#### LT Environmental, Inc.

3300 North "A" Street Building 1, Unit 103 Midland, Texas 79705 432.704.5178

A proud member of WSP

March 25, 2020

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

# RE: Closure Request Thriller BWL Federal 001H Remediation Permit Number 2RP-4915 Eddy County, New Mexico

Dear Mr. Billings:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following Closure Request detailing site assessment, soil sampling, and excavation activities at the Thriller BWL Federal 001H (Site) in Unit A, Section 32, Township 25 South, Range 29 East, in Eddy County, New Mexico (Figure 1). The purpose of the site assessment, soil sampling, and excavation activities was to address impacts to soil after a release of crude oil and produced water at the Site.

The release is included in the Compliance Agreement for Remediation for Historical Releases (Compliance Agreement) between XTO and the New Mexico Oil Conservation Division (NMOCD) effective November 13, 2018. The purpose of the Compliance Agreement is to ensure reportable releases that occurred prior to August 14, 2018, where XTO is responsible for the corrective action, comply with Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC) as amended on August 14, 2018. The release is categorized as a Tier IV site in the Compliance Agreement, meaning the release occurred prior to August 14, 2018, the effective date of 19.15.29 NMAC; however, remediation was ongoing.

#### **RELEASE BACKGROUND**

On July 25, 2018, a flex pipe flow line was damaged from rubbing and flexing against a rock, resulting in the release of crude oil and produced water. Approximately 3 barrels (bbls) of crude oil and 51 bbls of produced water were released onto the surface of the well pad. A vacuum truck recovered 3 bbls of crude oil and 47 bbls of produced water; approximately 4 bbls of released fluids were unrecovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 on August 3, 2018, and was assigned Remediation Permit (RP) Number 2RP-4915 (Attachment 1). The location referenced on the initial C-141 of Unit P, Section 30, Township 25 South, Range 29 East is the location of the well associated with release. However, the surface location of the release is in Unit A, Section 32, Township 25 South, Range 29 East, which is the location referenced on the final C-141 and



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attached figures. Based on the site assessment activities and results of the soil sampling events, XTO is requesting no further action for this release.

#### SITE CHARACTERIZATION

LTE characterized the Site according to Table 1, *Closure Criteria for Soils Impacted by a Release*, of 19.15.29.12 of the NMAC. Depth to groundwater at the Site is estimated to be between 51 feet and 100 feet below ground surface (bgs) based on the nearest water well data. The nearest permitted water well with depth to water data is United States Geological Survey (USGS) well 320532104001701, located approximately 2,056 feet west of the Site. The water well has a depth to groundwater of 98 feet and a total depth 128 feet. Ground surface elevation at the water well location is 2,988 feet above mean sea level (AMSL), which is approximately 4 feet lower in elevation than the Site. The closest continuously flowing water or significant watercourse to the Site is an unnamed dry wash located approximately 1,930 feet southeast of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is located in a medium-potential karst area.

#### **CLOSURE CRITERIA**

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

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

#### SITE ASSESSMENT, EXCAVATION, AND DELINEATION SOIL SAMPLING ACTIVITIES

On June 26, 2019, LTE personnel arrived at the Site to evaluate the release extent. Site inspection and remediation efforts were postponed due to ongoing operations and drilling activities at the Site, near the release area. Remediation activity restrictions were imposed due to safety concerns at the Site.

LTE returned to the Site during February 2020, upon completion of drilling and operations activities. Due to the recent drilling and construction activities, no visible indications of the



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release were identified. Potholes were advanced via backhoe at six locations within and around the documented release area to assess for potential soil impacts. Potholes PH01 through PH06 were advanced to a depth of 5 feet bgs. Three delineation soil samples were collected from each pothole from depths ranging from 1 foot to 5 feet bgs. Soil from the potholes was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photoionization detector (PID) and Hach<sup>®</sup> chloride QuanTab<sup>®</sup> test strips, respectively. Field screening results and observations for each pothole were logged on lithologic/soil sampling logs, which are included in Attachment 2. The pothole delineation soil sample locations are depicted on Figure 2.

Impacted soil was excavated from the release area as indicated by field screening activities for the delineation soil samples. To direct excavation activities, LTE screened soil for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach<sup>®</sup> chloride QuanTab<sup>®</sup> test strips, respectively. Impacted soil was excavated to a depth of 5 feet bgs, in the area around pothole PH01. Following removal of impacted soil, LTE collected 5-point composite soil samples every 200 square feet from the sidewalls and floors of the excavation. The 5-point composite samples were collected by depositing five aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples SW01 and SW02 were collected from the sidewalls of the excavation from depths ranging from the ground surface to 5 feet bgs. Composite soil samples FS01 and FS02 were collected from the floor of the excavation from a depth of 5 feet bgs. The excavation extent and excavation soil sample locations are depicted on Figure 3.

The delineation and excavation soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were shipped at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Xenco Laboratories (Xenco) in Midland, Texas, for analysis of for analysis of BTEX following United States Environmental Protection Agency (USEPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following USEPA Method 8015M/D; and chloride following USEPA Method 300.0. Photographic documentation was conducted during the Site visits. Photographs are included in Attachment 3.

The excavation measured approximately 400 square feet in area and was completed to a depth of 5 feet bgs. A total of approximately 80 cubic yards of impacted soil were removed from the excavations. The impacted soil was transported and properly disposed of at the R360 Landfill located in Hobbs, New Mexico.

#### ANALYTICAL RESULTS

Laboratory analytical results for the delineation soil samples, collected from potholes PH02 through PH06, indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Laboratory analytical results indicated that TPH and/or GRO/DRO concentrations exceeded the Closure Criteria in delineation soil samples PH01 and PH01A,



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collected at depths of 1 foot and 3 feet bgs, respectively. Subsequent delineation sample PH01B, collected at 5 feet bgs, was compliant with the Closure Criteria.

Impacted soil was excavated from the area around pothole PH01. Laboratory analytical results for excavation soil samples SW01, SW02, FS01, and FS02 indicated that BTEX, GRP/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Based on the laboratory analytical results for the delineation and excavation soil samples, no further remediation was required. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Attachment 4.

# **CLOSURE REQUEST**

Site assessment and soil sampling activities were completed within the release area, to assess for soil impacts resulting from the July 25, 2018, release of crude oil and produced water at the Site. Based on field screening activities and soil sample laboratory analytical results from the site assessment activities, impacted soil was excavated. Laboratory analytical results for the excavation soil samples indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria, and no further remediation was required.

The majority of the release was recovered during initial response activities. Initial response efforts, natural attenuation, and excavation of impacted soil have mitigated impacts at this Site. XTO requests no further action for RP Number 2RP-4915. XTO backfilled the excavation with material purchased locally and recontoured the Site to match pre-existing site conditions. An updated NMOCD Form C-141 is included in Attachment 1.

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

Sincerely,

LT ENVIRONMENTAL, INC.

Sinée Cole

Aimee Cole Project Environmental Scientist

cc: Kyle Littrell, XTO Ryan Mann, State Land Office Mike Bratcher, NMOCD

Ushley L. Ager

Ashley L. Ager, P.G. Senior Geologist

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Attachments:

Figure 1 Site Location Map

Figure 2 Delineation Soil Sample Locations

Figure 3 Excavation Soil Sample Locations

Table 1Soil Analytical Results

Attachment 1 Initial/Final NMOCD Form C-141 (2RP-4915)

Attachment 2 Lithologic / Soil Sample Logs

Attachment 3 Photographic Log

Attachment 4 Laboratory Analytical Reports

# FIGURES





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P:XTO Energy/GIS/MXD/012918162\_THRILLER BWL\_FEDERAL 001H\_4915/012918162\_FIG01\_RECEPTOR\_SL\_2020.mxd





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# TABLES



# TABLE 1 SOIL ANALYTICAL RESULTS

# THRILLER BWL FEDERAL 001H REMEDIATION PERMIT NUMBER 2RP-4915 EDDY COUNTY, NEW MEXICO XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl- benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD	Table 1 Closur	e Criteria	10	NE	NE	NE	50	NE	NE	NE	1,000	2,500	10,000
PH01	1	02/27/2020	<0.00500	0.424	1.63	9.23	11.3	2,310	16,400	1,740	18,700	20,500	41.7
PH01A	3	02/27/2020	<0.00500	0.00950	0.0705	0.408	0.488	115	1,990	151	2,110	2,260	129
PH01B	5	02/27/2020	<0.00500	<0.00500	<0.00500	0.0850	0.0850	<49.8	<49.8	<49.8	<49.8	<49.8	70.0
PH02	1	02/27/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.1	166	<50.1	166	166	59.1
PH02A	3	02/27/2020	<0.00200	<0.00200	0.0112	0.0407	0.0519	<50.1	479	<50.1	479	479	223
PH02B	5	02/27/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	1,440
PH03	1	02/27/2020	<0.00199	<0.00199	<0.00199	0.00538	0.00538	<50.0	458	<50.0	458	458	827
PH03A	3	02/27/2020	<0.00200	<0.00200	<0.00200	0.0161	0.0161	<50.0	<50.0	<50.0	<50.0	<50.0	729
PH03B	5	02/27/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	1,580
PH04	1.5	02/27/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	<49.9	46.8
PH04A	3	02/27/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	67.8	<50.0	67.8	67.8	43.1
PH04B	5	02/27/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.9	252	<49.9	252	252	597
PH05	1	02/27/2020	<0.00250	<0.00250	0.0181	0.180	0.198	<50.1	697	71.2	697	768	95.7
PH05A	3	02/27/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	73.1	<50.2	73.1	73.1	63.4
PH05B	5	02/27/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	95.7	<49.9	95.7	95.7	56.1
PH06	1	02/28/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	59.1
PH06A	3	02/28/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	10.7
PH06B	5	02/28/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	36.3

