
Date Collected: 03.12.20 10.42

Date Received: 03.12.20 15.26
Sample Depth: 2.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3119461

Date Prep: 03.12.20 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	03.12.20 23.22	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.12.20 23.22	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.12.20 23.22	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.12.20 23.22	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.12.20 23.22	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.12.20 23.22	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.12.20 23.22	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	96	%	70-130	03.12.20 23.22		
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.12.20 23.22		



Certificate of Analytical Results 655540

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 State #1

Sample Id: **FS31**
Lab Sample Id: 655540-006

Matrix: Soil
Date Collected: 03.12.20 13.09

Date Received: 03.12.20 15.26
Sample Depth: 2.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3119475

Date Prep: 03.12.20 17.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	537	10.1	mg/kg	03.12.20 19.44		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3119530

Date Prep: 03.12.20 18.00

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	03.12.20 22.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	03.12.20 22.50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	03.12.20 22.50	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	03.12.20 22.50	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	03.12.20 22.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	03.12.20 22.50	
o-Terphenyl	84-15-1	104	%	70-135	03.12.20 22.50	



Certificate of Analytical Results 655540

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 State #1

Sample Id: **FS31**
Lab Sample Id: 655540-006

Matrix: Soil
Date Collected: 03.12.20 13.09

Date Received: 03.12.20 15.26
Sample Depth: 2.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3119461

Date Prep: 03.12.20 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	03.12.20 23.43	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.12.20 23.43	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.12.20 23.43	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.12.20 23.43	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.12.20 23.43	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.12.20 23.43	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.12.20 23.43	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	97	%	70-130	03.12.20 23.43		
1,4-Difluorobenzene	540-36-3	109	%	70-130	03.12.20 23.43		



Certificate of Analytical Results 655540

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 State #1

Sample Id: FS32
Lab Sample Id: 655540-007

Matrix: Soil
Date Collected: 03.12.20 12.38

Date Received: 03.12.20 15.26
Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3119475

Date Prep: 03.12.20 17.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	593	9.96	mg/kg	03.12.20 19.51		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3119530

Date Prep: 03.12.20 18.00

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	03.12.20 23.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	03.12.20 23.10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	03.12.20 23.10	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	03.12.20 23.10	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	03.12.20 23.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	03.12.20 23.10	
o-Terphenyl	84-15-1	113	%	70-135	03.12.20 23.10	



Certificate of Analytical Results 655540

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 State #1

Sample Id: **FS32**
Lab Sample Id: 655540-007

Matrix: Soil
Date Collected: 03.12.20 12.38

Date Received: 03.12.20 15.26
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.12.20 18.00

Basis: Wet Weight

Seq Number: 3119461

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.13.20 00.03	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.13.20 00.03	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.13.20 00.03	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.13.20 00.03	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.13.20 00.03	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.13.20 00.03	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.13.20 00.03	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	95	%	70-130	03.13.20 00.03		
1,4-Difluorobenzene	540-36-3	109	%	70-130	03.13.20 00.03		



Certificate of Analytical Results 655540

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 State #1

Sample Id: **FS33**
Lab Sample Id: 655540-008

Matrix: Soil
Date Collected: 03.12.20 12.41

Date Received: 03.12.20 15.26
Sample Depth: 3 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3119475

Date Prep: 03.12.20 17.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	308	9.94	mg/kg	03.12.20 19.57		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3119529

Date Prep: 03.12.20 18.00

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	03.12.20 21.28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	03.12.20 21.28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	03.12.20 21.28	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	03.12.20 21.28	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	03.12.20 21.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	124	%	70-135	03.12.20 21.28	
o-Terphenyl	84-15-1	134	%	70-135	03.12.20 21.28	



Certificate of Analytical Results 655540

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 State #1

Sample Id: **FS33**
Lab Sample Id: 655540-008

Matrix: Soil
Date Collected: 03.12.20 12.41

Date Received: 03.12.20 15.26
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3119461

Date Prep: 03.12.20 18.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.13.20 00.24	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.13.20 00.24	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.13.20 00.24	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	03.13.20 00.24	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.13.20 00.24	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.13.20 00.24	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.13.20 00.24	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	96	%	70-130	03.13.20 00.24		
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.13.20 00.24		



Flagging Criteria

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

****** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

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.

Hat Mesa 32 State #1

Analytical Method: Chloride by EPA 300

Seq Number: 3119475

MB Sample Id: 7698758-1-BLK

Matrix: Solid

LCS Sample Id: 7698758-1-BKS

Prep Method: E300P

Date Prep: 03.12.20

LCSD Sample Id: 7698758-1-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	03.12.20 18:35	

Analytical Method: Chloride by EPA 300

Seq Number: 3119475

Parent Sample Id: 655539-041

Matrix: Soil

MS Sample Id: 655539-041 S

Prep Method: E300P

Date Prep: 03.12.20

MSD Sample Id: 655539-041 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	205	199	415	106	416	106	90-110	0	20	mg/kg	03.12.20 20:09	

Analytical Method: Chloride by EPA 300

Seq Number: 3119475

Parent Sample Id: 655540-001

Matrix: Soil

MS Sample Id: 655540-001 S

Prep Method: E300P

Date Prep: 03.12.20

MSD Sample Id: 655540-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	617	200	823	103	824	104	90-110	0	20	mg/kg	03.12.20 18:54	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3119516

MB Sample Id: 7698702-1-BLK

Matrix: Solid

LCS Sample Id: 7698702-1-BKS

Prep Method: SW8015P

Date Prep: 03.12.20

LCSD Sample Id: 7698702-1-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	935	94	807	81	70-135	15	35	mg/kg	03.12.20 11:35	
Diesel Range Organics (DRO)	<50.0	1000	1040	104	885	89	70-135	16	35	mg/kg	03.12.20 11:35	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	91		111		93		70-135	%	03.12.20 11:35
o-Terphenyl	101		112		95		70-135	%	03.12.20 11:35

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.

