



LT Environmental, Inc.

3300 North A Street, Building 1, #103
Midland, Texas 79705
T 432.704.5178

March 16, 2020

Mr. Mike Bratcher
New Mexico Oil Conservation Division
811 South First Street
Artesia, New Mexico 8821**RE: Containment Liner Inspection and Subsequent Delineation
C 17 State #001H
Incident ID: NRM2003533617
Eddy County, New Mexico**

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE) is pleased to present the following letter report to WPX Energy Production, LLC (WPX) summarizing the response efforts and secondary containment liner inspection associated with a produced water release at the C 17 STATE #001H well pad (Site) in Unit A, Section 17, Township 23 South, Range 27 East, in Eddy County, New Mexico (Figure 1). On December 19, 2019, there was a failure in the produced water dump line causing the release of approximately 35 barrels (bbls) of produced water in the lined steel containment at the site. All fluids were contained within the lined secondary containment, recovered immediately, and returned to production. WPX reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 on December 30, 2019, and was subsequently assigned Incident ID NRM2003533617 (Attachment 1).

INITIAL LINER INSPECTION

On January 14, 2020, LTE personnel competent in the inspection of on-site equipment and facilities visited the Site to visually inspect the liner. During the inspection, seven tears approximately 1 inch in size were noted in the northeast and southwest areas of the secondary containment liner. Based on this observation, additional assessment and soil sampling activities were warranted. Repair of the liner was arranged after access and sampling of the underlying soil was complete. Photographs taken during the liner inspection and follow-up liner repair are included as Attachment 2.

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 greater than 100 feet below ground surface (bgs) based on the nearest water well data. The nearest permitted water well with depth to water data is C 04044 Pod 1, located approximately 4,195 feet northeast of the Site. The water well has a depth to groundwater of 150 feet and a total depth of 290 feet bgs. Ground surface elevation at the water well location is 3,148 feet above mean sea level (AMSL), which is approximately 12 feet lower in elevation than the Site. The closest continuously flowing water or significant watercourse to the Site is a drainage located approximately





Bratcher, M.

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1,045 feet east 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. The Site is greater than 300 feet from a wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is located in a medium potential karst area. Based on these criteria, the following NMOCD Table 1 Closure Criteria apply: 10 milligrams per kilogram (mg/kg) benzene; 50 mg/kg total benzene, toluene, ethylbenzene, and total xylenes (BTEX); 1,000 mg/kg for the sum of total petroleum hydrocarbons (TPH) – gasoline range organics (GRO) and TPH – diesel range organics (DRO); 2,500 mg/kg TPH; and 20,000 mg/kg chloride.

SOIL SAMPLING

On January 30, 2020, LTE was onsite to conduct soil sampling associated with the observed tears in the tank battery secondary containment liner. Soil samples were collected beneath each of the observed tears from surface level to 0.3 feet bgs at each location (SS01 through SS07). Soil samples were field screened for volatile aromatic hydrocarbons using a photo-ionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. The soil samples were placed directly into a pre-cleaned glass jar, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were shipped at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Xenco Laboratories (Xenco) in Midland, Texas, for analysis of BTEX following United State Environmental Protection Agency (USEPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-motor oil range organics (MRO) following USEPA Method 8015M/D; and chloride following USEPA Method 300.0. Soil sample locations are depicted on the attached Figure 2.

ANALYTICAL RESULTS

Laboratory analytical results of soil samples indicated that BTEX, TPH, and chloride concentrations were either below the laboratory detection limit or compliant with the NMOCD Closure Criteria. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Attachment 4.

WPX repaired the observed tears as depicted in the attached Photographic Log (Attachment 2). LTE recommends that WPX request no further action for Incident ID NRM2003533617. An updated NMOCD Form C-141 is included as Attachment 1.





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

Sincerely,
LT ENVIRONMENTAL, INC.

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

Chris McKisson
Project Environmental Scientist

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

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

Attachments:

- Figure 1 Site Location Map
- Figure 2 Site Map
- Table 1 Soil Analytical Results
- Attachment 1 Initial/Final NMOCD Form C-141
- Attachment 2 Photographic Log
- Attachment 3 Laboratory Analytical Reports