# TABLE 1 SOIL ANALYTICAL RESULTS

## THRILLER BWL FEDERAL 001H REMEDIATION PERMIT NUMBER 2RP-4915 EDDY COUNTY, NEW MEXICO XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl- benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD	Table 1 Closur	e Criteria	10	NE	NE	NE	50	NE	NE	NE	1,000	2,500	10,000
FS01	5	02/28/2020	<0.00200	<0.00200	<0.00200	0.0101	0.0101	<50.1	<50.1	<50.1	<50.1	<50.1	506
FS02	5	02/28/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.0	<50.0	<50.0	<50.0	<50.0	734
SW01	0 - 5	02/28/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	79.1	<50.1	79.1	79.1	514
SW02	0 - 5	02/28/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.1	64.0	<50.1	64.0	64.0	33.4

Notes:

bgs - below ground surface

BTEX - benzene, toluene, ethylbenzene, and total xylenes

DRO - diesel range organics

GRO - gasoline range organics

mg/kg - milligrams per kilogram

ORO - motor oil range organics NMAC - New Mexico Administrative Code NMOCD - New Mexico Oil Conservation Division NE - not established

TPH - total petroleum hydrocarbons

Bold - indicates result exceeds the applicable regulatory standard

< - indicates result is below laboratory reporting limits

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



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Received by OCD: 4/8/2020 3:38:21 PM		OCD Rec'd:08/08/	18 Page 14 of 120
1625 N. French Dr., Hobbs, NM 88240	f New Mexico s and Natural Resource	5	Form C-141 Revised April 3, 2017
District III Oil Cons	ervation Division	Submit 1 Copy t	to appropriate District Office in
1000 Rio Brazos Road, Aztec, NM 874101220 SouDistrict IV1220 Sou	th St. Francis Dr.	acc	ordance with 19.15.29 NMAC.
1220 S. St. Francis Dr., Santa Fe, NM 87505 Santa	Fe, NM 87505		
Release Notificati	on and Corrective	Action	
	OPERATOR	🛛 Initia	Report 🗌 Final Report
Name of Company: XTO Energy OGRID: 5380	Contact: Kyle Littrell	1.6001	
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220 Facility Name: Thriller BWL Federal 001H	Telephone No: 432-22 Facility Type: Explora		
			20.015.42000
Surface Owner: Federal Mineral Owne	State land. See attach	ed email. API No:	30-015-43909
	ON OF RELEASE	East/Wast Line	Country
Unit LetterSectionTownshipRangeFeet from theNorP3025S29E354Sou	th/South LineFeet from theth660		County Eddy
Surface location of release is in Unit A, Sec 32, T255, R29E Latitude 32.093055 I	<b>.ongitude</b> 103.998609	NAD83	
	E OF RELEASE		
Type of Release	Volume of Release	Volume R	
Oil and produced water Source of Release	51bbl produced water, 3 Date and Hour of Occur		luced water, 3bbl oil Hour of Discovery
Flow line	7/25/2018, AM	7/25/2018,	
Was Immediate Notice Given?	If YES, To Whom? Mike Bratcher and Mari	a Pruett (NMOCD), Jim	Amos and Shelly Tucker
	(BLM), Ryan Mann (SL	.0)	
By Whom? Jake Foust Was a Watercourse Reached?	Date and Hour: 7/26/20 If YES, Volume Impact		
$\square Yes \boxtimes No$	N/A	ing the watercourse.	5
If a Watercourse was Impacted, Describe Fully.*			
N/A			
Describe Cause of Problem and Remedial Action Taken.* Release was from a flex pipe flowline rubbing and flexing against a roc damage.	k. The flowline was repaired	and is scheduled to be b	puried to prevent further
Describe Area Affected and Cleanup Action Taken.* Fluid impacted pad surface, flowing south toward the center of the loca	tion All fluid stored on red.	and there uses no impost	to the posture. Vecuum trucks
were dispatched and recovered 50bbl of standing fluid. An environmen			
I hereby certify that the information given above is true and complete to			
regulations all operators are required to report and/or file certain release public health or the environment. The acceptance of a C-141 report by			
should their operations have failed to adequately investigate and remed	iate contamination that pose a	a threat to ground water,	surface water, human health
or the environment. In addition, NMOCD acceptance of a C-141 report federal, state, or local laws and/or regulations.	does not relieve the operator	r of responsibility for co	mpliance with any other
batt	OIL CO	<b>DNSERVATION</b>	DIVISION
Signature Defiliet			
	Approved by Environment	al Specialist: Maria P	ruott
Printed Name: Kyle Littrell			
Title: Environmental Coordinator	Approval Date: 08/11/18	B Expiration I	Date: N/A
E-mail Address: Kyle_Littrell@xtoenergy.com	Conditions of Approval:		Attached
Date: 08-03-18 Phone: 432-221-7331	Confirm location		2RP-4915
* Attach Additional Sheets If Necessary			

A#: pMAP1822341664 I#: nMAP1822341832

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### Littrell, Kyle

From:	Ruth, Amy
Sent:	Monday, August 13, 2018 5:14 PM
То:	Pruett, Maria, EMNRD; Bratcher, Mike, EMNRD; Mann, Ryan; Jim Amos; Tucker, Shelly (stucker@blm.gov)
Cc:	Littrell, Kyle; Sanders, Toady; McSpadden, Wes; Foust, Bryan
Subject:	RE: 2RP-4915 Initial C-141 - Thriller BWL Federal 1H (API 30-015-43909)

Good afternoon, Ms. Pruett,

Per our conversation this afternoon, we are confirming that the referenced release point occurred at the provided GPS coordinates (32.093055 N, -103.998609 W), though the released fluids came from the referenced well and API.

Again, please call me with any questions and have a good week.

Respectfully,

Amy C· Ruth Delaware Basin Division Environmental Coordinator 3104 E. Greene Street | Carlsbad, NM 88220 | M: 432.661.0571 | O: 575.689.3380



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From: Pruett, Maria, EMNRD [mailto:Maria.Pruett@state.nm.us]
Sent: Saturday, August 11, 2018 11:46 AM
To: Ruth, Amy; Bratcher, Mike, EMNRD; Mann, Ryan; Jim Amos; Tucker, Shelly (stucker@blm.gov)
Cc: Littrell, Kyle; Sanders, Toady; McSpadden, Wes; Foust, Bryan
Subject: 2RP-4915 Initial C-141 - Thriller BWL Federal 1H (API 30-015-43909)

Hello Ms. Ruth,

OCD has received your initial C-141, thank you! This has been assigned:2RP-4915.

Note there is an action item: this permit will expire Tuesday, August 14 without confirmation of location. Please let me know if you have any questions.

Best Regards,

Maria Pruett

**Environmental Specialist** 

N.M. Oil Conservation Division District 2 811 S. 1<sup>st</sup> Street Artesia, NM 88210 Desk: 575 748-1283 X 101 Cell: 575 840-5963 Fax: 575748-9720

From: Ruth, Amy <Amy\_Ruth@xtoenergy.com>
Sent: Wednesday, August 8, 2018 1:38 PM
To: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Pruett, Maria, EMNRD <Maria.Pruett@state.nm.us>; Mann,
Ryan <rmann@slo.state.nm.us>; Jim Amos <jamos@blm.gov>; Tucker, Shelly (stucker@blm.gov) <stucker@blm.gov>
Cc: Littrell, Kyle <Kyle\_Littrell@xtoenergy.com>; Sanders, Toady <Toady\_Sanders@xtoenergy.com>; McSpadden, Wes
<Wes\_McSpadden@xtoenergy.com>; Foust, Bryan <Bryan\_Foust@xtoenergy.com>
Subject: Initial C-141 - Thriller BWL Federal 1H (API 30-015-43909)

Good Afternoon,

Attached is the initial form C-141 detailing the release from the referenced facility. Please call us with any questions or concerns. Thank you.

Respectfully,

Amy C· Ruth Delaware Basin Division

Environmental Coordinator 3104 E. Greene Street | Carlsbad, NM 88220 | M: 432.661.0571 | O: 575.689.3380



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#### From: Foust, Bryan

Sent: Thursday, July 26, 2018 1:24 PM
To: Bratcher, Mike, EMNRD; <u>maria.pruett@state.nm.us</u>; Mann, Ryan; Jim Amos; Tucker, Shelly (<u>stucker@blm.gov</u>)
Cc: Littrell, Kyle; Ruth, Amy; Sanders, Toady; McSpadden, Wes
Subject: Release notification - Thriller BWL Federal 1H (API 30-015-43909)

Good afternoon, this is sent as notification of a release of fluids in an amount greater than 25 barrels. The associated well is on federal land, but the release originated from a flowline on the pad at the Shocker 32 battery, which is on state land. Details will be provided with an initial form C-141. Please contact us with any questions.

Thank you, Jake Foust XTO Energy 432-266-2663 District I 1625 N. French Dr., Hobbs, NM 88240 District II 811 S. First St., Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505 State of New Mexico Energy Minerals and Natural Resources Department

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised August 24, 2018 Submit to appropriate OCD District office

Incident ID	
District RP	2RP-4915
Facility ID	
Application ID	

# **Release Notification**

# **Responsible Party**

Responsible Party: XTO Energy, Inc	OGRID: 5380
Contact Name: Kyle Littrell	Contact Telephone: (432)-221-7331
Contact email: Kyle_Littrell@xtoenergy.com	Incident #: 2RP-4915
Contact mailing address: 522 W. Mermod, Suite 704 Carlsbad, NM 88220	

# **Location of Release Source**

Latitude <u>N 32.093055</u>

(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Thriller BWL Federal 001H	Site Type: Exploration and Production
Date Release Discovered: 7/25/2018	API# (if applicable): 30-015-43909

Unit Letter	Section	Township	Range	County
А	32	258	29E	Eddy

Surface Owner: State Federal Tribal Private (Name: \_\_\_\_\_

# Nature and Volume of Release

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

Crude Oil	Volume Released (bbls): 3	Volume Recovered (bbls): 3
Produced Water	Volume Released (bbls): 51	Volume Recovered (bbls): 47
	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 Palease		

Cause of Release

The release was a result of a flex pipe flowline rubbing and flexing against a rock. The flowline was repaired and buried.

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Oil	Conservation	Division

Incident ID	
District RP	2RP-4915
Facility ID	
Application ID	

Was this a major	If YES, for what reason(s) does the responsible party consider this a major release?
release as defined by	Release volume was greater than 25 bbls.
19.15.29.7(A) NMAC?	
Yes 🗌 No	
If YES, was immediate ne	otice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
Notice was given by Jake	Foust to Mike Bratcher/Maria Pruett (NMOCD), Jim Amos/Shelly Tucker (BLM), and Ryan Mann (SLO) on
July 26, 2018, at 1:24 PM	I.