Hat Mesa 32 State #1

Analytical Method: TPH by SW8015 Mod

Seq Number: 3119529

MB Sample Id: 7698799-1-BLK

Matrix: Solid

LCS Sample Id: 7698799-1-BKS

Prep Method: SW8015P

Date Prep: 03.12.20

LCSD Sample Id: 7698799-1-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	937	94	946	95	70-135	1	35	mg/kg	03.12.20 20:48	
Diesel Range Organics (DRO)	<50.0	1000	1020	102	1040	104	70-135	2	35	mg/kg	03.12.20 20:48	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date	Flag		
1-Chlorooctane	87		127		109		70-135	%	03.12.20 20:48			
o-Terphenyl	92		109		110		70-135	%	03.12.20 20:48			

Analytical Method: TPH by SW8015 Mod

Seq Number: 3119530

MB Sample Id: 7698800-1-BLK

Matrix: Solid

LCS Sample Id: 7698800-1-BKS

Prep Method: SW8015P

Date Prep: 03.12.20

LCSD Sample Id: 7698800-1-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	974	97	942	94	70-135	3	35	mg/kg	03.12.20 20:48	
Diesel Range Organics (DRO)	<50.0	1000	1090	109	1040	104	70-135	5	35	mg/kg	03.12.20 20:48	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date	Flag		
1-Chlorooctane	99		116		112		70-135	%	03.12.20 20:48			
o-Terphenyl	106		116		108		70-135	%	03.12.20 20:48			

Analytical Method: TPH by SW8015 Mod

Seq Number: 3119516

Matrix: Solid

MB Sample Id: 7698702-1-BLK

Prep Method: SW8015P

Date Prep: 03.12.20

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	03.12.20 11:15	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3119529

Matrix: Solid

MB Sample Id: 7698799-1-BLK

Prep Method: SW8015P

Date Prep: 03.12.20

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	03.12.20 20:27	

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.

Hat Mesa 32 State #1

Analytical Method: TPH by SW8015 Mod

Seq Number: 3119530

Matrix: Solid

Prep Method: SW8015P

Date Prep: 03.12.20

MB Sample Id: 7698800-1-BLK

Parameter

MB
Result

Units

Analysis
Date

Flag

Motor Oil Range Hydrocarbons (MRO)

<50.0

mg/kg

03.12.20 20:27

Analytical Method: TPH by SW8015 Mod

Seq Number: 3119516

Matrix: Soil

Prep Method: SW8015P

Date Prep: 03.12.20

Parent Sample Id: 655422-001

MS Sample Id: 655422-001 S

MSD Sample Id: 655422-001 SD

Parameter

Parent
ResultSpike
AmountMS
ResultMS
%RecMSD
ResultMSD
%Rec

Limits

%RPD

RPD Limit

Units

Analysis
Date

Flag

Gasoline Range Hydrocarbons (GRO)

<50.3

1010

890

88

947

95

70-135

6

35

mg/kg

03.12.20 12:37

Diesel Range Organics (DRO)

<50.3

1010

962

95

1040

104

70-135

8

35

mg/kg

03.12.20 12:37

Surrogate

MS
%RecMS
FlagMSD
%RecMSD
Flag

Limits

Units

Analysis
Date

1-Chlorooctane

105

110

70-135

%

03.12.20 12:37

o-Terphenyl

104

112

70-135

%

03.12.20 12:37

Analytical Method: TPH by SW8015 Mod

Seq Number: 3119529

Matrix: Soil

Prep Method: SW8015P

Date Prep: 03.12.20

Parent Sample Id: 655540-008

MS Sample Id: 655540-008 S

MSD Sample Id: 655540-008 SD

Parameter

Parent
ResultSpike
AmountMS
ResultMS
%RecMSD
ResultMSD
%Rec

Limits

%RPD

RPD Limit

Units

Analysis
Date

Flag

Gasoline Range Hydrocarbons (GRO)

<49.8

995

1120

113

965

97

70-135

15

35

mg/kg

03.12.20 21:49

Diesel Range Organics (DRO)

<49.8

995

1270

128

1080

108

70-135

16

35

mg/kg

03.12.20 21:49

Surrogate

MS
%RecMS
FlagMSD
%RecMSD
Flag

Limits

Units

Analysis
Date

1-Chlorooctane

129

114

70-135

%

03.12.20 21:49

o-Terphenyl

132

116

70-135

%

03.12.20 21:49

Analytical Method: TPH by SW8015 Mod

Seq Number: 3119530

Matrix: Soil

Prep Method: SW8015P

Date Prep: 03.12.20

Parent Sample Id: 655540-004

MS Sample Id: 655540-004 S

MSD Sample Id: 655540-004 SD

Parameter

Parent
ResultSpike
AmountMS
ResultMS
%RecMSD
ResultMSD
%Rec

Limits

%RPD

RPD Limit

Units

Analysis
Date

Flag

Gasoline Range Hydrocarbons (GRO)

<49.8

995

912

92

981

98

70-135

7

35

mg/kg

03.12.20 21:49

Diesel Range Organics (DRO)

<49.8

995

1030

104

1110

111

70-135

7

35

mg/kg

03.12.20 21:49

Surrogate

MS
%RecMS
FlagMSD
%RecMSD
Flag

Limits

Units

Analysis
Date

1-Chlorooctane

112

120

70-135

%

03.12.20 21:49

o-Terphenyl

114

121

70-135

%

03.12.20 21:49

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.

Hat Mesa 32 State #1

Analytical Method: BTEX by EPA 8021B

Seq Number: 3119459

MB Sample Id: 7698684-1-BLK

Matrix: Solid

LCS Sample Id: 7698684-1-BKS

Prep Method: SW5030B

Date Prep: 03.12.20

LCSD Sample Id: 7698684-1-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	0.126	126	0.122	122	70-130	3	35	mg/kg	03.12.20 12:08	
Toluene	<0.00200	0.100	0.113	113	0.109	109	70-130	4	35	mg/kg	03.12.20 12:08	
Ethylbenzene	<0.00200	0.100	0.104	104	0.0998	100	71-129	4	35	mg/kg	03.12.20 12:08	
m,p-Xylenes	<0.00400	0.200	0.201	101	0.192	96	70-135	5	35	mg/kg	03.12.20 12:08	
o-Xylene	<0.00200	0.100	0.102	102	0.0986	99	71-133	3	35	mg/kg	03.12.20 12:08	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	118		111		112		70-130	%	03.12.20 12:08
4-Bromofluorobenzene	91		87		87		70-130	%	03.12.20 12:08

Analytical Method: BTEX by EPA 8021B

Seq Number: 3119461

MB Sample Id: 7698776-1-BLK

Matrix: Solid

LCS Sample Id: 7698776-1-BKS

Prep Method: SW5030B

Date Prep: 03.12.20

LCSD Sample Id: 7698776-1-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	0.108	108	0.113	113	70-130	5	35	mg/kg	03.12.20 21:20	
Toluene	<0.00200	0.100	0.103	103	0.109	109	70-130	6	35	mg/kg	03.12.20 21:20	
Ethylbenzene	<0.00200	0.100	0.0982	98	0.105	105	71-129	7	35	mg/kg	03.12.20 21:20	
m,p-Xylenes	<0.00400	0.200	0.202	101	0.216	108	70-135	7	35	mg/kg	03.12.20 21:20	
o-Xylene	<0.00200	0.100	0.102	102	0.109	109	71-133	7	35	mg/kg	03.12.20 21:20	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		108		108		70-130	%	03.12.20 21:20
4-Bromofluorobenzene	96		94		97		70-130	%	03.12.20 21:20