FIGURES



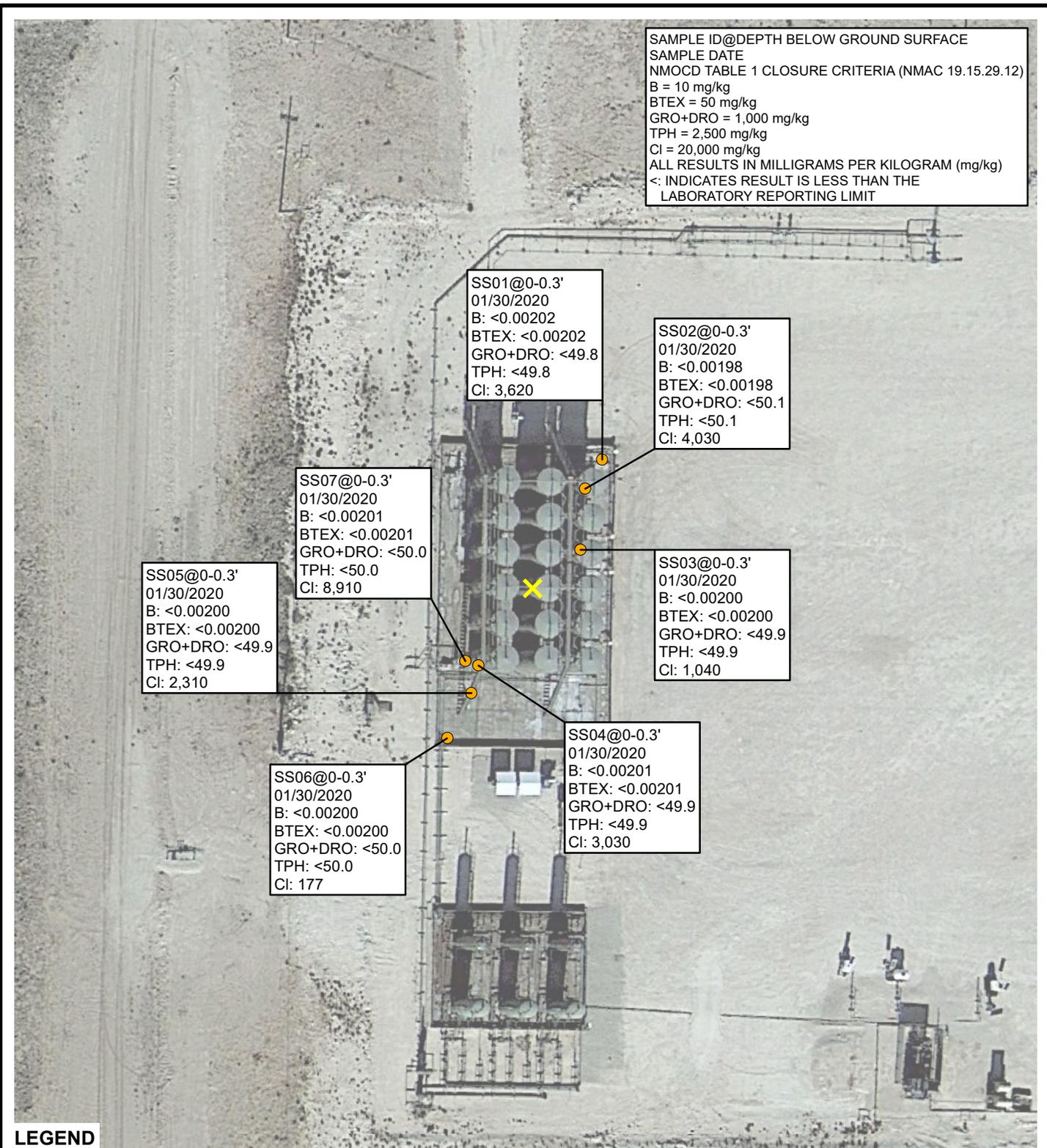
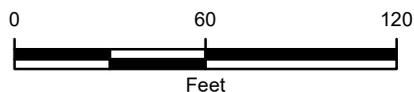


IMAGE COURTESY OF GOOGLE EARTH 2019

LEGEND

RELEASE LOCATION

SOIL SAMPLE



B: BENZENE
 BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE,
 AND TOTAL XYLENES
 GRO – GASOLINE RANGE ORGANICS
 DRO – DIESEL RANGE ORGANICS
 TPH – TOTAL PETROLEUM HYDROCARBONS
 Cl - CHLORIDE
 NMAC – NEW MEXICO ADMINISTRATIVE CODE
 NMOC D – NEW MEXICO OIL CONSERVATION DIVISION

FIGURE 2
SITE MAP
 C 17 STATE 1H
 UNIT A SEC 17 T23S R27E
 EDDY COUNTY, NEW MEXICO
WPX ENERGY PERMIAN, LLC.



TABLES



**TABLE 1
SOIL ANALYTICAL RESULTS**

**C 17 STATE #001H
NMOCD INCIDENT ID: NRM2003533617
EDDY COUNTY, NEW MEXICO
WPX ENERGY PERMIAN, INC.**

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	MRO (mg/kg)	Sum of GRO + DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
SS01	0 - 0.3	01/30/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.8	<49.8	<49.8	<49.8	<49.8	3,620
SS02	0 - 0.3	01/30/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.1	<50.1	<50.1	<50.1	<50.1	4,030
SS03	0 - 0.3	01/30/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	1,040
SS04	0 - 0.3	01/30/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<49.9	<49.9	<49.9	<49.9	<49.9	3,030
SS05	0 - 0.3	01/30/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	2,310
SS06	0 - 0.3	01/30/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	177
SS07	0 - 0.3	01/30/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.0	<50.0	<50.0	<50.0	<50.0	8,910
NMOCD Table 1 Closure Criteria			10	NE	NE	NE	50	NE	NE	NE	1,000	2,500	20,000

Notes:

bgs - below ground surface

BTEX - benzene, toluene, ethylbenzene, and total xylenes

mg/kg - milligrams per kilogram

NE - not established

NMOCD - New Mexico Oil Conservation Division

DRO - diesel range organics

GRO - gasoline range organics

MRO - motor oil range organics

TPH - total petroleum hydrocarbons

< - indicates result is below

laboratory reporting limits

Bold- indicates result exceeds the applicable regulatory standard

* - indicates sample was collected in area to be reclaimed after remediation is complete; closure criteria for chloride concentration in the top 4 feet of soil is 600 mg/kg