# **Initial Response**

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

 $\square$  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:Kyle Littrell	Title: <u>SH&amp;E Supervisor</u>
Signature:	Date: <u>3-23-2020</u>
email: <u>Kyle Littrell@xtoenergy.com</u>	Telephone:432-221-7331
OCD Only	
Received by:	Date:

Incident ID	
District RP	2RP-4915
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>51-100</u> (ft bgs)
Did this release impact groundwater or surface water?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	🗌 Yes 🛛 No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	🗌 Yes 🛛 No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	🗌 Yes 🛛 No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	🗌 Yes 🛛 No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of a wetland?	🗌 Yes 🛛 No
Are the lateral extents of the release overlying a subsurface mine?	🗌 Yes 🛛 No
Are the lateral extents of the release overlying an unstable area such as karst geology?	🗌 Yes 🛛 No
Are the lateral extents of the release within a 100-year floodplain?	🗌 Yes 🛛 No
Did the release impact areas <b>not</b> 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
- $\boxtimes$  Depth to water determination
- Determination of water sources and significant watercourses within <sup>1</sup>/<sub>2</sub>-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.

Page 3

Received by OCD: 4/8/202	3:38:21 PM State of New Mexico			Page 20 of 120
			Incident ID	
Page 4	Oil Conservation Division	n	District RP	2RP-4915
			Facility ID	
			Application ID	
regulations all operators are public health or the environ failed to adequately investig addition, OCD acceptance of and/or regulations. Printed Name: <u>Kyle</u> Signature:	rell@xtoenergy.com	notifications and perform the OCD does not relieve threat to groundwater, s of responsibility for co Title:SH&1 Date:3-2.	n corrective actions for rele e the operator of liability sl urface water, human healt mpliance with any other for <u>E Supervisor</u>	leases which may endanger hould their operations have h or the environment. In ederal, state, or local laws
OCD Only				
Received by:		Date:		

Oil Conservation Division

Incident ID	nMAP1822341832
District RP	2RP-4915
Facility ID	
Application ID	

Page 21 of 120

# 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.

<b><u>Closure Report Attachment Checklist</u></b> : Each of the following it	tems must be included in the closure report.
$\square$ A scaled site and sampling diagram as described in 19.15.29.	1 NMAC
Photographs of the remediated site prior to backfill or photos must be notified 2 days prior to liner inspection)	of the liner integrity if applicable (Note: appropriate OCD District office
Laboratory analyses of final sampling (Note: appropriate OD	C District office must be notified 2 days prior to final sampling)
Description of remediation activities	
and regulations all operators are required to report and/or file certai may endanger public health or the environment. The acceptance of should their operations have failed to adequately investigate and re- human health or the environment. In addition, OCD acceptance of	ations. The responsible party acknowledges they must substantially nditions that existed prior to the release or their final land use in
Printed Name:Kyle Littrell	-
Signature:	Date: <u>3-23-2020</u>
email: <u>Kyle_Littrell@xtoenergy.com</u>	Telephone:432-221-7331
OCD Only	
Received by:	Date:
	of liability should their operations have failed to adequately investigate and water, human health, or the environment nor does not relieve the responsible for regulations.
Closure Approved by: <u>Bradford Billin</u>	Date: 09/14/2021
Printed Name: Bradford Billings	Title:Envi.Spec.A

1	hE	2		<b>LT Envi</b> 508 Wes Carlsbad, N	ronmenta t Stevens	I, Inc. Street		BH or PH Name: PHD Date: 2.27.20
A	proud me	ember	C	Carlsbad, N	lew Mexic	o 88220		Site Name: Thr://er RP or Incident Number: 2RP - 4915 LTE Job Number:
	A provid member of WSP LITHOLOGIC / SOIL SAMPLING LOG Dag: Field Screening: Chloride, PID nents: TD O 5 TD O 5						G	Lagrad But (1. Method: Rockhie
Lat/Lo	Field Screening: Chloride, PID         rents:       TD Q.5         TD Q.5         Sample Depth (ft bgs)       Depth (ft bgs)       M         e.1966       1197       N       PHo1       1       1         e.1966       705       N       PHo1A       3       3         L186       261       N       4       4         e.186       13.4       N       PHb1B       5       5         I       I       I       I       I       I         I       I       I       I       I       I							Hole Diameter: Total Depth: 5'
Comm	ents:		7	nac		'ID	-	
Moisture Content	Chloride (ppm)	Vapor (ppm)			Sample Depth		USCS/Rock Symbol	Lithology/Remarks
PD				P401	1		Cc HE	0-5 Caliche wil sand, white - tan caliche, no stain, odor, m-f, pourly graded -2- increase in caliche size
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D	2186	261	N			4		-4 - increase sand size, postiligraded, medium
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						6		TO@5'
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						+ 9 +		
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٢	1	0	0	LT Envir 508 West Carlsbad, No	onmenta Stevens ew Mexico	<b>I, Inc.</b> Street o 88220			BH or PH Name: pHOZ Site Name: Thriller	Date: 2.27.20
A	proud me	mber							RP or Incident Number: 2 K	2P-4915
of	WSP						~		LTE Job Number: Logged By: SL	Mathadi P 11
		LITHO	DLOG	IC / SOIL			G		Logged By: 52 Hole Diameter:	Method: Backbe
_at/Lon	ig:				Field Scree Chloride, P				Hole Diameter.	5'
Comme	ents:			TDC	~ /					
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol		Lith	ology/Remarks
D	c186	56.5	2	phor	1		SP			e, tan, brown, odor, no strin, raded, ton callche
ь	6896	16.6	2	рногд	3	3		-4-	increase caliche,	White - fan
D	1651	11.4	N	рно ЗА	5	5			TDO	2 5'
1 ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (						6 - 7 - 7				
						8 - 8 - 9 - 9				
										*
						T 12				

٢	4F	2		<b>LT Envi</b> 508 Wes Carlsbad, N	r <b>onmenta</b> t Stevens lew Mexic	<b>I, Inc.</b> Street o 88220			BH or PH Name: PHO 3 Site Name: The iller	Date: 2 · 2 7 · 20
A	proud m	ember							RP or Incident Number: 21	20-4915
	mon					mar	20		LTE Job Number:	had a state
	Chloride, PID       Chloride, PID       TD @ $S'$ annus:     TD @ $S'$ Openth (ft bgs)       Depth (ft bgs)     Depth (ft bgs)       Coloride, PID     Depth (ft bgs)       Chloride, PID     Depth (ft bgs)       Cuburide     Depth (ft bgs)       Coloride     Coloride       Coloride     Coloride       Coloride     Coloride       Coloride     Coloride       Coloride     Coloride       Coloride     Coloride       Coloride<						DG		Logged By: SL Hole Diameter:	Method: Backhoe
Lat/Lor	ıg:								Hole Diameter:	Total Depth: 5'
Comme	ents:		-	-				100		
- 1			-		15 6	-				
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth	Depin	USCS/Rock Symbol		Lith	ology/Remarks
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D	1483	3.5	2	8403B	5	Ē			increase in s	ano
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					-	7				
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						Ŧ				
						12			No.	

1	11E	0		<b>LT Envir</b> 508 West Carlsbad, N	onmenta Stevens	<b>I, Inc.</b> Street			BH or PH Name:	Date: 2.27.20
	proud me	mber	C	Carlsbad, N	ew Mexic	o 88220			Site Name: Thriller RP or Incident Number:	2RP- 4915
of	WSP				1.			1.1	LTE Job Number:	
		LITHO	DLOG	IC / SOII			)G		Logged By: SL	Method: Backbe
at/Lon	ng:				Field Scree Chloride, F				Hole Diameter:	Total Depth: 5",
Comme	ents:			TD		10				
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol		Lit	hology/Remarks
D	e.89b	4.7	S	рНач	1.5		CAHÉ	0- j Ca	liche, tan-wh	iste, odor, no stain, wl , poorly graded
D	2896	8:6	4	рНочА	3	3				
D	2896	<b>51.1</b> c	2	PH04B	5	4			th a C(	
						- 6 - 7		40	DC5'	
						* * * *				
						9 10				
						+ 11 + 12				

1	he	0		LT Envir	ronmenta t Stevens	I, Inc. Street		BH or PH Name: RH 05	Date: 2 - 27 - 20	
4	proud me	ember	C	Carlsbad, N	lew Mexic	0 88220		Site Name: Thriller RP or Incident Number:	2RP-4915	
of	WSP				here		1.5	LTE Job Number:		
	Chloride, PID       hents:       ID $@ 5'$ Sample       Depth     Depth       (fbgs)     Image: Chloride, PID       Depth     Image: Chloride, PID       Image: Chloride, PID     Image: Chloride, PID <th chloride,<="" image:="" th=""><th>G</th><th>Logged By: 5L</th><th>Method: Backhal</th></th>						<th>G</th> <th>Logged By: 5L</th> <th>Method: Backhal</th>	G	Logged By: 5L	Method: Backhal
at/Lon	g:		vi.					Hole Diameter:	Total Depth: 51	
Comme	ents:		Th	051	Chloride, P	UD				
-			19				×			
Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth	Depui	USCS/Rock Symbol	Lith	hology/Remarks	
	n i					0		0-5		
Ø	2896	121	2	pH05	1 -	1		Caliche w/ sar	nd, no stain, odor, white-ta -f, brown-tan sand	
						2	Cette	poorly graded, m	T) or own - Jun sand	
2	2789 b	47.6	N	PH05A	3	3				
						4				
D	2896	46.8	2	PH05B	5	5				
-						+		TO C 5'		
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						* 8				
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						10				
						Ŧ				
		10				I 11 I				
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1	he	2		<b>LT Env</b> 508 Wes Carlsbad, I	ronmenta st Stevens	al, Inc. Street		BH or PH Name:         Date:           PH06         2.28.20	
C				Carlsbad, I	Vew Mexic	0 88220	)	Site Name: Thr iller	
A	proud m f WSP	ember						RP or Incident Number: 2RP - 4915	
	a straine and							LTE Job Number:	
		LITH	OLOG	GIC / SOI			DG	Logged By: SL Method: TFack hoe	
Lat/Lo	ng:	1 2.4			Field Scree		- C. 2	Hole Diameter: Total Depth: 5'	
Comm	ente.	-	~		Chloride, I	PID			
Comm	ents.		TD	05	/				
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks	
A	1896	2.1	η	b floe				0-5 Calicher W/sand, tan, brown, no odor, no	
						-	cute	Calichep wlsand, tan, brown, no odor, ho stain, c-m, poorly graded	
D	2896	6.1	2	рН064	3	3	((1))		
٥	2896	2.4	2	pH06B	5	- 4 - 4			
B						5			
					-	- 6 - 6		TDe 5'	
						7			
						8			
						- 10			
						11			
					-	12			



#### PHOTOGRAPHIC LOG



Photograph 1: West facing view of the release area.