Analytical Method: BTEX by EPA 8021B

Seq Number: 3119459

Parent Sample Id: 655422-001

Matrix: Soil

MS Sample Id: 655422-001 S

Prep Method: SW5030B

Date Prep: 03.12.20

MSD Sample Id: 655422-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.127	126	0.126	125	70-130	1	35	mg/kg	03.12.20 12:49	
Toluene	<0.00202	0.101	0.125	124	0.115	114	70-130	8	35	mg/kg	03.12.20 12:49	
Ethylbenzene	<0.00202	0.101	0.116	115	0.106	105	71-129	9	35	mg/kg	03.12.20 12:49	
m,p-Xylenes	<0.00404	0.202	0.223	110	0.204	101	70-135	9	35	mg/kg	03.12.20 12:49	
o-Xylene	<0.00202	0.101	0.113	112	0.103	102	71-133	9	35	mg/kg	03.12.20 12:49	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	111		111		70-130	%	03.12.20 12:49
4-Bromofluorobenzene	86		89		70-130	%	03.12.20 12:49

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.

Hat Mesa 32 State #1

Analytical Method: BTEX by EPA 8021B

Seq Number: 3119461

Parent Sample Id: 655540-004

Matrix: Soil

MS Sample Id: 655540-004 S

Prep Method: SW5030B

Date Prep: 03.12.20

MSD Sample Id: 655540-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.119	119	0.104	104	70-130	13	35	mg/kg	03.12.20 22:01	
Toluene	<0.00200	0.0998	0.112	112	0.100	100	70-130	11	35	mg/kg	03.12.20 22:01	
Ethylbenzene	<0.00200	0.0998	0.106	106	0.0951	95	71-129	11	35	mg/kg	03.12.20 22:01	
m,p-Xylenes	<0.00399	0.200	0.216	108	0.195	98	70-135	10	35	mg/kg	03.12.20 22:01	
o-Xylene	<0.00200	0.0998	0.110	110	0.0990	99	71-133	11	35	mg/kg	03.12.20 22:01	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	109		107		70-130	%	03.12.20 22:01
4-Bromofluorobenzene	94		92		70-130	%	03.12.20 22:01

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

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, Carlsbad, NM (575) 988-3199, Phoenix, AZ (480) 355-0900
 Tampa, FL (813) 620-2000, Tallahassee, FL (850) 756-0747, Delray Beach, FL (561) 689-6701
 Atlanta, GA (770) 449-8800

Work Order No: 655540

www.xenco.com Page 1 of 1

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

Work Order Comments	
Program: UST/PS ☐ PRP ☐ Brownfields ☐ RRD ☐ Superfund ☐	
State of Project:	
Reporting Level: ☐ Level ☐ PST/US ☐ TRRP ☐ Level ☐	
Deliverables: EDD ☐ ADAPT ☐ Other: ☐	

Project Name:	Lat Mosca 32 State #1	Turn Around	☐
Project Number:	012919267	Routine:	☐
PO #:	11/04/19 spill date	Rush: 24 hrs	
Sampler's Name:	Fatima Smith	Due Date:	
SAMPLE RECEIPT		Temp Blank:	Yes ☐ No ☒
Temperature (°C):	0.8	Wet Ice:	Yes ☐ No ☒
Received Intact:	Yes ☒ No ☐	Thermometer ID	TNM007
Cooler Custody Seals:	Yes ☒ No ☐	Correction Factor:	-0.2
Sample Custody Seals:	Yes ☒ No ☐	Total Containers:	8

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	ANALYSIS REQUEST	Work Order Notes
FS26	S	3/12/20	0957	3.5	1	X	X	X		
FS27										
FS28										
FS29										
FS30										
FS31										
FS32										
FS33										

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)
		3/12/20 15:20	
1			
2			
3			
4			
5			

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 03.12.2020 03.26.00 PM

Work Order #: 655540

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?	___
#3 *Samples received on ice?	___
#4 *Custody Seals intact on shipping container/ cooler?	___
#5 Custody Seals intact on sample bottles?	No
#6 *Custody Seals Signed and dated?	No
#7 *Chain of Custody present?	___
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	___
#10 Chain of Custody agrees with sample labels/matrix?	___
#11 Container label(s) legible and intact?	___
#12 Samples in proper container/ bottle?	___
#13 Samples properly preserved?	___
#14 Sample container(s) intact?	___
#15 Sufficient sample amount for indicated test(s)?	___
#16 All samples received within hold time?	___
#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: 03.12.2020

Checklist reviewed by:



Jessica Kramer

Date: 03.13.2020

Analytical Report 655695

for
LT Environmental, Inc.

Project Manager: Dan Moir

Hat Mesa 32 State #1

012919267

16-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)



16-MAR-20

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

Reference: XENCO Report No(s): **655695**
Hat Mesa 32 State #1
Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 655695. 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. 655695 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 655695****LT Environmental, Inc., Arvada, CO**

Hat Mesa 32 State #1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS34	S	03-13-20 11:02	2 ft	655695-001
FS35	S	03-13-20 13:18	2.5 ft	655695-002
FS36	S	03-13-20 12:22	2 ft	655695-003



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Hat Mesa 32 State #1

Project ID: 012919267
Work Order Number(s): 655695

Report Date: 16-MAR-20
Date Received: 03/13/2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3119634 BTEX by EPA 8021B

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



Certificate of Analysis Summary 655695

LT Environmental, Inc., Arvada, CO

Project Name: Hat Mesa 32 State #1

Project Id: 012919267

Contact: Dan Moir

Project Location:

Date Received in Lab: Fri Mar-13-20 03:40 pm

Report Date: 16-MAR-20

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	655695-001	655695-002	655695-003			
	<i>Field Id:</i>	FS34	FS35	FS36			
	<i>Depth:</i>	2- ft	2.5- ft	2- ft			
	<i>Matrix:</i>	SOIL	SOIL	SOIL			
	<i>Sampled:</i>	Mar-13-20 11:02	Mar-13-20 13:18	Mar-13-20 12:22			
BTEX by EPA 8021B	<i>Extracted:</i>	Mar-13-20 18:00	Mar-13-20 18:00	Mar-13-20 18:00			
	<i>Analyzed:</i>	Mar-14-20 01:45	Mar-14-20 02:06	Mar-14-20 02:26			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
Benzene		<0.00201 0.00201	<0.00198 0.00198	<0.00198 0.00198			
Toluene		<0.00201 0.00201	<0.00198 0.00198	<0.00198 0.00198			
Ethylbenzene		<0.00201 0.00201	<0.00198 0.00198	<0.00198 0.00198			
m,p-Xylenes		<0.00402 0.00402	<0.00396 0.00396	<0.00396 0.00396			
o-Xylene		<0.00201 0.00201	<0.00198 0.00198	<0.00198 0.00198			
Total Xylenes		<0.00201 0.00201	<0.00198 0.00198	<0.00198 0.00198			
Total BTEX		<0.00201 0.00201	<0.00198 0.00198	<0.00198 0.00198			
Chloride by EPA 300	<i>Extracted:</i>	Mar-13-20 19:03	Mar-13-20 19:03	Mar-13-20 19:03			
	<i>Analyzed:</i>	Mar-13-20 20:20	Mar-13-20 20:37	Mar-13-20 20:43			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
Chloride		462 9.94	236 10.1	633 9.96			
TPH by SW8015 Mod	<i>Extracted:</i>	Mar-13-20 18:30	Mar-13-20 18:30	Mar-13-20 18:30			
	<i>Analyzed:</i>	Mar-13-20 22:08	Mar-13-20 22:28	Mar-13-20 22:48			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<50.0 50.0	<50.0 50.0			
Diesel Range Organics (DRO)		<50.0 50.0	<50.0 50.0	<50.0 50.0			
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<50.0 50.0	<50.0 50.0			
Total GRO-DRO		<50.0 50.0	<50.0 50.0	<50.0 50.0			
Total TPH		<50.0 50.0	<50.0 50.0	<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

Jessica Kramer
Project Manager



Certificate of Analytical Results 655695

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 State #1

Sample Id: **FS34**
Lab Sample Id: 655695-001

Matrix: Soil
Date Collected: 03.13.20 11.02

Date Received: 03.13.20 15.40
Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3119637

Date Prep: 03.13.20 19.03

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	462	9.94	mg/kg	03.13.20 20.20		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3119703

Date Prep: 03.13.20 18.30

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	03.13.20 22.08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	03.13.20 22.08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.13.20 22.08	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	03.13.20 22.08	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	03.13.20 22.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	03.13.20 22.08	
o-Terphenyl	84-15-1	96	%	70-135	03.13.20 22.08	



Certificate of Analytical Results 655695

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 State #1

Sample Id: **FS34**
Lab Sample Id: 655695-001

Matrix: Soil
Date Collected: 03.13.20 11.02

Date Received: 03.13.20 15.40
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.13.20 18.00

Basis: Wet Weight

Seq Number: 3119634

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.14.20 01.45	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.14.20 01.45	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.14.20 01.45	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.14.20 01.45	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.14.20 01.45	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	03.14.20 01.45	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.14.20 01.45	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	95	%	70-130	03.14.20 01.45		
1,4-Difluorobenzene	540-36-3	109	%	70-130	03.14.20 01.45		



Certificate of Analytical Results 655695

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 State #1

Sample Id: **FS35**
Lab Sample Id: 655695-002

Matrix: Soil
Date Collected: 03.13.20 13.18

Date Received: 03.13.20 15.40
Sample Depth: 2.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3119637

Date Prep: 03.13.20 19.03

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	236	10.1	mg/kg	03.13.20 20.37		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3119703

Date Prep: 03.13.20 18.30

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	03.13.20 22.28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	03.13.20 22.28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.13.20 22.28	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	03.13.20 22.28	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	03.13.20 22.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	03.13.20 22.28	
o-Terphenyl	84-15-1	101	%	70-135	03.13.20 22.28	



Certificate of Analytical Results 655695

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 State #1

Sample Id: **FS35**
Lab Sample Id: 655695-002

Matrix: Soil
Date Collected: 03.13.20 13.18

Date Received: 03.13.20 15.40
Sample Depth: 2.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3119634

Date Prep: 03.13.20 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	03.14.20 02.06	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	03.14.20 02.06	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	03.14.20 02.06	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	03.14.20 02.06	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	03.14.20 02.06	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	03.14.20 02.06	U	1
Total BTEX		<0.00198	0.00198	mg/kg	03.14.20 02.06	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	97	%	70-130	03.14.20 02.06		
1,4-Difluorobenzene	540-36-3	106	%	70-130	03.14.20 02.06		



Certificate of Analytical Results 655695

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 State #1

Sample Id: **FS36**
Lab Sample Id: 655695-003

Matrix: Soil
Date Collected: 03.13.20 12.22

Date Received: 03.13.20 15.40
Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3119637

Date Prep: 03.13.20 19.03

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	633	9.96	mg/kg	03.13.20 20.43		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3119703

Date Prep: 03.13.20 18.30

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	03.13.20 22.48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	03.13.20 22.48	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.13.20 22.48	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	03.13.20 22.48	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	03.13.20 22.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	03.13.20 22.48	
o-Terphenyl	84-15-1	103	%	70-135	03.13.20 22.48	



Certificate of Analytical Results 655695

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 State #1

Sample Id: **FS36**
Lab Sample Id: 655695-003

Matrix: Soil
Date Collected: 03.13.20 12.22

Date Received: 03.13.20 15.40
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3119634

Date Prep: 03.13.20 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	03.14.20 02.26	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	03.14.20 02.26	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	03.14.20 02.26	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	03.14.20 02.26	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	03.14.20 02.26	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	03.14.20 02.26	U	1
Total BTEX		<0.00198	0.00198	mg/kg	03.14.20 02.26	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.14.20 02.26		
4-Bromofluorobenzene	460-00-4	96	%	70-130	03.14.20 02.26		



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.

Hat Mesa 32 State #1

Analytical Method: Chloride by EPA 300

Seq Number: 3119637

MB Sample Id: 7698873-1-BLK

Matrix: Solid

LCS Sample Id: 7698873-1-BKS

Prep Method: E300P

Date Prep: 03.13.20

LCSD Sample Id: 7698873-1-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	260	104	260	104	90-110	0	20	mg/kg	03.13.20 20:09	

Analytical Method: Chloride by EPA 300

Seq Number: 3119637

Parent Sample Id: 655695-001

Matrix: Soil

MS Sample Id: 655695-001 S

Prep Method: E300P

Date Prep: 03.13.20

MSD Sample Id: 655695-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	462	200	674	106	675	107	90-110	0	20	mg/kg	03.13.20 20:26	

Analytical Method: Chloride by EPA 300

Seq Number: 3119637

Parent Sample Id: 655702-003

Matrix: Soil

MS Sample Id: 655702-003 S

Prep Method: E300P

Date Prep: 03.13.20

MSD Sample Id: 655702-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	13.5	200	228	107	226	106	90-110	1	20	mg/kg	03.13.20 21:48	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3119703

MB Sample Id: 7698918-1-BLK

Matrix: Solid

LCS Sample Id: 7698918-1-BKS

Prep Method: SW8015P

Date Prep: 03.13.20

LCSD Sample Id: 7698918-1-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	962	96	70-135	2	35	mg/kg	03.13.20 14:25	
Diesel Range Organics (DRO)	<50.0	1000	1070	107	1060	106	70-135	1	35	mg/kg	03.13.20 14:25	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	93		115		105		70-135	%	03.13.20 14:25
o-Terphenyl	97		107		106		70-135	%	03.13.20 14:25

Analytical Method: TPH by SW8015 Mod

Seq Number: 3119703

Matrix: Solid

MB Sample Id: 7698918-1-BLK

Prep Method: SW8015P

Date Prep: 03.13.20

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	03.13.20 15:05	

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



LT Environmental, Inc.