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

ATTACHMENT 1: FORM C-141



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

State of New Mexico
Energy Minerals and Natural
Resources Department

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

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

Incident ID	NRM2003533617
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

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

Location of Release Source

Latitude 32.308862 _____ Longitude -104.205363 _____
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: C 17 STATE #001H	Site Type: Production Facility
Date Release Discovered: 12/19/2019	API# (if applicable): 30-015-44534

Unit Letter	Section	Township	Range	County
A	17	23S	27E	Eddy

Surface Owner: State Federal Tribal Private

Nature and Volume of Release

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

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 35	Volume Recovered (bbls) 35
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: Failure of produced water dump line resulted in the release of approx. 35 bbls of produced water inside lined secondary treater containment. Volume was estimated by recovered volume as containment is fully lined. Liner to be inspected for closure.

Form C-141

State of New Mexico
Oil Conservation Division

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Incident ID	NRM2003533617
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? Volume exceeded 25bbbls
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? District II office notified via email 12/19/2019 at 3:01 PM including Victoria Venegas, Robert Hamlet and Mike Bratcher.	

Initial Response

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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> 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: _____ _____ _____
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: Jim Raley  Title: Environmental Specialist Signature: _____ Date: 12/30/2019 email: james.raley@wpenergy.com Telephone: 575-689-7597
<u>OCD Only</u> Received by: <u>Ramona Marcus</u> Date: <u>2/4/2020</u>

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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?	≥100 (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

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

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

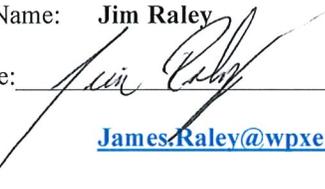
- Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- Field data
- Data table of soil contaminant concentration data
- Depth to water determination
- Determination of water sources and significant watercourses within ½-mile of the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

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

State of New Mexico
Oil Conservation Division

Incident ID	NRM2003533617
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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: **Jim Raley** Title: **Environmental Specialist**
 Signature:  Date: **3/18/2020**
 email: James.Raley@wpenergy.com Telephone: **575-689-7597**

OCD Only

Received by: Cristina Eads Date: 03/17/2020

Incident ID	NRM2003533617
District RP	
Facility ID	
Application ID	

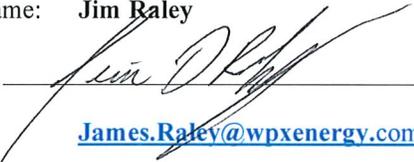
Closure

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: **Jim Raley** Title: **Environmental Specialist**
 Signature:  Date: **3/18/2020**
 email: James.Raley@wpenergy.com Telephone: **575-689-7597**

OCD Only

Received by: Cristina Eads Date: 03/17/2020

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: Denied Date: 04/08/2020

Printed Name: Cristina Eads Title: Environmental Specialist

ATTACHMENT 2: PHOTOGRAPHIC LOG

PHOTOGRAPHIC LOG



Photograph 1: View of tare in liner.



Photograph 2: View of tare in liner.



Photograph 3: View of tare in liner.



Photograph 4: View of tare in liner.

PHOTOGRAPHIC LOG



Photograph 5: View east of liner repair.



Photograph 6: View west of liner repair.



Photograph 7: View southwest of liner repair.



Photograph 4: View north of liner repair.

ATTACHMENT 3: LABORATORY ANALYTICAL RESULTS

Analytical Report 650903

for

LT Environmental, Inc.

Project Manager: Chris McKisson

C 17 State 1H

034820004

31-JAN-20

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):

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

Xenco-Dallas (EPA Lab Code: TX01468):

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

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

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

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

Xenco-Carlsbad (LELAP): Louisiana (05092)

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

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

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



31-JAN-20

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

Reference: XENCO Report No(s): **650903**
C 17 State 1H
Project Address: Rural Eddy County

Chris McKisson:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 650903. 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. 650903 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 650903

LT Environmental, Inc., Arvada, CO

C 17 State 1H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	01-30-20 09:55	0 - 0.3 ft	650903-001
SS02	S	01-30-20 10:15	0 - 0.3 ft	650903-002
SS03	S	01-30-20 10:35	0 - 0.3 ft	650903-003
SS04	S	01-30-20 11:00	0 - 0.3 ft	650903-004
SS05	S	01-30-20 11:20	0 - 0.3 ft	650903-005
SS06	S	01-30-20 11:40	0 - 0.3 ft	650903-006
SS07	S	01-30-20 11:55	0 - 0.3 ft	650903-007



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: C 17 State 1H

Project ID: 034820004
Work Order Number(s): 650903

Report Date: 31-JAN-20
Date Received: 01/30/2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3115056 BTEX by EPA 8021B

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

Batch: LBA-3115060 BTEX by EPA 8021B

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

Batch: LBA-3115096 TPH by SW8015 Mod

Surrogate 1-Chlorooctane, Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected.

Samples affected are: 650903-001,650903-003.