Photograph 3: West facing view of open excavation.



Photograph 2: South facing view of the release area.



Photograph 4: West facing view of open excavation.

Thriller BWL Federal 001H Eddy County, New Mexico Photographs Taken: February 2020

Page 1 of 2



. Released to Imaging: 9/14/2021 10:39:59 AM

#### PHOTOGRAPHIC LOG



Photograph 5: View of backfilled excavation.



**Photograph 6:** View of backfilled excavation.





# **Analytical Report 654041**

for

# LT Environmental, Inc.

**Project Manager: Dan Moir** 

# Thriller

# 012918162

# 03.02.2020

Collected By: Client

1089 N Canal Street Carlsbad, NM 88220

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

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

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



03.02.2020

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

Reference: XENCO Report No(s): 654041 Thriller 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) 654041. 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. 654041 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,

fession kenner

Jessica Kramer Project Assistant

A Small Business and Minority Company

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



# Sample Cross Reference 654041

# LT Environmental, Inc., Arvada, CO

Thriller

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH01	S	02.27.2020 12:20	1 ft	654041-001
PH01A	S	02.27.2020 12:40	3 ft	654041-002
PH01B	S	02.27.2020 13:00	5 ft	654041-003
PH02	S	02.27.2020 13:10	1 ft	654041-004
PH02A	S	02.27.2020 13:20	3 ft	654041-005
PH02B	S	02.27.2020 13:30	5 ft	654041-006
PH03	S	02.27.2020 13:40	1 ft	654041-007
PH03A	S	02.27.2020 13:50	3 ft	654041-008
PH03B	S	02.27.2020 14:00	5 ft	654041-009
PH04	S	02.27.2020 14:10	1.5 ft	654041-010
PH04A	S	02.27.2020 14:20	3 ft	654041-011
PH04B	S	02.27.2020 14:35	5 ft	654041-012
PH05	S	02.27.2020 15:00	1 ft	654041-013
PH05A	S	02.27.2020 15:15	3 ft	654041-014
PH05B	S	02.27.2020 15:30	5 ft	654041-015



# **CASE NARRATIVE**

Client Name: LT Environmental, Inc. Project Name: Thriller

 Project ID:
 012918162

 Work Order Number(s):
 654041

 Report Date:
 03.02.2020

 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-3118140 BTEX by EPA 8021B Soil samples were not received in Terracore kits and therefore were prepared by method 5030.


**Project Id:** 012918162

Contact: Dan Moir

**Project Location:** 

## Certificate of Analysis Summary 654041

LT Environmental, Inc., Arvada, CO

**Project Name: Thriller** 

 Date Received in Lab:
 Fri 02.28.2020 08:35

 Report Date:
 03.02.2020 12:22

Project Manager: Jessica Kramer

	Lab Id:	654041-0	001	654041-0	002	654041-0	003	654041-	004	654041-0	005	654041-0	06
Analysis Requested	Field Id:	PH01	l	PH01.	A	PH01B		PH02		PH02A		PH02B	
Analysis Requested	Depth:	1- ft		3- ft		5- ft		1- ft		3- ft		5- ft	
	Matrix:	SOIL		SOIL	,	SOIL		SOIL		SOIL	,	SOIL	
	Sampled:	02.27.2020	12:20	02.27.2020	12:40	02.27.2020	13:00	02.27.2020	13:10	02.27.2020	13:20	02.27.2020	13:30
BTEX by EPA 8021B	Extracted:	02.28.2020	10:34	02.28.2020	10:34	02.28.2020	10:34	02.28.2020	10:34	02.28.2020	10:34	02.28.2020	10:34
	Analyzed:	02.28.2020	13:12	02.28.2020	13:32	02.28.2020	13:52	02.28.2020	14:13	02.28.2020	14:33	02.29.2020	07:33
	Units/RL:	mg/kg	RL										
Benzene		< 0.00500	0.00500	< 0.00500	0.00500	< 0.00500	0.00500	< 0.00199	0.00199	< 0.00200	0.00200	< 0.00199	0.00199
Toluene		0.424	0.0200	0.00950	0.00500	< 0.00500	0.00500	< 0.00199	0.00199	< 0.00200	0.00200	< 0.00199	0.00199
Ethylbenzene		1.63	0.0200	0.0705	0.0200	< 0.00500	0.00500	< 0.00199	0.00199	0.0112	0.00200	< 0.00199	0.00199
m,p-Xylenes		5.34	0.0400	0.169	0.0400	0.0590	0.0400	< 0.00398	0.00398	0.0203	0.00400	< 0.00398	0.00398
o-Xylene		3.89	0.0200	0.239	0.0200	0.0260	0.0200	< 0.00199	0.00199	0.0204	0.00200	< 0.00199	0.00199
Total Xylenes		9.23	0.0200	0.408	0.0200	0.0850	0.0200	< 0.00199	0.00199	0.0407	0.00200	< 0.00199	0.00199
Total BTEX		11.3	0.00500	0.488	0.00500	0.0850	0.00500	< 0.00199	0.00199	0.0519	0.00200	< 0.00199	0.00199
Chloride by EPA 300	Extracted:	02.28.2020	10:30	02.28.2020	10:30	02.28.2020	10:30	02.28.2020	10:30	02.28.2020	10:30	02.28.2020	10:30
	Analyzed:	02.28.2020	10:56	02.28.2020	11:13	02.28.2020	11:19	02.28.2020	11:25	02.28.2020	11:30	02.28.2020	11:47
	Units/RL:	mg/kg	RL										
Chloride		41.7	9.98	129	50.3	70.0	10.1	59.1	9.98	223	9.98	1440	49.6
TPH by SW8015 Mod	Extracted:	02.28.2020	10:00	02.28.2020	10:00	02.28.2020	10:00	02.28.2020	10:00	02.28.2020	10:00	02.28.2020	10:00
	Analyzed:	03.02.2020	10:48	02.28.2020	15:11	02.28.2020	13:51	02.28.2020	14:11	02.28.2020	14:11	02.28.2020	14:31
	Units/RL:	mg/kg	RL										
Gasoline Range Hydrocarbons (GRO)		2310	250	115	50.0	<49.8	49.8	<50.1	50.1	<50.1	50.1	<50.0	50.0
Diesel Range Organics (DRO)		16400	250	1990	50.0	<49.8	49.8	166	50.1	479	50.1	<50.0	50.0
Motor Oil Range Hydrocarbons (MRO)		1740	250	151	50.0	<49.8	49.8	<50.1	50.1	<50.1	50.1	<50.0	50.0
Total GRO-DRO		18700	250	2110	50.0	<49.8	49.8	166	50.1	479	50.1	<50.0	50.0
Total TPH		20500	250	2260	50.0	<49.8	49.8	166	50.1	479	50.1	<50.0	50.0

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

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

Page 5 of 43

Final 1.000



**Project Id:** 012918162

Contact: Dan Moir

**Project Location:** 

Certificate of Analysis Summary 654041

LT Environmental, Inc., Arvada, CO

**Project Name: Thriller** 

 Date Received in Lab:
 Fri 02.28.2020 08:35

 Report Date:
 03.02.2020 12:22

Project Manager: Jessica Kramer

	Lab Id:	654041-	007	654041-0	008	654041-0	009	654041-	010	654041-0	011	654041-0	)12
Analysis Requested	Field Id:	PH03	3	PH03.	A	PH03B		PH04		PH04A		PH04B	
Analysis Requested	Depth:	1- ft		3- ft		5- ft		1.5- f	t	3- ft		5- ft	
	Matrix:	SOIL		SOIL	,	SOIL	,	SOIL		SOIL		SOIL	
	Sampled:	02.27.2020	13:40	02.27.2020	13:50	02.27.2020	14:00	02.27.2020	14:10	02.27.2020	14:20	02.27.2020	14:35
BTEX by EPA 8021B	Extracted:	02.28.2020	10:34	02.28.2020	10:34	02.28.2020	10:34	02.28.2020	10:34	02.28.2020	10:34	02.28.2020	10:34
	Analyzed:	02.28.2020	15:14	02.28.2020	15:34	02.28.2020	15:55	02.28.2020	17:37	02.28.2020	17:57	02.28.2020	18:18
	Units/RL:	mg/kg	RL										
Benzene		< 0.00199	0.00199	< 0.00200	0.00200	< 0.00200	0.00200	< 0.00198	0.00198	<0.00200	0.00200	< 0.00199	0.00199
Toluene		< 0.00199	0.00199	< 0.00200	0.00200	< 0.00200	0.00200	< 0.00198	0.00198	<0.00200	0.00200	< 0.00199	0.00199
Ethylbenzene		< 0.00199	0.00199	< 0.00200	0.00200	< 0.00200	0.00200	< 0.00198	0.00198	<0.00200	0.00200	< 0.00199	0.00199
m,p-Xylenes		< 0.00398	0.00398	0.0161	0.00399	< 0.00399	0.00399	< 0.00397	0.00397	< 0.00400	0.00400	< 0.00398	0.00398
o-Xylene		0.00538	0.00199	< 0.00200	0.00200	< 0.00200	0.00200	< 0.00198	0.00198	<0.00200	0.00200	< 0.00199	0.00199
Total Xylenes		0.00538	0.00199	0.0161	0.00200	< 0.00200	0.00200	< 0.00198	0.00198	<0.00200	0.00200	< 0.00199	0.00199
Total BTEX		0.00538	0.00199	0.0161	0.00200	< 0.00200	0.00200	< 0.00198	0.00198	<0.00200	0.00200	< 0.00199	0.00199
Chloride by EPA 300	Extracted:	02.28.2020	10:30	02.28.2020	10:30	02.28.2020	10:30	02.28.2020	10:30	02.28.2020	10:30	02.28.2020	10:30
	Analyzed:	02.28.2020	11:53	02.28.2020	11:59	02.28.2020	12:04	02.28.2020	12:10	02.28.2020	12:16	02.28.2020	12:33
	Units/RL:	mg/kg	RL										
Chloride		827	50.4	729	49.7	1580	50.1	46.8	10.1	43.1	9.92	597	49.8
TPH by SW8015 Mod	Extracted:	02.28.2020	10:00	02.28.2020	10:00	02.28.2020	10:00	02.28.2020	10:00	02.28.2020	10:00	02.28.2020	10:00
	Analyzed:	02.28.2020	14:31	02.28.2020	14:51	02.28.2020	14:51	02.28.2020	16:20	02.28.2020	16:20	02.28.2020	16:40
	Units/RL:	mg/kg	RL										
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<50.0	50.0	<49.8	49.8	<49.9	49.9	<50.0	50.0	<49.9	49.9
Diesel Range Organics (DRO)		458	50.0	<50.0	50.0	<49.8	49.8	<49.9	49.9	67.8	50.0	252	49.9
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<50.0	50.0	<49.8	49.8	<49.9	49.9	<50.0	50.0	<49.9	49.9
Total GRO-DRO		458	50.0	<50.0	50.0	<49.8	49.8	<49.9	49.9	67.8	50.0	252	49.9
Total TPH		458	50.0	<50.0	50.0	<49.8	49.8	<49.9	49.9	67.8	50.0	252	49.9