Hat Mesa 32 State #1

Analytical Method: TPH by SW8015 Mod

Seq Number: 3119703

Parent Sample Id: 655684-001

Matrix: Soil

MS Sample Id: 655684-001 S

Prep Method: SW8015P

Date Prep: 03.13.20

MSD Sample Id: 655684-001 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)	<50.0	1000	849	85	878	88	70-135	3	35	mg/kg	03.13.20 18:03	
Diesel Range Organics (DRO)	88.1	1000	936	85	946	86	70-135	1	35	mg/kg	03.13.20 18:03	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	103		105		70-135	%	03.13.20 18:03
o-Terphenyl	99		99		70-135	%	03.13.20 18:03

Analytical Method: BTEX by EPA 8021B

Seq Number: 3119634

MB Sample Id: 7698870-1-BLK

Matrix: Solid

LCS Sample Id: 7698870-1-BKS

Prep Method: SW5030B

Date Prep: 03.13.20

LCSD Sample Id: 7698870-1-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	0.109	109	0.107	107	70-130	2	35	mg/kg	03.13.20 23:23	
Toluene	<0.00200	0.100	0.105	105	0.102	102	70-130	3	35	mg/kg	03.13.20 23:23	
Ethylbenzene	<0.00200	0.100	0.0998	100	0.0963	96	71-129	4	35	mg/kg	03.13.20 23:23	
m,p-Xylenes	<0.00400	0.200	0.206	103	0.199	100	70-135	3	35	mg/kg	03.13.20 23:23	
o-Xylene	<0.00200	0.100	0.104	104	0.100	100	71-133	4	35	mg/kg	03.13.20 23:23	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		108		109		70-130	%	03.13.20 23:23
4-Bromofluorobenzene	94		95		92		70-130	%	03.13.20 23:23

Analytical Method: BTEX by EPA 8021B

Seq Number: 3119634

Parent Sample Id: 655684-001

Matrix: Soil

MS Sample Id: 655684-001 S

Prep Method: SW5030B

Date Prep: 03.13.20

MSD Sample Id: 655684-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.111	111	0.0966	97	70-130	14	35	mg/kg	03.14.20 00:03	
Toluene	<0.00201	0.100	0.102	102	0.0892	90	70-130	13	35	mg/kg	03.14.20 00:03	
Ethylbenzene	<0.00201	0.100	0.0981	98	0.0865	87	71-129	13	35	mg/kg	03.14.20 00:03	
m,p-Xylenes	<0.00402	0.201	0.201	100	0.177	89	70-135	13	35	mg/kg	03.14.20 00:03	
o-Xylene	<0.00201	0.100	0.103	103	0.0905	91	71-133	13	35	mg/kg	03.14.20 00:03	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		109		70-130	%	03.14.20 00:03
4-Bromofluorobenzene	91		95		70-130	%	03.14.20 00:03

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

Houston, TX (281) 240-4200, Dallas TX (214) 902-0300, San Antonio, TX (210) 509-3334
Midland, TX (432) 304-5440, El Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 782-7550, Carlsbad, NM (575) 988-3199, Phoenix, AZ (480) 355-0900
Tampa, FL (813) 620-2000, Tallahassee, FL (850) 756-0747, Delray Beach, FL (561) 689-6701
Atlanta, GA (770) 449-8800

Work Order No.:

455495

www.xenco.com Page 1 of 1

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

Work Order Comments

Program: USTPST ☐ PRP ☐ Brownfields ☐ RR ☐ Superfund ☐

State of Project:

Reporting Level ☐ Level ☐ PST/UST ☐ TRRP ☐ Level ☐

Deliverables: EDD ☐ ADAPT ☐ Other:

[illegible]

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number	TPH (EP)	BTEX (E)	Chloride	Sample Comments
ES34	S	3/13/20	1102	2'	1	X	X	X	
ES35	S	3/13/20	1318	2.5'	1	X	X	X	
ES36	S	3/13/20	1222	2'	1	X	X	X	
<i>[Handwritten signature]</i>									

Total 200.7 / 6010 200.8 / 6020:
Circle Method(s) and Metal(s) to be

8RCRA	13PPM	Texas 11	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni
TCLP / SPLP 6010: 8RCRA			Sb	As	Ba	Be	Cd	Cr	Co	Cu	Pb	Mn	Mo	Ni	Se	Ag	Ti	U	

bio2 Na Sr Tl Sn U V Zn
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>	3/3/20 15:40	2		
			4		
			6		

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.**Date/ Time Received:** 03.13.2020 03.40.00 PM**Work Order #:** 655695**Acceptable Temperature Range:** 0 - 6 degC**Air and Metal samples Acceptable Range:** Ambient**Temperature Measuring device used :** T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.6
#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)?	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: 03.13.2020

Checklist reviewed by:

Jessica Kramer

Date: 03.16.2020

Analytical Report 655867

for
LT Environmental, Inc.

Project Manager: Dan Moir

Hat Mesa 32 State #1

012919267

17-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)



17-MAR-20

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **655867**

Hat Mesa 32 State #1

Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 655867. 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. 655867 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 655867

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 State #1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS26A	S	03-16-20 13:25	4 ft	655867-001
FS27A	S	03-16-20 13:30	3 ft	655867-002



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Hat Mesa 32 State #1

Project ID: 012919267
Work Order Number(s): 655867

Report Date: 17-MAR-20
Date Received: 03/16/2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3119914 BTEX by EPA 8021B

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



Certificate of Analysis Summary 655867

LT Environmental, Inc., Arvada, CO

Project Name: Hat Mesa 32 State #1

Project Id: 012919267

Contact: Dan Moir

Project Location:

Date Received in Lab: Mon Mar-16-20 04:30 pm

Report Date: 17-MAR-20

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	655867-001	655867-002				
	Field Id:	FS26A	FS27A				
	Depth:	4- ft	3- ft				
	Matrix:	SOIL	SOIL				
	Sampled:	Mar-16-20 13:25	Mar-16-20 13:30				
BTEX by EPA 8021B	Extracted:	Mar-16-20 23:08	Mar-16-20 23:08				
	Analyzed:	Mar-17-20 03:56	Mar-17-20 04:16				
	Units/RL:	mg/kg RL	mg/kg RL				
Benzene		<0.00202 0.00202	<0.00201 0.00201				
Toluene		<0.00202 0.00202	<0.00201 0.00201				
Ethylbenzene		<0.00202 0.00202	<0.00201 0.00201				
m,p-Xylenes		<0.00403 0.00403	<0.00402 0.00402				
o-Xylene		<0.00202 0.00202	<0.00201 0.00201				
Total Xylenes		<0.00202 0.00202	<0.00201 0.00201				
Total BTEX		<0.00202 0.00202	<0.00201 0.00201				
Chloride by EPA 300	Extracted:	Mar-16-20 20:00	Mar-16-20 20:00				
	Analyzed:	Mar-16-20 22:47	Mar-16-20 23:05				
	Units/RL:	mg/kg RL	mg/kg RL				
Chloride		190 9.98	128 9.98				
TPH by SW8015 Mod	Extracted:	Mar-16-20 17:30	Mar-16-20 17:30				
	Analyzed:	Mar-17-20 01:05	Mar-17-20 01:26				
	Units/RL:	mg/kg RL	mg/kg RL				
Gasoline Range Hydrocarbons (GRO)		<50.1 50.1	<49.8 49.8				
Diesel Range Organics (DRO)		<50.1 50.1	<49.8 49.8				
Motor Oil Range Hydrocarbons (MRO)		<50.1 50.1	<49.8 49.8				
Total GRO-DRO		<50.1 50.1	<49.8 49.8				
Total TPH		<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 655867

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 State #1

Sample Id: **FS26A**
Lab Sample Id: 655867-001

Matrix: Soil
Date Collected: 03.16.20 13.25

Date Received: 03.16.20 16.30
Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Tech: JUM

Analyst: MAB

Seq Number: 3119919

Date Prep: 03.16.20 20.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	190	9.98	mg/kg	03.16.20 22.47		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3119879

Date Prep: 03.16.20 17.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	03.17.20 01.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	03.17.20 01.05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	03.17.20 01.05	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	03.17.20 01.05	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	03.17.20 01.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	03.17.20 01.05	
o-Terphenyl	84-15-1	107	%	70-135	03.17.20 01.05	



Certificate of Analytical Results 655867

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 State #1

Sample Id: **FS26A**
Lab Sample Id: 655867-001

Matrix: Soil
Date Collected: 03.16.20 13.25

Date Received: 03.16.20 16.30
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: JUM

% Moisture:

Analyst: MAB

Date Prep: 03.16.20 23.08

Basis: Wet Weight

Seq Number: 3119914

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	03.17.20 03.56	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	03.17.20 03.56	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	03.17.20 03.56	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	03.17.20 03.56	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	03.17.20 03.56	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	03.17.20 03.56	U	1
Total BTEX		<0.00202	0.00202	mg/kg	03.17.20 03.56	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.17.20 03.56		
4-Bromofluorobenzene	460-00-4	97	%	70-130	03.17.20 03.56		



Certificate of Analytical Results 655867

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 State #1

Sample Id: **FS27A**
Lab Sample Id: 655867-002

Matrix: Soil
Date Collected: 03.16.20 13.30

Date Received: 03.16.20 16.30
Sample Depth: 3 ft

Analytical Method: Chloride by EPA 300

Tech: JUM

Analyst: MAB

Seq Number: 3119919

Date Prep: 03.16.20 20.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	128	9.98	mg/kg	03.16.20 23.05		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3119879

Date Prep: 03.16.20 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	03.17.20 01.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	03.17.20 01.26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	03.17.20 01.26	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	03.17.20 01.26	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	03.17.20 01.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	03.17.20 01.26	
o-Terphenyl	84-15-1	102	%	70-135	03.17.20 01.26	



Certificate of Analytical Results 655867

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 State #1

Sample Id: **FS27A**
Lab Sample Id: 655867-002

Matrix: Soil
Date Collected: 03.16.20 13.30

Date Received: 03.16.20 16.30
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: JUM

% Moisture:

Analyst: MAB

Date Prep: 03.16.20 23.08

Basis: Wet Weight

Seq Number: 3119914

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.17.20 04.16	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.17.20 04.16	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.17.20 04.16	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.17.20 04.16	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.17.20 04.16	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	03.17.20 04.16	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.17.20 04.16	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	98	%	70-130	03.17.20 04.16		
4-Bromofluorobenzene	460-00-4	97	%	70-130	03.17.20 04.16		



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.

Hat Mesa 32 State #1

Analytical Method: Chloride by EPA 300

Seq Number: 3119919

MB Sample Id: 7699007-1-BLK

Matrix: Solid

LCS Sample Id: 7699007-1-BKS

Prep Method: E300P

Date Prep: 03.16.20

LCSD Sample Id: 7699007-1-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	262	105	258	103	90-110	2	20	mg/kg	03.16.20 19:12	

Analytical Method: Chloride by EPA 300

Seq Number: 3119919

Parent Sample Id: 655779-001

Matrix: Soil

MS Sample Id: 655779-001 S

Prep Method: E300P

Date Prep: 03.16.20

MSD Sample Id: 655779-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1380	198	1670	146	1640	130	90-110	2	20	mg/kg	03.16.20 21:25	X

Analytical Method: Chloride by EPA 300

Seq Number: 3119919

Parent Sample Id: 655867-001

Matrix: Soil

MS Sample Id: 655867-001 S

Prep Method: E300P

Date Prep: 03.16.20

MSD Sample Id: 655867-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	190	200	398	104	398	104	90-110	0	20	mg/kg	03.16.20 22:53	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3119879

MB Sample Id: 7699038-1-BLK

Matrix: Solid

LCS Sample Id: 7699038-1-BKS

Prep Method: SW8015P

Date Prep: 03.16.20

LCSD Sample Id: 7699038-1-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	958	96	949	95	70-135	1	35	mg/kg	03.16.20 23:23	
Diesel Range Organics (DRO)	50.0	1000	1100	110	1100	110	70-135	0	35	mg/kg	03.16.20 23:23	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	95		117		118		70-135	%	03.16.20 23:23
o-Terphenyl	98		114		113		70-135	%	03.16.20 23:23

Analytical Method: TPH by SW8015 Mod

Seq Number: 3119879

Matrix: Solid

MB Sample Id: 7699038-1-BLK

Prep Method: SW8015P

Date Prep: 03.16.20

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	03.16.20 23:03	

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.