Certificate of Analysis Summary 650903

LT Environmental, Inc., Arvada, CO

Project Name: C 17 State 1H

Project Id: 034820004
Contact: Chris McKisson
Project Location: Rural Eddy County

Date Received in Lab: Thu Jan-30-20 01:58 pm
Report Date: 31-JAN-20
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	650903-001	650903-002	650903-003	650903-004	650903-005	650903-006
	<i>Field Id:</i>	SS01	SS02	SS03	SS04	SS05	SS06
	<i>Depth:</i>	0-0.3 ft					
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jan-30-20 09:55	Jan-30-20 10:15	Jan-30-20 10:35	Jan-30-20 11:00	Jan-30-20 11:20	Jan-30-20 11:40
BTEX by EPA 8021B	<i>Extracted:</i>	Jan-30-20 15:00	Jan-30-20 15:00	Jan-30-20 15:00	Jan-30-20 16:31	Jan-30-20 16:31	Jan-30-20 16:31
	<i>Analyzed:</i>	Jan-30-20 21:02	Jan-30-20 21:23	Jan-30-20 21:43	Jan-31-20 00:47	Jan-31-20 01:07	Jan-31-20 01:28
	<i>Units/RL:</i>	mg/kg RL					
	Benzene	<0.00202 0.00202	<0.00198 0.00198	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200
	Toluene	<0.00202 0.00202	<0.00198 0.00198	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200
	Ethylbenzene	<0.00202 0.00202	<0.00198 0.00198	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200
	m,p-Xylenes	<0.00403 0.00403	<0.00396 0.00396	<0.00400 0.00400	<0.00402 0.00402	<0.00401 0.00401	<0.00399 0.00399
	o-Xylene	<0.00202 0.00202	<0.00198 0.00198	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200
Xylenes, Total	<0.00202 0.00202	<0.00198 0.00198	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	
Total BTEX	<0.00202 0.00202	<0.00198 0.00198	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	
Chloride by EPA 300	<i>Extracted:</i>	Jan-30-20 16:24					
	<i>Analyzed:</i>	Jan-30-20 19:57	Jan-30-20 20:03	Jan-30-20 20:09	Jan-30-20 20:15	Jan-30-20 20:33	Jan-30-20 20:39
	<i>Units/RL:</i>	mg/kg RL					
Chloride		3620 50.4	4030 50.1	1040 50.3	3030 50.3	2310 49.7	177 9.98
TPH by SW8015 Mod	<i>Extracted:</i>	Jan-30-20 16:50	Jan-30-20 16:50	Jan-30-20 16:50	Jan-30-20 17:30	Jan-30-20 17:30	Jan-30-20 17:30
	<i>Analyzed:</i>	Jan-31-20 02:41	Jan-31-20 02:41	Jan-31-20 03:00	Jan-31-20 03:59	Jan-31-20 04:19	Jan-31-20 04:38
	<i>Units/RL:</i>	mg/kg RL					
	Gasoline Range Hydrocarbons (GRO)	<49.8 49.8	<50.1 50.1	<49.9 49.9	<49.9 49.9	<49.9 49.9	<49.9 49.9
	Diesel Range Organics (DRO)	<49.8 49.8	<50.1 50.1	<49.9 49.9	<49.9 49.9	<49.9 49.9	<49.9 49.9
Motor Oil Range Hydrocarbons (MRO)	<49.8 49.8	<50.1 50.1	<49.9 49.9	<49.9 49.9	<49.9 49.9	<49.9 49.9	
Total GRO-DRO	<49.8 49.8	<50.1 50.1	<49.9 49.9	<49.9 49.9	<49.9 49.9	<49.9 49.9	
Total TPH	<49.8 49.8	<50.1 50.1	<49.9 49.9	<49.9 49.9	<49.9 49.9	<49.9 49.9	

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Jessica Kramer
Project Assistant



Certificate of Analysis Summary 650903

LT Environmental, Inc., Arvada, CO

Project Name: C 17 State 1H

Project Id: 034820004
Contact: Chris McKisson
Project Location: Rural Eddy County

Date Received in Lab: Thu Jan-30-20 01:58 pm
Report Date: 31-JAN-20
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	650903-007				
	Field Id:	SS07				
	Depth:	0-0.3 ft				
	Matrix:	SOIL				
	Sampled:	Jan-30-20 11:55				
BTEX by EPA 8021B	Extracted:	Jan-30-20 16:31				
	Analyzed:	Jan-31-20 01:48				
	Units/RL:	mg/kg RL				
	Benzene	<0.00201 0.00201				
	Toluene	<0.00201 0.00201				
	Ethylbenzene	<0.00201 0.00201				
	m,p-Xylenes	<0.00402 0.00402				
	o-Xylene	<0.00201 0.00201				
Xylenes, Total	<0.00201 0.00201					
Total BTEX	<0.00201 0.00201					
Chloride by EPA 300	Extracted:	Jan-30-20 16:24				
	Analyzed:	Jan-30-20 20:45				
	Units/RL:	mg/kg RL				
Chloride	8910 50.4					
TPH by SW8015 Mod	Extracted:	Jan-30-20 17:30				
	Analyzed:	Jan-31-20 04:38				
	Units/RL:	mg/kg RL				
	Gasoline Range Hydrocarbons (GRO)	<50.0 50.0				
	Diesel Range Organics (DRO)	<50.0 50.0				
	Motor Oil Range Hydrocarbons (MRO)	<50.0 50.0				
	Total GRO-DRO	<50.0 50.0				
Total TPH	<50.0 50.0					