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

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Jessica Kramer Project Assistant

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**Project Id:** 012918162

Dan Moir **Contact:** 

**Project Location:** 

Certificate of Analysis Summary 654041

LT Environmental, Inc., Arvada, CO

**Project Name: Thriller** 

Date Received in Lab: Fri 02.28.2020 08:35 **Report Date:** 03.02.2020 12:22

Project Manager: Jessica Kramer

	Lab Id:	654041-	013	654041-0	014	654041-0	)15		
Analysis Requested	Field Id:	PH05	5	PH054	4	PH05B			
Analysis Requested	Depth:	1- ft		3- ft		5- ft			
	Matrix:	SOIL		SOIL		SOIL			
	Sampled:	02.27.2020	15:00	02.27.2020	15:15	02.27.2020	15:30		
BTEX by EPA 8021B	Extracted:	02.28.2020	10:34	02.28.2020	10:34	02.28.2020	10:34		
	Analyzed:	02.28.2020	18:38	02.28.2020	18:58	02.28.2020	16:15		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzene		< 0.00250	0.00250	< 0.00200	0.00200	< 0.00200	0.00200		
Toluene		< 0.00250	0.00250	< 0.00200	0.00200	< 0.00200	0.00200		
Ethylbenzene		0.0181	0.0100	< 0.00200	0.00200	< 0.00200	0.00200		
m,p-Xylenes		0.107	0.0200	< 0.00400	0.00400	< 0.00401	0.00401		
o-Xylene		0.0729	0.0100	< 0.00200	0.00200	< 0.00200	0.00200		
Total Xylenes		0.180	0.0100	< 0.00200	0.00200	< 0.00200	0.00200		
Total BTEX		0.198	0.00250	< 0.00200	0.00200	< 0.00200	0.00200		
Chloride by EPA 300	Extracted:	02.28.2020	10:30	02.28.2020	10:30	02.28.2020	10:30		
	Analyzed:	02.28.2020	12:39	02.28.2020	12:56	02.28.2020	13:01		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		95.7	49.9	63.4	50.1	56.1	9.94		
TPH by SW8015 Mod	Extracted:	02.28.2020	10:00	02.28.2020	10:00	02.28.2020	10:00		
	Analyzed:	02.28.2020	16:40	02.28.2020	17:00	02.28.2020	13:31		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)		<50.1	50.1	<50.2	50.2	<49.9	49.9		
Diesel Range Organics (DRO)		697	50.1	73.1	50.2	95.7	49.9		
Motor Oil Range Hydrocarbons (MRO)		71.2	50.1	<50.2	50.2	<49.9	49.9		
Total GRO-DRO		697	50.1	73.1	50.2	95.7	49.9		
Total TPH		768	50.1	73.1	50.2	95.7	49.9		

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

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Jessica Kramer Project Assistant

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# **Certificate of Analytical Results 654041**

## LT Environmental, Inc., Arvada, CO

Thriller

Sample Id: <b>PH01</b> Lab Sample Id: 654041-001		Matrix: Date Collec	Soil eted: 02.27.2020 12:20		Date Received:02 Sample Depth: 1		:35
Analytical Method: Chloride by EPA	A 300				Prep Method: E	300P	
Tech: MAB					% Moisture:		
Analyst: MAB		Date Prep:	02.28.2020 10:30		Basis: W	Vet Weight	
Seq Number: 3118156		Ĩ					
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	41.7	9.98	mg/kg	02.28.2020 10:50	6	1
Analytical Method:TPH by SW8015Tech:MABAnalyst:CACSeq Number:3118137	5 Mod	Date Prep:	02.28.2020 10:00		Prep Method: S % Moisture: Basis: W	W8015P Vet Weight	
Tech: MAB Analyst: CAC	5 Mod Cas Number	ľ	02.28.2020 10:00 RL	Units	% Moisture:	Vet Weight	Dil
Tech: MAB Analyst: CAC Seq Number: 3118137		ľ		Units mg/kg	% Moisture: Basis: W	Vet Weight Flag	<b>Dil</b> 5
Tech: MAB Analyst: CAC Seq Number: 3118137 Parameter	Cas Number	Result 1	RL		% Moisture: Basis: W Analysis Date	Vet Weight Flag 8	
Tech: MAB Analyst: CAC Seq Number: 3118137 Parameter Gasoline Range Hydrocarbons (GRO)	Cas Number PHC610	Result J 2310	<b>RL</b> 250	mg/kg	% Moisture: Basis: W Analysis Date 03.02.2020 10:44	Vet Weight Flag 8 8	5
Tech: MAB Analyst: CAC Seq Number: 3118137 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO)	Cas Number PHC610 C10C28DRO	Result 1 2310 16400	<b>RL</b> 250 250	mg/kg mg/kg	% Moisture: Basis: W Analysis Date 03.02.2020 10:44 03.02.2020 10:44	Vet Weight Flag 8 8 8	5 5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	132	%	70-135	03.02.2020 10:48	
o-Terphenyl	84-15-1	129	%	70-135	03.02.2020 10:48	



# **Certificate of Analytical Results 654041**

## LT Environmental, Inc., Arvada, CO

Thriller

Sample Id: Lab Sample I	<b>PH01</b> d: 654041-001		Matrix: Date Collected	Soil d: 02.27.2020 12:20	Date Receive Sample Deptl	d:02.28.2020 08: h: 1 ft	35
Analytical M Tech:	ethod: BTEX by EPA 80 MAB	21B			Prep Method: % Moisture:	SW5030B	
Analyst:	MAB		Date Prep:	02.28.2020 10:34	Basis:	Wet Weight	
Seq Number:	3118140						
Donomotor		Cas Number	Docult DI	T	4- A	Flag	Dil

Parameter	Cas Numbe	er Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00500	0.00500		mg/kg	02.28.2020 13:12	U	1
Toluene	108-88-3	0.424	0.0200		mg/kg	02.28.2020 13:12		1
Ethylbenzene	100-41-4	1.63	0.0200		mg/kg	02.28.2020 13:12		1
m,p-Xylenes	179601-23-1	5.34	0.0400		mg/kg	02.28.2020 13:12		1
o-Xylene	95-47-6	3.89	0.0200		mg/kg	02.28.2020 13:12		1
Total Xylenes	1330-20-7	9.23	0.0200		mg/kg	02.28.2020 13:12		1
Total BTEX		11.3	0.00500		mg/kg	02.28.2020 13:12		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	126	%	70-130	02.28.2020 13:12		
1,4-Difluorobenzene		540-36-3	94	%	70-130	02.28.2020 13:12		



# **Certificate of Analytical Results 654041**

#### LT Environmental, Inc., Arvada, CO

Thriller

Sample Id: <b>PH01A</b> Lab Sample Id:654041-002		Matrix: Date Col	Soil llected: 02.27	.2020 12:40		Date Received:02.2 Sample Depth: 3 ft	28.2020 08	:35
Analytical Method: Chloride by EP.	A 300					Prep Method: E30	0P	
Tech: MAB						% Moisture:		
Analyst: MAB		Date Pre	ep: 02.28	.2020 10:30		Basis: Wet	Weight	
Seq Number: 3118156			1					
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	129	50.3		mg/kg	02.28.2020 11:13		5
Analytical Method:TPH by SW801Tech:MABAnalyst:CACSeq Number:3118137	5 Mod	Date Pre	ep: 02.28	.2020 10:00		Prep Method: SW % Moisture: Basis: Wet	8015P Weight	
Tech: MAB Analyst: CAC	5 Mod Cas Number	Date Pre <b>Result</b>	ep: 02.28 <b>RL</b>	.2020 10:00		% Moisture:		Dil
Tech: MAB Analyst: CAC Seq Number: 3118137			<b>.</b>	.2020 10:00		% Moisture: Basis: Wet	Weight	<b>Dil</b>
Tech: MAB Analyst: CAC Seq Number: 3118137 Parameter	Cas Number	Result	RL	.2020 10:00	Units	<ul> <li>Moisture:</li> <li>Basis: Wet</li> <li>Analysis Date</li> </ul>	Weight	
Tech: MAB Analyst: CAC Seq Number: 3118137 Parameter Gasoline Range Hydrocarbons (GRO)	Cas Number PHC610	Result 115	RL 50.0	.2020 10:00	Units mg/kg	% Moisture: Basis: Wet Analysis Date 02.28.2020 15:11	Weight	1
Tech: MAB Analyst: CAC Seq Number: 3118137 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO)	Cas Number PHC610 C10C28DRO	Result 115 1990	<b>RL</b> 50.0 50.0	.2020 10:00	Units mg/kg mg/kg	% Moisture: Basis: Wet Analysis Date 02.28.2020 15:11 02.28.2020 15:11	Weight	1
Tech: MAB Analyst: CAC Seq Number: 3118137 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) Motor Oil Range Hydrocarbons (MRO)	Cas Number PHC610 C10C28DRO PHCG2835	Result 115 1990 151	RL 50.0 50.0 50.0	.2020 10:00	Units mg/kg mg/kg mg/kg	A         Moisture:           Basis:         Wet           Analysis Date         02.28.2020 15:11           02.28.2020 15:11         02.28.2020 15:11           02.28.2020 15:11         02.28.2020 15:11	Weight	1 1 1
Tech: MAB Analyst: CAC Seq Number: 3118137 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) Motor Oil Range Hydrocarbons (MRO) Total GRO-DRO	Cas Number PHC610 C10C28DRO PHCG2835 PHC628 PHC635	Result 115 1990 151 2110 2260	RL 50.0 50.0 50.0 50.0 50.0	.2020 10:00 Units	Units mg/kg mg/kg mg/kg mg/kg	% Moisture: Basis: Wet 02.28.2020 15:11 02.28.2020 15:11 02.28.2020 15:11 02.28.2020 15:11 02.28.2020 15:11	Weight	1 1 1 1

131

%

70-135

84-15-1

o-Terphenyl

.