Hat Mesa 32 State #1

Analytical Method: TPH by SW8015 Mod

Seq Number: 3119879

Parent Sample Id: 655860-001

Matrix: Soil

MS Sample Id: 655860-001 S

Prep Method: SW8015P

Date Prep: 03.16.20

MSD Sample Id: 655860-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.1	1000	851	85	887	88	70-135	4	35	mg/kg	03.17.20 00:24	
Diesel Range Organics (DRO)	<50.1	1000	967	97	1010	100	70-135	4	35	mg/kg	03.17.20 00:24	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	119		107		70-135	%	03.17.20 00:24
o-Terphenyl	114		108		70-135	%	03.17.20 00:24

Analytical Method: BTEX by EPA 8021B

Seq Number: 3119914

MB Sample Id: 7699005-1-BLK

Matrix: Solid

LCS Sample Id: 7699005-1-BKS

Prep Method: SW5030B

Date Prep: 03.16.20

LCSD Sample Id: 7699005-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.101	101	0.101	101	70-130	0	35	mg/kg	03.16.20 20:07	
Toluene	<0.00200	0.100	0.101	101	0.0974	97	70-130	4	35	mg/kg	03.16.20 20:07	
Ethylbenzene	<0.00200	0.100	0.101	101	0.0937	94	71-129	7	35	mg/kg	03.16.20 20:07	
m,p-Xylenes	<0.00400	0.200	0.210	105	0.194	97	70-135	8	35	mg/kg	03.16.20 20:07	
o-Xylene	<0.00200	0.100	0.105	105	0.0965	97	71-133	8	35	mg/kg	03.16.20 20:07	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		106		108		70-130	%	03.16.20 20:07
4-Bromofluorobenzene	94		97		93		70-130	%	03.16.20 20:07

Analytical Method: BTEX by EPA 8021B

Seq Number: 3119914

Parent Sample Id: 655779-001

Matrix: Soil

MS Sample Id: 655779-001 S

Prep Method: SW5030B

Date Prep: 03.16.20

MSD Sample Id: 655779-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00198	0.0990	0.0740	75	0.0615	62	70-130	18	35	mg/kg	03.16.20 20:47	X
Toluene	<0.00198	0.0990	0.0709	72	0.0590	59	70-130	18	35	mg/kg	03.16.20 20:47	X
Ethylbenzene	<0.00198	0.0990	0.0658	66	0.0553	55	71-129	17	35	mg/kg	03.16.20 20:47	X
m,p-Xylenes	<0.00396	0.198	0.136	69	0.114	57	70-135	18	35	mg/kg	03.16.20 20:47	X
o-Xylene	<0.00198	0.0990	0.0710	72	0.0580	58	71-133	20	35	mg/kg	03.16.20 20:47	X

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		107		70-130	%	03.16.20 20:47
4-Bromofluorobenzene	94		97		70-130	%	03.16.20 20:47

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



Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300, San Antonio, TX (210) 509-3334
 Midland, TX (432) 704-5440, El Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199, Phoenix, AZ (480) 355-0900
 Tampa, FL (813) 620-2000, Tallahassee, FL (850) 756-0747, Delray Beach, FL (561) 689-6701
 Atlanta, GA (770) 449-8800

Work Order No: 16558107

www.xenco.com Page 1 of 1

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian Office	Company Name:	XTO Energy, Inc.
Address:	3300 North A Street	Address:	3104 E Greene St
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 86220
Phone:	(432) 236-3849	Email:	fsmith@xenv.com, dmoir@xenv.com

Program: UST/PS	PRP	Brownfields	RR	Superfund
State of Project:				
Reporting Level:	Level 1	Level 2	Level 3	Level 4
Deliverables:	EDD	ADAPT	Other:	

Project Name:	Lat Mesa 32 State #1	Turn Around		ANALYSIS REQUEST																Work Order Notes
Project Number:	012919267	Routine:	☐																	TAT starts the day received by the lab, if received by 4:30pm
PO #:	11/04/19 spill date	Rush:	24 hrs																	
Sampler's Name:	Fatima Smith	Due Date:																		Sample Comments
SAMPLE RECEIPT	Temp Blank:	Yes	No	Well Ice:	Yes	No														
Temperature (°C):	1.8	Thermometer ID																		
Received Intact:	Yes	No																		
Cooler Custody Seals:	Yes	No																		
Sample Custody Seals:	Yes	No																		
Sample Identification	Matrix	Date Sampled	Time Sampled	Depth																
FS26A	S	3/16/20	1325	4'																
ES27A	S	3/16/20	1340	3'																

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

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
fatima	fatima	3/16/20 16:30			

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 03.16.2020 04.30.00 PM

Work Order #: 655867

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.8
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	No
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by:



Elizabeth McClellan

Date: 03.16.2020

Checklist reviewed by:



Jessica Kramer

Date: 03.17.2020

Analytical Report 656032

for
LT Environmental, Inc.

Project Manager: Dan Moir

Hat Mesa 32 State #1

012919267

19-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)



19-MAR-20

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **656032**

Hat Mesa 32 State #1

Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 656032. 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. 656032 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 656032

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 State #1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS36 A	S	03-17-20 10:33	2.5 ft	656032-001



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Hat Mesa 32 State #1

Project ID: 012919267
Work Order Number(s): 656032

Report Date: 19-MAR-20
Date Received: 03/18/2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3120167 BTEX by EPA 8021B

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



Certificate of Analysis Summary 656032

LT Environmental, Inc., Arvada, CO

Project Name: Hat Mesa 32 State #1

Project Id: 012919267

Contact: Dan Moir

Project Location:

Date Received in Lab: Wed Mar-18-20 08:38 am

Report Date: 19-MAR-20

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	656032-001					
	Field Id:	FS36 A					
	Depth:	2.5- ft					
	Matrix:	SOIL					
	Sampled:	Mar-17-20 10:33					
BTEX by EPA 8021B	Extracted:	Mar-18-20 11:00					
	Analyzed:	Mar-18-20 13:25					
	Units/RL:	mg/kg RL					
Benzene		<0.00200 0.00200					
Toluene		<0.00200 0.00200					
Ethylbenzene		<0.00200 0.00200					
m,p-Xylenes		<0.00400 0.00400					
o-Xylene		<0.00200 0.00200					
Total Xylenes		<0.00200 0.00200					
Total BTEX		<0.00200 0.00200					
Chloride by EPA 300	Extracted:	Mar-18-20 10:00					
	Analyzed:	Mar-18-20 13:43					
	Units/RL:	mg/kg RL					
Chloride		541 10.1					
TPH by SW8015 Mod	Extracted:	Mar-18-20 14:50					
	Analyzed:	Mar-18-20 15:04					
	Units/RL:	mg/kg RL					
Gasoline Range Hydrocarbons (GRO)		<50.3 50.3					
Diesel Range Organics (DRO)		<50.3 50.3					
Motor Oil Range Hydrocarbons (MRO)		<50.3 50.3					
Total GRO-DRO		<50.3 50.3					
Total TPH		<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

Version: 1.0%

Jessica Kramer
Project Manager



Certificate of Analytical Results 656032

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 State #1

Sample Id: **FS36 A**
Lab Sample Id: 656032-001

Matrix: Soil
Date Collected: 03.17.20 10.33

Date Received: 03.18.20 08.38
Sample Depth: 2.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3120104