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Version: 1.0%

Jessica Kramer
Project Assistant



Certificate of Analytical Results 650903

LT Environmental, Inc., Arvada, CO

C 17 State 1H

Sample Id: SS01	Matrix: Soil	Date Received: 01.30.20 13.58
Lab Sample Id: 650903-001	Date Collected: 01.30.20 09.55	Sample Depth: 0 - 0.3 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 01.30.20 16.24	Basis: Wet Weight
Seq Number: 3115083		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3620	50.4	mg/kg	01.30.20 19.57		5

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DTH		% Moisture:
Analyst: DTH	Date Prep: 01.30.20 16.50	Basis: Wet Weight
Seq Number: 3115096		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	01.31.20 02.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	01.31.20 02.41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	01.31.20 02.41	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	01.31.20 02.41	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	01.31.20 02.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	136	%	70-135	01.31.20 02.41	**
o-Terphenyl	84-15-1	137	%	70-135	01.31.20 02.41	**



Certificate of Analytical Results 650903

LT Environmental, Inc., Arvada, CO

C 17 State 1H

Sample Id: SS01	Matrix: Soil	Date Received: 01.30.20 13.58
Lab Sample Id: 650903-001	Date Collected: 01.30.20 09.55	Sample Depth: 0 - 0.3 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 01.30.20 15.00	Basis: Wet Weight
Seq Number: 3115056		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.30.20 21.02	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.30.20 21.02	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.30.20 21.02	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	01.30.20 21.02	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.30.20 21.02	U	1
Xylenes, Total	1330-20-7	<0.00202	0.00202	mg/kg	01.30.20 21.02	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.30.20 21.02	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	111	%	70-130	01.30.20 21.02		
4-Bromofluorobenzene	460-00-4	97	%	70-130	01.30.20 21.02		



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LT Environmental, Inc., Arvada, CO

C 17 State 1H

Sample Id: SS02	Matrix: Soil	Date Received: 01.30.20 13.58
Lab Sample Id: 650903-002	Date Collected: 01.30.20 10.15	Sample Depth: 0 - 0.3 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 01.30.20 16.24	Basis: Wet Weight
Seq Number: 3115083		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	4030	50.1	mg/kg	01.30.20 20.03		5

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DTH		% Moisture:
Analyst: DTH	Date Prep: 01.30.20 16.50	Basis: Wet Weight
Seq Number: 3115096		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	01.31.20 02.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	01.31.20 02.41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	01.31.20 02.41	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	01.31.20 02.41	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	01.31.20 02.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-135	01.31.20 02.41	
o-Terphenyl	84-15-1	108	%	70-135	01.31.20 02.41	



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LT Environmental, Inc., Arvada, CO

C 17 State 1H

Sample Id: SS02	Matrix: Soil	Date Received: 01.30.20 13.58
Lab Sample Id: 650903-002	Date Collected: 01.30.20 10.15	Sample Depth: 0 - 0.3 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 01.30.20 15.00	Basis: Wet Weight
Seq Number: 3115056		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	01.30.20 21.23	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	01.30.20 21.23	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	01.30.20 21.23	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	01.30.20 21.23	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	01.30.20 21.23	U	1
Xylenes, Total	1330-20-7	<0.00198	0.00198	mg/kg	01.30.20 21.23	U	1
Total BTEX		<0.00198	0.00198	mg/kg	01.30.20 21.23	U	1
			%				
Surrogate	Cas Number	Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	96	%	70-130	01.30.20 21.23		
1,4-Difluorobenzene	540-36-3	109	%	70-130	01.30.20 21.23		



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LT Environmental, Inc., Arvada, CO

C 17 State 1H

Sample Id: SS03	Matrix: Soil	Date Received: 01.30.20 13.58
Lab Sample Id: 650903-003	Date Collected: 01.30.20 10.35	Sample Depth: 0 - 0.3 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 01.30.20 16.24	Basis: Wet Weight
Seq Number: 3115083		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1040	50.3	mg/kg	01.30.20 20.09		5

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DTH		% Moisture:
Analyst: DTH	Date Prep: 01.30.20 16.50	Basis: Wet Weight
Seq Number: 3115096		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	01.31.20 03.00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	01.31.20 03.00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.31.20 03.00	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	01.31.20 03.00	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	01.31.20 03.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	137	%	70-135	01.31.20 03.00	**
o-Terphenyl	84-15-1	136	%	70-135	01.31.20 03.00	**



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LT Environmental, Inc., Arvada, CO

C 17 State 1H

Sample Id: SS03	Matrix: Soil	Date Received: 01.30.20 13.58
Lab Sample Id: 650903-003	Date Collected: 01.30.20 10.35	Sample Depth: 0 - 0.3 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 01.30.20 15.00	Basis: Wet Weight
Seq Number: 3115056		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.30.20 21.43	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.30.20 21.43	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.30.20 21.43	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.30.20 21.43	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.30.20 21.43	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	01.30.20 21.43	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.30.20 21.43	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	99	%	70-130	01.30.20 21.43		
1,4-Difluorobenzene	540-36-3	111	%	70-130	01.30.20 21.43		



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LT Environmental, Inc., Arvada, CO

C 17 State 1H

Sample Id: **SS04** Matrix: Soil Date Received: 01.30.20 13.58
 Lab Sample Id: 650903-004 Date Collected: 01.30.20 11.00 Sample Depth: 0 - 0.3 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 01.30.20 16.24 Basis: Wet Weight
 Seq Number: 3115083