02.28.2020 15:11



# **Certificate of Analytical Results 654041**

## LT Environmental, Inc., Arvada, CO

Thriller

Sample Id: <b>P</b> Lab Sample Id: 6	<b>PH01A</b> 554041-002		Matrix: Date Collected	Soil : 02.27.2020 12:40	Date Received Sample Depth	l:02.28.2020 08:3: : 3 ft	5
5	od: BTEX by EPA 8021 IAB	В			Prep Method: % Moisture:	SW5030B	
	IAB		Date Prep:	02.28.2020 10:34	Basis:	Wet Weight	
Seq Number: 31	118140		•				
Parameter		Cas Number	Result DI	Unite	Analysis D	to Elag	Ъ

Parameter	Cas Numbe	er Kesult	KL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00500	0.00500		mg/kg	02.28.2020 13:32	U	1
Toluene	108-88-3	0.00950	0.00500		mg/kg	02.28.2020 13:32		1
Ethylbenzene	100-41-4	0.0705	0.0200		mg/kg	02.28.2020 13:32		1
m,p-Xylenes	179601-23-1	0.169	0.0400		mg/kg	02.28.2020 13:32		1
o-Xylene	95-47-6	0.239	0.0200		mg/kg	02.28.2020 13:32		1
Total Xylenes	1330-20-7	0.408	0.0200		mg/kg	02.28.2020 13:32		1
Total BTEX		0.488	0.00500		mg/kg	02.28.2020 13:32		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	111	%	70-130	02.28.2020 13:32		
1,4-Difluorobenzene		540-36-3	100	%	70-130	02.28.2020 13:32		



# **Certificate of Analytical Results 654041**

## LT Environmental, Inc., Arvada, CO

Thriller

Sample Id: Lab Sample I	<b>PH01B</b> d: 654041-003		Matrix: Date Collect	Soil ed: 02.27.2020 13:00		Date Received: Sample Depth:		:35
Analytical Mo Tech: Analyst: Seq Number:	ethod: Chloride by EPA MAB MAB 3118156	. 300	Date Prep:	02.28.2020 10:30		Prep Method: % Moisture: Basis:	E300P Wet Weight	
Parameter		Cas Number	Result R	L	Units	Analysis Dat	te Flag	Dil
Chloride		16887-00-6	70.0	10.1	mg/kg	02.28.2020 11:	19	1
Analytical Me Tech: Analyst: Seq Number:	ethod: TPH by SW8015 MAB CAC 3118137	Mod	Date Prep:	02.28.2020 10:00		Prep Method: % Moisture: Basis:	SW8015P Wet Weight	

Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
PHC610	<49.8	49.8		mg/kg	02.28.2020 13:51	U	1
C10C28DRO	<49.8	49.8		mg/kg	02.28.2020 13:51	U	1
PHCG2835	<49.8	49.8		mg/kg	02.28.2020 13:51	U	1
PHC628	<49.8	49.8		mg/kg	02.28.2020 13:51	U	1
PHC635	<49.8	49.8		mg/kg	02.28.2020 13:51	U	1
	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
	111-85-3	90	%	70-135	02.28.2020 13:51		
	84-15-1	102	%	70-135	02.28.2020 13:51		
	PHC610 C10C28DRO PHCG2835 PHC628 PHC635	PHC610       <49.8	PHC610         <49.8         49.8           C10C28DRO         <49.8	PHC610     <49.8     49.8       C10C28DRO     <49.8	PHC610         <49.8         49.8         mg/kg           C10C28DRO         <49.8	PHC610         <49.8         49.8         mg/kg         02.28.2020 13:51           C10C28DRO         <49.8	PHC610         <49.8         49.8         mg/kg         02.28.2020 13:51         U           C10C28DRO         <49.8



# **Certificate of Analytical Results 654041**

## LT Environmental, Inc., Arvada, CO

Thriller

Sample Id: Lab Sample Id	Sample Id: <b>PH01B</b> Lab Sample Id:654041-003			Soil d: 02.27.2020 13:00	Date Received:02.28.2020 08 Sample Depth: 5 ft		
2	ethod: BTEX by EPA 802	21B			Prep Method:	SW5030B	
Tech:	MAB				% Moisture:		
Analyst:	MAB		Date Prep:	02.28.2020 10:34	Basis:	Wet Weight	
Seq Number:	3118140						
Denometer		Cas Number	Docult DI	TT -			ЪЧ

Parameter	Cas Numbe	er Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00500	0.00500		mg/kg	02.28.2020 13:52	U	1
Toluene	108-88-3	< 0.00500	0.00500		mg/kg	02.28.2020 13:52	U	1
Ethylbenzene	100-41-4	< 0.00500	0.00500		mg/kg	02.28.2020 13:52	U	1
m,p-Xylenes	179601-23-1	0.0590	0.0400		mg/kg	02.28.2020 13:52		1
o-Xylene	95-47-6	0.0260	0.0200		mg/kg	02.28.2020 13:52		1
Total Xylenes	1330-20-7	0.0850	0.0200		mg/kg	02.28.2020 13:52		1
Total BTEX		0.0850	0.00500		mg/kg	02.28.2020 13:52		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	105	%	70-130	02.28.2020 13:52		
4-Bromofluorobenzene		460-00-4	122	%	70-130	02.28.2020 13:52		



Surrogate

o-Terphenyl

1-Chlorooctane

## **Certificate of Analytical Results 654041**

#### LT Environmental, Inc., Arvada, CO

Thriller

Sample Id: PH02 Lab Sample Id: 654041-004		Matrix: Date Collec	Soil eted: 02.27.2020 13:10		Date Received:02.2 Sample Depth: 1 ft		:35
Analytical Method: Chloride by EP	PA 300				Prep Method: E30		
Tech: MAB					% Moisture:		
Analyst: MAB		Date Prep:	02.28.2020 10:30			t Weight	
Seq Number: 3118156		Date Hep.	02.20.2020 10.50			e worght	
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	59.1	9.98	mg/kg	02.28.2020 11:25		1
Analytical Method: TPH by SW80	15 Mod				Prep Method: SW	/8015P	
Analytical Method: TPH by SW80 Tech: MAB Analyst: CAC Seq Number: 3118137	15 Mod	Date Prep:	02.28.2020 10:00		Prep Method: SW % Moisture: Basis: We	78015P t Weight	
Tech: MAB Analyst: CAC	15 Mod Cas Number	I	02.28.2020 10:00 RL	Units	% Moisture:		Dil
Tech: MAB Analyst: CAC Seq Number: 3118137		I		Units mg/kg	% Moisture: Basis: We	t Weight	<b>Dil</b>
Tech: MAB Analyst: CAC Seq Number: 3118137 Parameter	Cas Number	Result	RL		<ul><li>Moisture:</li><li>Basis: We</li><li>Analysis Date</li></ul>	t Weight Flag	
Tech: MAB Analyst: CAC Seq Number: 3118137 Parameter Gasoline Range Hydrocarbons (GRO)	Cas Number PHC610	Result 50.1	<b>RL</b> 50.1	mg/kg	% Moisture: Basis: We Analysis Date 02.28.2020 14:11	t Weight Flag	
Tech: MAB Analyst: CAC Seq Number: 3118137 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO)	Cas Number PHC610 C10C28DRO	Result 50.1 166	<b>RL</b> 50.1 50.1	mg/kg mg/kg	% Moisture:           Basis:         We           Analysis Date           02.28.2020 14:11           02.28.2020 14:11	t Weight Flag U	1

% Recovery

104

120

Units

%

%

Limits

70-135

70-135

Analysis Date

02.28.2020 14:11

02.28.2020 14:11

Flag

.