Date Prep: 03.18.20 10.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	541	10.1	mg/kg	03.18.20 13.43		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3120217

Date Prep: 03.18.20 14.50

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	03.18.20 15.04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	03.18.20 15.04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	03.18.20 15.04	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	03.18.20 15.04	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	03.18.20 15.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	03.18.20 15.04	
o-Terphenyl	84-15-1	107	%	70-135	03.18.20 15.04	



Certificate of Analytical Results 656032

LT Environmental, Inc., Arvada, CO

Hat Mesa 32 State #1

Sample Id: **FS36 A**
Lab Sample Id: 656032-001

Matrix: Soil
Date Collected: 03.17.20 10.33

Date Received: 03.18.20 08.38
Sample Depth: 2.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MRB

Seq Number: 3120167

Date Prep: 03.18.20 11.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.18.20 13.25	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.18.20 13.25	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.18.20 13.25	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	03.18.20 13.25	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.18.20 13.25	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.18.20 13.25	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.18.20 13.25	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	90	%	70-130	03.18.20 13.25		
1,4-Difluorobenzene	540-36-3	113	%	70-130	03.18.20 13.25		



Flagging Criteria

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

****** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



LT Environmental, Inc.

Hat Mesa 32 State #1

Analytical Method: Chloride by EPA 300

Seq Number: 3120104

MB Sample Id: 7699133-1-BLK

Matrix: Solid

LCS Sample Id: 7699133-1-BKS

Prep Method: E300P

Date Prep: 03.18.20

LCSD Sample Id: 7699133-1-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	260	104	261	104	90-110	0	20	mg/kg	03.18.20 12:43	

Analytical Method: Chloride by EPA 300

Seq Number: 3120104

Parent Sample Id: 656011-025

Matrix: Soil

MS Sample Id: 656011-025 S

Prep Method: E300P

Date Prep: 03.18.20

MSD Sample Id: 656011-025 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	84.3	399	509	106	504	105	90-110	1	20	mg/kg	03.18.20 13:02	

Analytical Method: Chloride by EPA 300

Seq Number: 3120104

Parent Sample Id: 656011-028

Matrix: Soil

MS Sample Id: 656011-028 S

Prep Method: E300P

Date Prep: 03.18.20

MSD Sample Id: 656011-028 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	55.3	198	261	104	262	104	90-110	0	20	mg/kg	03.18.20 14:10	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3120217

MB Sample Id: 7699257-1-BLK

Matrix: Solid

LCS Sample Id: 7699257-1-BKS

Prep Method: SW8015P

Date Prep: 03.18.20

LCSD Sample Id: 7699257-1-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	829	83	761	76	70-135	9	35	mg/kg	03.18.20 14:23	
Diesel Range Organics (DRO)	<50.0	1000	905	91	835	84	70-135	8	35	mg/kg	03.18.20 14:23	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	89		111		102		70-135	%	03.18.20 14:23
o-Terphenyl	98		98		92		70-135	%	03.18.20 14:23

Analytical Method: TPH by SW8015 Mod

Seq Number: 3120217

Matrix: Solid

MB Sample Id: 7699257-1-BLK

Prep Method: SW8015P

Date Prep: 03.18.20

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	03.18.20 14:02	

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.

Hat Mesa 32 State #1

Analytical Method: TPH by SW8015 Mod

Seq Number: 3120217

Parent Sample Id: 656032-001

Matrix: Soil

MS Sample Id: 656032-001 S

Prep Method: SW8015P

Date Prep: 03.18.20

MSD Sample Id: 656032-001 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	995	850	85	966	97	70-135	13	35	mg/kg	03.18.20 15:24	
Diesel Range Organics (DRO)	<49.8	995	928	93	1070	107	70-135	14	35	mg/kg	03.18.20 15:24	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	119		115		70-135	%	03.18.20 15:24
o-Terphenyl	108		123		70-135	%	03.18.20 15:24

Analytical Method: BTEX by EPA 8021B

Seq Number: 3120167

MB Sample Id: 7699151-1-BLK

Matrix: Solid

LCS Sample Id: 7699151-1-BKS

Prep Method: SW5030B

Date Prep: 03.18.20

LCSD Sample Id: 7699151-1-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	0.111	111	0.118	118	70-130	6	35	mg/kg	03.18.20 11:43	
Toluene	<0.00200	0.100	0.102	102	0.107	107	70-130	5	35	mg/kg	03.18.20 11:43	
Ethylbenzene	<0.00200	0.100	0.0954	95	0.0996	100	71-129	4	35	mg/kg	03.18.20 11:43	
m,p-Xylenes	<0.00400	0.200	0.186	93	0.194	97	70-135	4	35	mg/kg	03.18.20 11:43	
o-Xylene	<0.00200	0.100	0.0917	92	0.0979	98	71-133	7	35	mg/kg	03.18.20 11:43	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	113		107		111		70-130	%	03.18.20 11:43
4-Bromofluorobenzene	88		80		86		70-130	%	03.18.20 11:43

Analytical Method: BTEX by EPA 8021B

Seq Number: 3120167

Parent Sample Id: 656032-001

Matrix: Soil

MS Sample Id: 656032-001 S

Prep Method: SW5030B

Date Prep: 03.18.20

MSD Sample Id: 656032-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.128	129	0.122	122	70-130	5	35	mg/kg	03.18.20 12:24	
Toluene	<0.00199	0.0994	0.116	117	0.110	110	70-130	5	35	mg/kg	03.18.20 12:24	
Ethylbenzene	<0.00199	0.0994	0.107	108	0.100	100	71-129	7	35	mg/kg	03.18.20 12:24	
m,p-Xylenes	<0.00398	0.199	0.209	105	0.195	98	70-135	7	35	mg/kg	03.18.20 12:24	
o-Xylene	<0.00199	0.0994	0.105	106	0.0992	99	71-133	6	35	mg/kg	03.18.20 12:24	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	112		111		70-130	%	03.18.20 12:24
4-Bromofluorobenzene	87		90		70-130	%	03.18.20 12:24

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

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300, San Antonio, TX (210) 509-3334
Midland, TX (432) 740-5440, El Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1266
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3189, Phoenix, AZ (480) 355-0900
Tampa, FL (813) 620-2000, Tallahassee, FL (850) 756-0747, Delray Beach, FL (561) 680-6701
Atlanta, GA (770) 449-8800

Work Order No: 654032

[illegible]

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 03.18.2020 08.38.00 AM

Work Order #: 656032

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

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

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

Analyst:

PH Device/Lot#:

Checklist completed by:



Elizabeth McClellan

Date: 03.19.2020

Checklist reviewed by:



Jessica Kramer

Date: 03.19.2020