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3030	50.3	mg/kg	01.30.20 20.15		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 01.30.20 17.30 Basis: Wet Weight
 Seq Number: 3115105

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	01.31.20 03.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	01.31.20 03.59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.31.20 03.59	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	01.31.20 03.59	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	01.31.20 03.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	01.31.20 03.59	
o-Terphenyl	84-15-1	100	%	70-135	01.31.20 03.59	



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LT Environmental, Inc., Arvada, CO

C 17 State 1H

Sample Id: SS04	Matrix: Soil	Date Received: 01.30.20 13.58
Lab Sample Id: 650903-004	Date Collected: 01.30.20 11.00	Sample Depth: 0 - 0.3 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 01.30.20 16.31	Basis: Wet Weight
Seq Number: 3115060		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.31.20 00.47	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.31.20 00.47	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.31.20 00.47	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.31.20 00.47	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.31.20 00.47	U	1
Xylenes, Total	1330-20-7	<0.00201	0.00201	mg/kg	01.31.20 00.47	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.31.20 00.47	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	96	%	70-130	01.31.20 00.47		
1,4-Difluorobenzene	540-36-3	110	%	70-130	01.31.20 00.47		



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LT Environmental, Inc., Arvada, CO

C 17 State 1H

Sample Id: SS05	Matrix: Soil	Date Received: 01.30.20 13.58
Lab Sample Id: 650903-005	Date Collected: 01.30.20 11.20	Sample Depth: 0 - 0.3 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 01.30.20 16.24	Basis: Wet Weight
Seq Number: 3115083		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2310	49.7	mg/kg	01.30.20 20.33		5

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DTH		% Moisture:
Analyst: DTH	Date Prep: 01.30.20 17.30	Basis: Wet Weight
Seq Number: 3115105		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	01.31.20 04.19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	01.31.20 04.19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.31.20 04.19	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	01.31.20 04.19	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	01.31.20 04.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	118	%	70-135	01.31.20 04.19	
o-Terphenyl	84-15-1	110	%	70-135	01.31.20 04.19	



Certificate of Analytical Results 650903

LT Environmental, Inc., Arvada, CO

C 17 State 1H

Sample Id: SS05	Matrix: Soil	Date Received: 01.30.20 13.58
Lab Sample Id: 650903-005	Date Collected: 01.30.20 11.20	Sample Depth: 0 - 0.3 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 01.30.20 16.31	Basis: Wet Weight
Seq Number: 3115060		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.31.20 01.07	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.31.20 01.07	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.31.20 01.07	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	01.31.20 01.07	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.31.20 01.07	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	01.31.20 01.07	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.31.20 01.07	U	1
			%				
Surrogate	Cas Number	Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	98	%	70-130	01.31.20 01.07		
1,4-Difluorobenzene	540-36-3	111	%	70-130	01.31.20 01.07		



Certificate of Analytical Results 650903

LT Environmental, Inc., Arvada, CO

C 17 State 1H

Sample Id: **SS06** Matrix: Soil Date Received: 01.30.20 13.58
 Lab Sample Id: 650903-006 Date Collected: 01.30.20 11.40 Sample Depth: 0 - 0.3 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 01.30.20 16.24 Basis: Wet Weight
 Seq Number: 3115083

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	177	9.98	mg/kg	01.30.20 20.39		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 01.30.20 17.30 Basis: Wet Weight
 Seq Number: 3115105

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	01.31.20 04.38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	01.31.20 04.38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.31.20 04.38	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	01.31.20 04.38	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.31.20 04.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	01.31.20 04.38	
o-Terphenyl	84-15-1	99	%	70-135	01.31.20 04.38	



Certificate of Analytical Results 650903

LT Environmental, Inc., Arvada, CO

C 17 State 1H

Sample Id: SS06	Matrix: Soil	Date Received: 01.30.20 13.58
Lab Sample Id: 650903-006	Date Collected: 01.30.20 11.40	Sample Depth: 0 - 0.3 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 01.30.20 16.31	Basis: Wet Weight
Seq Number: 3115060		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.31.20 01.28	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.31.20 01.28	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.31.20 01.28	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.31.20 01.28	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.31.20 01.28	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	01.31.20 01.28	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.31.20 01.28	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	97	%	70-130	01.31.20 01.28		
1,4-Difluorobenzene	540-36-3	110	%	70-130	01.31.20 01.28		



Certificate of Analytical Results 650903

LT Environmental, Inc., Arvada, CO

C 17 State 1H

Sample Id: SS07	Matrix: Soil	Date Received: 01.30.20 13.58
Lab Sample Id: 650903-007	Date Collected: 01.30.20 11.55	Sample Depth: 0 - 0.3 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 01.30.20 16.24	Basis: Wet Weight
Seq Number: 3115083		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8910	50.4	mg/kg	01.30.20 20.45		5

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DTH		% Moisture:
Analyst: DTH	Date Prep: 01.30.20 17.30	Basis: Wet Weight
Seq Number: 3115105		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	01.31.20 04.38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	01.31.20 04.38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.31.20 04.38	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	01.31.20 04.38	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.31.20 04.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	118	%	70-135	01.31.20 04.38	
o-Terphenyl	84-15-1	110	%	70-135	01.31.20 04.38	



Certificate of Analytical Results 650903

LT Environmental, Inc., Arvada, CO

C 17 State 1H

Sample Id: **SS07** Matrix: Soil Date Received: 01.30.20 13.58
 Lab Sample Id: 650903-007 Date Collected: 01.30.20 11.55 Sample Depth: 0 - 0.3 ft
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 01.30.20 16.31 Basis: Wet Weight
 Seq Number: 3115060

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.31.20 01.48	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.31.20 01.48	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.31.20 01.48	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.31.20 01.48	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.31.20 01.48	U	1
Xylenes, Total	1330-20-7	<0.00201	0.00201	mg/kg	01.31.20 01.48	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.31.20 01.48	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	111	%	70-130	01.31.20 01.48		
4-Bromofluorobenzene	460-00-4	97	%	70-130	01.31.20 01.48		



LT Environmental, Inc.