Cas Number

111-85-3

84-15-1



# **Certificate of Analytical Results 654041**

## LT Environmental, Inc., Arvada, CO

Sample Id: Lab Sample Id	Sample Id:PH02Lab Sample Id:654041-004			Soil d: 02.27.2020 13:10		Date Received:02.28.2020 08: Sample Depth: 1 ft		
Analytical Me	thod: BTEX by EPA 80	21B			Prep Method	: SW5030B		
Tech:	MAB				% Moisture:			
Analyst:	MAB		Date Prep:	02.28.2020 10:34	Basis:	Wet Weight		
Seq Number:	3118140							
Parameter		Cas Number	Result RI	. 1	Unite Analysis I	)ətə Flan	Dil	

Parameter	Cas Numbe	r Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00199	0.00199		mg/kg	02.28.2020 14:13	U	1
Toluene	108-88-3	< 0.00199	0.00199		mg/kg	02.28.2020 14:13	U	1
Ethylbenzene	100-41-4	< 0.00199	0.00199		mg/kg	02.28.2020 14:13	U	1
m,p-Xylenes	179601-23-1	< 0.00398	0.00398		mg/kg	02.28.2020 14:13	U	1
o-Xylene	95-47-6	< 0.00199	0.00199		mg/kg	02.28.2020 14:13	U	1
Total Xylenes	1330-20-7	< 0.00199	0.00199		mg/kg	02.28.2020 14:13	U	1
Total BTEX		< 0.00199	0.00199		mg/kg	02.28.2020 14:13	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	102	%	70-130	02.28.2020 14:13		
4-Bromofluorobenzene		460-00-4	95	%	70-130	02.28.2020 14:13		



# **Certificate of Analytical Results 654041**

#### LT Environmental, Inc., Arvada, CO

Thriller

Sample Id: <b>PH02A</b> Lab Sample Id: 654041-005		Matrix: Date Collec	Soil cted: 02.27.2020 13:20		Date Received:02.2 Sample Depth: 3 ft		:35
Analytical Method: Chloride by EP	PA 300				Prep Method: E30	)0P	
Tech: MAB					% Moisture:		
Analyst: MAB		Date Prep:	02.28.2020 10:30		Basis: We	t Weight	
Seq Number: 3118156							
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	223	9.98	mg/kg	02.28.2020 11:30		1
Analytical Method: TPH by SW80 Tech: MAB Analyst: CAC Seq Number: 3118137	15 Mod	Date Prep:	02.28.2020 10:00		Prep Method: SW % Moisture: Basis: We	8015P t Weight	
Tech: MAB Analyst: CAC	15 Mod Cas Number	·	02.28.2020 10:00 RL	Units	% Moisture:		Dil
Tech: MAB Analyst: CAC Seq Number: 3118137		·		Units mg/kg	% Moisture: Basis: We	t Weight	<b>Dil</b>
Tech: MAB Analyst: CAC Seq Number: 3118137 Parameter	Cas Number	Result	RL		% Moisture: Basis: We Analysis Date	t Weight Flag	
Tech: MAB Analyst: CAC Seq Number: 3118137 Parameter Gasoline Range Hydrocarbons (GRO)	Cas Number PHC610	Result <50.1	RL 50.1	mg/kg	% Moisture: Basis: We Analysis Date 02.28.2020 14:11	t Weight Flag	
Tech: MAB Analyst: CAC Seq Number: 3118137 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO)	Cas Number PHC610 C10C28DRO	Result <50.1 479	<b>RL</b> 50.1 50.1	mg/kg mg/kg	% Moisture:           Basis:         We           Analysis Date           02.28.2020 14:11           02.28.2020 14:11	t Weight Flag U	1

				8 8		
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	02.28.2020 14:11	
o-Terphenyl	84-15-1	116	%	70-135	02.28.2020 14:11	



# **Certificate of Analytical Results 654041**

## LT Environmental, Inc., Arvada, CO

Sample Id: Lab Sample I	Sample Id: <b>PH02A</b> Lab Sample Id:654041-005			Soil d: 02.27.2020 13:20	Date Receive Sample Depth	:35	
Analytical Mo	ethod: BTEX by EPA 80	21B			Prep Method:	SW5030B	
Tech:	MAB				% Moisture:		
Analyst:	MAB		Date Prep:	02.28.2020 10:34	Basis:	Wet Weight	
Seq Number:	3118140						
Parameter		Cas Number	Result RI	. 1	Unite Analysis D	ata Flag	БіІ

Parameter	Cas Numbe	r Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	02.28.2020 14:33	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	02.28.2020 14:33	U	1
Ethylbenzene	100-41-4	0.0112	0.00200		mg/kg	02.28.2020 14:33		1
m,p-Xylenes	179601-23-1	0.0203	0.00400		mg/kg	02.28.2020 14:33		1
o-Xylene	95-47-6	0.0204	0.00200		mg/kg	02.28.2020 14:33		1
Total Xylenes	1330-20-7	0.0407	0.00200		mg/kg	02.28.2020 14:33		1
Total BTEX		0.0519	0.00200		mg/kg	02.28.2020 14:33		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	105	%	70-130	02.28.2020 14:33		
1,4-Difluorobenzene		540-36-3	100	%	70-130	02.28.2020 14:33		



# **Certificate of Analytical Results 654041**

#### LT Environmental, Inc., Arvada, CO

Thriller

Sample Id:PH02BLab Sample Id:654041-006		Matrix: Date Colle	Soil cted: 02.27.2020 13:30		Date Received:02. Sample Depth: 5 ft		:35
Analytical Method: Chloride by El	PA 300				Prep Method: E3	00P	
Tech: MAB					% Moisture:		
Analyst: MAB		Date Prep:	02.28.2020 10:30		Basis: We	et Weight	
Seq Number: 3118156							
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1440	49.6	mg/kg	02.28.2020 11:47		5
Analytical Method: TPH by SW80	15 Mod				Prep Method: SW	/8015P	
Tech: MAB Analyst: CAC			02 28 2020 10 00		% Moisture:		
Analyst: CAC Seq Number: 3118137		Date Prep:	02.28.2020 10:00		Basis: We	et Weight	
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	02.28.2020 14:31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	02.28.2020 14:31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	02.28.2020 14:31	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	02.28.2020 14:31	U	1

Total GRO-DRO	PHC628	<50.0	0 50.0		mg/kg	02.28.2020 14:31	U	1
Total TPH	PHC635	<50.0	0 50.0		mg/kg	02.28.2020 14:31	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	103	%	70-135	02.28.2020 14:31		
1-Chlorooctane o-Terphenyl		111-85-3 84-15-1	103 116	% %	70-135 70-135	02.28.2020 14:31 02.28.2020 14:31		



# **Certificate of Analytical Results 654041**

## LT Environmental, Inc., Arvada, CO

Sample Id: Lab Sample Id	<b>PH02B</b> l: 654041-006		Matrix: Date Collected	Soil 1: 02.27.2020 13:30	Date Received Sample Depth	1:02.28.2020 08 :: 5 ft	:35
5	thod: BTEX by EPA 802	21B			Prep Method:	SW5030B	
Tech:	MAB				% Moisture:		
Analyst:	MAB		Date Prep:	02.28.2020 10:34	Basis:	Wet Weight	
Seq Number:	3118140						
Parameter		Cas Number	Result DI	т	Inita Analysia D	ata Elag	Ъ

Parameter	Cas Number	r Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00199	0.00199		mg/kg	02.29.2020 07:33	U	1
Toluene	108-88-3	< 0.00199	0.00199		mg/kg	02.29.2020 07:33	U	1
Ethylbenzene	100-41-4	< 0.00199	0.00199		mg/kg	02.29.2020 07:33	U	1
m,p-Xylenes	179601-23-1	< 0.00398	0.00398		mg/kg	02.29.2020 07:33	U	1
o-Xylene	95-47-6	< 0.00199	0.00199		mg/kg	02.29.2020 07:33	U	1
Total Xylenes	1330-20-7	< 0.00199	0.00199		mg/kg	02.29.2020 07:33	U	1
Total BTEX		< 0.00199	0.00199		mg/kg	02.29.2020 07:33	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	94	%	70-130	02.29.2020 07:33		
1,4-Difluorobenzene		540-36-3	103	%	70-130	02.29.2020 07:33		



1-Chlorooctane

o-Terphenyl

## **Certificate of Analytical Results 654041**

#### LT Environmental, Inc., Arvada, CO

Thriller

I I	H03		Matrix:	Soil		Date Received:02.2	28.2020 08:	35
Lab Sample Id: 654	54041-007		Date Colle	cted: 02.27.2020 13:40		Sample Depth: 1 ft		
Analytical Method	l: Chloride by EPA	300				Prep Method: E30	0P	
Tech: MA	AB					% Moisture:		
Analyst: MA	AB		Date Prep:	02.28.2020 10:30		Basis: Wet	Weight	
Seq Number: 311	18156							
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride		16887-00-6	827	50.4	mg/kg	02.28.2020 11:53		5
Analytical Method	1: TPH by SW8015	5 Mod				Prep Method: SW	8015P	
Analytical Method	1: TPH by SW8015	5 Mod				Prep Method: SW8	8015P	
Analytical Method Tech: MA	2	5 Mod				Prep Method: SW3 % Moisture:	8015P	
2	AB	5 Mod	Date Prep:	02.28.2020 10:00		% Moisture:	8015P Weight	
Tech: MA Analyst: CA	AB	5 Mod	Date Prep:	02.28.2020 10:00		% Moisture:		
Tech: MA Analyst: CA Seq Number: 311	AB AC	5 Mod Cas Number	Date Prep: <b>Result</b>	02.28.2020 10:00 RL	Units	% Moisture:		Dil
Tech: MA Analyst: CA Seq Number: 311 Parameter	AB AC 18137				Units mg/kg	% Moisture: Basis: Wet	Weight	<b>Dil</b>
Tech: MA Analyst: CA Seq Number: 311 Parameter Gasoline Range Hydro	AB AC 18137 rocarbons (GRO)	Cas Number	Result	RL		% Moisture: Basis: Wet Analysis Date	Weight Flag	
Tech: MA Analyst: CA Seq Number: 311 Parameter Gasoline Range Hydro Diesel Range Organia	AB AC 18137 rocarbons (GRO) <b>ics (DRO</b> )	Cas Number PHC610	Result <50.0	<b>RL</b> 50.0	mg/kg	% Moisture: Basis: Wet Analysis Date 02.28.2020 14:31	Weight Flag	1
Tech: MA Analyst: CA Seq Number: 311 Parameter Gasoline Range Hydrod Diesel Range Organie Motor Oil Range Hydrod	AB AC 18137 rocarbons (GRO) <b>ics (DRO</b> )	Cas Number PHC610 C10C28DRO	Result <50.0 458	<b>RL</b> 50.0 50.0	mg/kg mg/kg	Moisture:           Basis:         Wet           Analysis Date           02.28.2020 14:31           02.28.2020 14:31	Weight Flag	1
Tech: MA Analyst: CA	AB AC 18137 rocarbons (GRO) <b>ics (DRO</b> )	Cas Number PHC610 C10C28DRO PHCG2835	Result <50.0 458 <50.0	<b>RL</b> 50.0 50.0 50.0	mg/kg mg/kg mg/kg	% Moisture:         Basis:       Wet         Analysis Date         02.28.2020 14:31         02.28.2020 14:31         02.28.2020 14:31         02.28.2020 14:31	Weight Flag	1 1 1

94

105

%

%

70-135

70-135

111-85-3

84-15-1

.