C 17 State 1H

Analytical Method: Chloride by EPA 300

Seq Number: 3115083

MB Sample Id: 7695601-1-BLK

Matrix: Solid

LCS Sample Id: 7695601-1-BKS

Prep Method: E300P

Date Prep: 01.30.20

LCSD Sample Id: 7695601-1-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	261	104	90-110	1	20	mg/kg	01.30.20 19:20	

Analytical Method: Chloride by EPA 300

Seq Number: 3115083

Parent Sample Id: 650883-024

Matrix: Soil

MS Sample Id: 650883-024 S

Prep Method: E300P

Date Prep: 01.30.20

MSD Sample Id: 650883-024 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	841	200	1060	110	1050	105	90-110	1	20	mg/kg	01.30.20 19:38	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3115096

MB Sample Id: 7695660-1-BLK

Matrix: Solid

LCS Sample Id: 7695660-1-BKS

Prep Method: SW8015P

Date Prep: 01.30.20

LCSD Sample Id: 7695660-1-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	905	91	70-135	19	35	mg/kg	01.30.20 23:03	
Diesel Range Organics (DRO)	<50.0	1000	917	92	1030	103	70-135	12	35	mg/kg	01.30.20 23:03	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	87		132		107		70-135	%	01.30.20 23:03
o-Terphenyl	82		114		97		70-135	%	01.30.20 23:03

Analytical Method: TPH by SW8015 Mod

Seq Number: 3115105

MB Sample Id: 7695665-1-BLK

Matrix: Solid

LCS Sample Id: 7695665-1-BKS

Prep Method: SW8015P

Date Prep: 01.30.20

LCSD Sample Id: 7695665-1-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	1060	106	1130	113	70-135	6	35	mg/kg	01.31.20 03:40	
Diesel Range Organics (DRO)	103	1000	1050	105	976	98	70-135	7	35	mg/kg	01.31.20 03:40	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	105		131		134		70-135	%	01.31.20 03:40
o-Terphenyl	98		133		122		70-135	%	01.31.20 03:40

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.
C 17 State 1H

Analytical Method: TPH by SW8015 Mod
Seq Number: 3115096

Matrix: Solid
MB Sample Id: 7695660-1-BLK

Prep Method: SW8015P
Date Prep: 01.30.20

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	01.30.20 23:03	

Analytical Method: TPH by SW8015 Mod
Seq Number: 3115105

Matrix: Solid
MB Sample Id: 7695665-1-BLK

Prep Method: SW8015P
Date Prep: 01.30.20

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	01.31.20 03:20	

Analytical Method: TPH by SW8015 Mod
Seq Number: 3115096
Parent Sample Id: 650883-009

Matrix: Soil
MS Sample Id: 650883-009 S

Prep Method: SW8015P
Date Prep: 01.30.20
MSD Sample Id: 650883-009 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	936	94	1010	101	70-135	8	35	mg/kg	01.30.20 23:43	
Diesel Range Organics (DRO)	113	1000	850	74	948	84	70-135	11	35	mg/kg	01.30.20 23:43	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	113		122		70-135	%	01.30.20 23:43
o-Terphenyl	103		108		70-135	%	01.30.20 23:43

Analytical Method: TPH by SW8015 Mod
Seq Number: 3115105
Parent Sample Id: 650903-004

Matrix: Soil
MS Sample Id: 650903-004 S

Prep Method: SW8015P
Date Prep: 01.30.20
MSD Sample Id: 650903-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.2	1000	1180	118	1100	109	70-135	7	35	mg/kg	01.31.20 11:29	
Diesel Range Organics (DRO)	<50.2	1000	1010	101	1010	100	70-135	0	35	mg/kg	01.31.20 11:29	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	135		132		70-135	%	01.31.20 11:29
o-Terphenyl	135		128		70-135	%	01.31.20 11:29

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

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

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result
MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



LT Environmental, Inc.
C 17 State 1H

Analytical Method: BTEX by EPA 8021B

Seq Number: 3115056

MB Sample Id: 7695572-1-BLK

Matrix: Solid

LCS Sample Id: 7695572-1-BKS

Prep Method: SW5030B

Date Prep: 01.30.20

LCSD Sample Id: 7695572-1-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	0.109	109	70-130	9	35	mg/kg	01.30.20 12:46	
Toluene	<0.00200	0.100	0.109	109	0.0994	99	70-130	9	35	mg/kg	01.30.20 12:46	
Ethylbenzene	<0.00200	0.100	0.104	104	0.0946	95	71-129	9	35	mg/kg	01.30.20 12:46	
m,p-Xylenes	<0.00400	0.200	0.202	101	0.184	92	70-135	9	35	mg/kg	01.30.20 12:46	
o-Xylene	<0.00200	0.100	0.102	102	0.0938	94	71-133	8	35	mg/kg	01.30.20 12:46	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		109		109		70-130	%	01.30.20 12:46
4-Bromofluorobenzene	90		89		94		70-130	%	01.30.20 12:46

Analytical Method: BTEX by EPA 8021B

Seq Number: 3115060

MB Sample Id: 7695604-1-BLK

Matrix: Solid

LCS Sample Id: 7695604-1-BKS

Prep Method: SW5030B

Date Prep: 01.30.20

LCSD Sample Id: 7695604-1-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	0.114	114	70-130	3	35	mg/kg	01.30.20 23:05	
Toluene	<0.00200	0.100	0.101	101	0.105	105	70-130	4	35	mg/kg	01.30.20 23:05	
Ethylbenzene	<0.00200	0.100	0.0978	98	0.101	101	71-129	3	35	mg/kg	01.30.20 23:05	
m,p-Xylenes	<0.00400	0.200	0.192	96	0.198	99	70-135	3	35	mg/kg	01.30.20 23:05	
o-Xylene	<0.00200	0.100	0.0973	97	0.100	100	71-133	3	35	mg/kg	01.30.20 23:05	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	110		108		109		70-130	%	01.30.20 23:05
4-Bromofluorobenzene	93		91		92		70-130	%	01.30.20 23:05

Analytical Method: BTEX by EPA 8021B

Seq Number: 3115056

Parent Sample Id: 650838-001

Matrix: Soil

MS Sample Id: 650838-001 S

Prep Method: SW5030B

Date Prep: 01.30.20

MSD Sample Id: 650838-001 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	0.0988	0.119	120	0.116	117	70-130	3	35	mg/kg	01.30.20 13:27	
Toluene	<0.00198	0.0988	0.128	130	0.106	107	70-130	19	35	mg/kg	01.30.20 13:27	
Ethylbenzene	<0.00198	0.0988	0.123	124	0.102	103	71-129	19	35	mg/kg	01.30.20 13:27	
m,p-Xylenes	<0.00395	0.198	0.240	121	0.199	101	70-135	19	35	mg/kg	01.30.20 13:27	
o-Xylene	<0.00198	0.0988	0.120	121	0.0992	100	71-133	19	35	mg/kg	01.30.20 13:27	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	109		109		70-130	%	01.30.20 13:27
4-Bromofluorobenzene	94		92		70-130	%	01.30.20 13:27

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]
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.

C 17 State 1H

Analytical Method: BTEX by EPA 8021B

Seq Number: 3115060

Parent Sample Id: 650903-004

Matrix: Soil

MS Sample Id: 650903-004 S

Prep Method: SW5030B

Date Prep: 01.30.20

MSD Sample Id: 650903-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD	Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.0848	85	0.101	100	70-130	17	35		mg/kg	01.30.20 23:46	
Toluene	<0.00199	0.0994	0.0726	73	0.0919	91	70-130	23	35		mg/kg	01.30.20 23:46	
Ethylbenzene	<0.00199	0.0994	0.0717	72	0.0872	86	71-129	20	35		mg/kg	01.30.20 23:46	
m,p-Xylenes	<0.00398	0.199	0.177	89	0.170	85	70-135	4	35		mg/kg	01.30.20 23:46	
o-Xylene	<0.00199	0.0994	0.0802	81	0.0854	85	71-133	6	35		mg/kg	01.30.20 23:46	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		109		70-130	%	01.30.20 23:46
4-Bromofluorobenzene	95		95		70-130	%	01.30.20 23:46

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

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

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

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



Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334
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 Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8900 Tampa, FL (813) 620-2000 West Palm Beach, FL (561) 589-5701

Chain of Custody

Work Order No: 650903

Project Manager:	Chris McKisson	Bit to (if different)	→
Company Name:	LT Environmental	Company Name:	→
Address:	820 Megan Ave Unit B	Address:	
City, State ZIP:	Rifle CO 81650	City, State ZIP:	
Phone:	970 285 9985	Email:	cmckisson@henv.com & byers@henv.com

Project Name:	C 17 State 1H	Turn Around	
Project Number:	034820004	Routine	<input checked="" type="checkbox"/>
Project Location:	Rural Eddy County	Rush:	
Sampler's Name:	Anna Byers	Due Date:	
PO #:		Quote #:	

SAMPLE RECEIPT	Temp Blank:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Wet Ice:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Temperature (°C):	0.4	Thermometer ID	T-NM-084	
Received Intact:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Correction Factor:	-0.2	
Cooler Custody Seals:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Total Containers:	7	
Sample Custody Seals:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A			

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	ANALYSIS REQUEST														
						Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)											
SS01		S	1/30/20	0955	6-0.3'	1	X	X	X											
SS02		S		1015		1	X	X	X											
SS03		S		1035		1	X	X	X											
SS04		S		1100		1	X	X	X											
SS05		S		1120		1	X	X	X											
SS06		S		1140		1	X	X	X											
SS07		S		1155		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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Anna Byers	[Signature]	1/30/20 1858			

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 01.30.2020 01.58.00 PM

Work Order #: 650903

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: 01.30.2020

Checklist reviewed by:


Jessica Kramer

Date: 01.31.2020