02.28.2020 14:31

02.28.2020 14:31



# **Certificate of Analytical Results 654041**

## LT Environmental, Inc., Arvada, CO

Sample Id: Lab Sample I	<b>PH03</b> d: 654041-007		Matrix: Date Collecte	Soil d: 02.27.2020 13:40	Date Receive Sample Deptl	d:02.28.2020 08 h: 1 ft	:35
Analytical Me	ethod: BTEX by EPA 80	21B			Prep Method:	SW5030B	
Tech:	MAB				% Moisture:		
Analyst:	MAB		Date Prep:	02.28.2020 10:34	Basis:	Wet Weight	
Seq Number:	3118140						
Parameter		Cas Number	Result RI		nite Analysis D	ato Flag	Бі

Parameter	Cas Numbe	r Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00199	0.00199		mg/kg	02.28.2020 15:14	U	1
Toluene	108-88-3	< 0.00199	0.00199		mg/kg	02.28.2020 15:14	U	1
Ethylbenzene	100-41-4	< 0.00199	0.00199		mg/kg	02.28.2020 15:14	U	1
m,p-Xylenes	179601-23-1	< 0.00398	0.00398		mg/kg	02.28.2020 15:14	U	1
o-Xylene	95-47-6	0.00538	0.00199		mg/kg	02.28.2020 15:14		1
Total Xylenes	1330-20-7	0.00538	0.00199		mg/kg	02.28.2020 15:14		1
Total BTEX		0.00538	0.00199		mg/kg	02.28.2020 15:14		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	100	%	70-130	02.28.2020 15:14		
4-Bromofluorobenzene		460-00-4	97	%	70-130	02.28.2020 15:14		



# **Certificate of Analytical Results 654041**

## LT Environmental, Inc., Arvada, CO

Thriller

Sample Id: Lab Sample Id:	<b>PH03A</b> 654041-008		Matrix: Date Colle	Soil ected: 02.27.2020 13:50		Date Received:02.2 Sample Depth: 3 ft		3:35
2	hod: Chloride by El MAB	PA 300				Prep Method: E30 % Moisture:	)0P	
	MAB		Date Prep	02.28.2020 10:30			t Weight	
Seq Number:	3118156		1				-	
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride		16887-00-6	729	49.7	mg/kg	02.28.2020 11:59		5
Analytical Meth	hod: TPH by SW80	15 Mod				Prep Method: SW	8015P	
Tech	MAB					% Moisture:		

Tech:	MAB						% Moisture:		
Analyst:	CAC		Date P	rep: 02	2.28.2020 10:00		Basis:	Wet Weight	
Seq Number:	3118137								
Parameter		Cas Number	Result	RL		Units	Analysis Date	e Flag	Dil
Gasoline Range	Hydrocarbons (GRO)	PHC610	<50.0	50.0		mg/kg	02.28.2020 14:	51 U	1
Diesel Range Or	ganics (DRO)	C10C28DRO	<50.0	50.0		mg/kg	02.28.2020 14:	51 U	1
Motor Oil Range H	lydrocarbons (MRO)	PHCG2835	<50.0	50.0		mg/kg	02.28.2020 14:	51 U	1
Total GRO-DRC	)	PHC628	<50.0	50.0		mg/kg	02.28.2020 14:5	51 U	1
Total TPH		PHC635	<50.0	50.0		mg/kg	02.28.2020 14:5	51 U	1
Surrogate			Cas Number	% Recover	y Units	Limits	Analysis D	ate Flag	
1-Chlorooc	ctane		111-85-3	104	%	70-135	02.28.2020 14	4:51	
o-Terpheny	yl		84-15-1	118	%	70-135	02.28.2020 14	4:51	



# **Certificate of Analytical Results 654041**

## LT Environmental, Inc., Arvada, CO

Sample Id: Lab Sample I	<b>PH03A</b> d: 654041-008		Matrix: Date Collecte	Soil d: 02.27.2020 13:50	Date Receive Sample Deptl	d:02.28.2020 08 n: 3 ft	:35
Analytical Mo	ethod: BTEX by EPA 80	21B			Prep Method:	SW5030B	
Tech:	MAB				% Moisture:		
Analyst:	MAB		Date Prep:	02.28.2020 10:34	Basis:	Wet Weight	
Seq Number:	3118140						
Parameter		Cas Number	Result RI	. 1	Inite Analysis D	ata Flan	Dil

Parameter	Cas Numbe	er Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	02.28.2020 15:34	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	02.28.2020 15:34	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	02.28.2020 15:34	U	1
m,p-Xylenes	179601-23-1	0.0161	0.00399		mg/kg	02.28.2020 15:34		1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	02.28.2020 15:34	U	1
Total Xylenes	1330-20-7	0.0161	0.00200		mg/kg	02.28.2020 15:34		1
Total BTEX		0.0161	0.00200		mg/kg	02.28.2020 15:34		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	116	%	70-130	02.28.2020 15:34		
1,4-Difluorobenzene		540-36-3	104	%	70-130	02.28.2020 15:34		



Motor Oil Range Hydrocarbons (MRO)

Total GRO-DRO

Surrogate

o-Terphenyl

1-Chlorooctane

Total TPH

PHCG2835

PHC628

PHC635

#### **Certificate of Analytical Results 654041**

#### LT Environmental, Inc., Arvada, CO

Thriller

Sample Id:PH03BLab Sample Id:654041-009		Matrix: Date Collec	Soil cted: 02.27.2020 14:00		Date Received:02. Sample Depth: 5 f		:35
Analytical Method:Chloride by EFTech:MABAnalyst:MABSeq Number:3118156	PA 300	Date Prep:	02.28.2020 10:30		Prep Method: E3 % Moisture: Basis: We	00P et Weight	
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1580	50.1	mg/kg	02.28.2020 12:04		5
Analytical Method: TPH by SW80	15 Mod				Prep Method: SW	/8015P	
Tech: MAB					% Moisture:		
Analyst: CAC		Date Prep:	02.28.2020 10:00		Basis: We	et Weight	
•							
Seq Number: 3118137							
-	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Seq Number: 3118137	Cas Number PHC610	Result <49.8	<b>RL</b> 49.8	Units mg/kg	<b>Analysis Date</b> 02.28.2020 14:51	<b>Flag</b> U	<b>Dil</b>

<49.8

<49.8

<49.8

Cas Number

111-85-3

84-15-1

49.8

49.8

49.8

% Recovery

100

112

mg/kg

mg/kg

mg/kg

Limits

70-135

70-135

Units

%

%

02.28.2020 14:51

02.28.2020 14:51

02.28.2020 14:51

Analysis Date

02.28.2020 14:51

02.28.2020 14:51

U

U

U

Flag

1

1

1



# **Certificate of Analytical Results 654041**

## LT Environmental, Inc., Arvada, CO

Sample Id: Lab Sample Id	<b>PH03B</b> d: 654041-009		Matrix: Date Collected	Soil d: 02.27.2020 14:00	Date Received Sample Depth	d:02.28.2020 08 1: 5 ft	:35
Analytical Me	ethod: BTEX by EPA 802	21B			Prep Method:	SW5030B	
Tech:	MAB				% Moisture:		
Analyst:	MAB		Date Prep:	02.28.2020 10:34	Basis:	Wet Weight	
Seq Number:	3118140						
Parameter		Cas Number	Result DI	,	Unita Analysia D	ata Flag	Dil

Parameter	Cas Numbe	r Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	02.28.2020 15:55	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	02.28.2020 15:55	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	02.28.2020 15:55	U	1
m,p-Xylenes	179601-23-1	< 0.00399	0.00399		mg/kg	02.28.2020 15:55	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	02.28.2020 15:55	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	02.28.2020 15:55	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	02.28.2020 15:55	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	96	%	70-130	02.28.2020 15:55		
1,4-Difluorobenzene		540-36-3	104	%	70-130	02.28.2020 15:55		



# **Certificate of Analytical Results 654041**

## LT Environmental, Inc., Arvada, CO

Thriller

Sample Id: <b>PH04</b> Lab Sample Id: 654041-010		Matrix: Date Colle	Soil ected: 02.27.2020 14:10		Date Received:02.2 Sample Depth: 1.5		:35
Analytical Method: Chloride by El	PA 300				Prep Method: E30	0P	
Tech: MAB					% Moisture:		
Analyst: MAB		Date Prep:	02.28.2020 10:30		Basis: Wet	Weight	
Seq Number: 3118156							
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	46.8	10.1	mg/kg	02.28.2020 12:10		1
Analytical Method: TPH by SW80	15 Mod				Prep Method: SW	8015P	
Tech: MAB					% Moisture:		
Analyst: CAC		Date Prep:	02.28.2020 10:00		Basis: Wet	Weight	
Seq Number: 3118137						-	
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	02.28.2020 16:20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	02.28.2020 16:20	U	1

Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9		mg/kg	02.28.2020 16:20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9		mg/kg	02.28.2020 16:20	U	1
Total GRO-DRO	PHC628	<49.9	49.9		mg/kg	02.28.2020 16:20	U	1
Total TPH	PHC635	<49.9	49.9		mg/kg	02.28.2020 16:20	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	115	%	70-135	02.28.2020 16:20		
o-Terphenyl		84-15-1	132	%	70-135	02.28.2020 16:20		



# **Certificate of Analytical Results 654041**

## LT Environmental, Inc., Arvada, CO

Sample Id: Lab Sample Id	<b>PH04</b> d: 654041-010		Matrix: Date Collecte	Soil d: 02.27.2020 14:10	Date Receive Sample Dept	ed:02.28.2020 08 h: 1.5 ft	3:35
Analytical Me	ethod: BTEX by EPA 80	21B			Prep Method	: SW5030B	
Tech:	MAB				% Moisture:		
Analyst:	MAB		Date Prep:	02.28.2020 10:34	Basis:	Wet Weight	
Seq Number:	3118140						
Parameter		Cas Number	Result DI	,	Unita Analysia I	lata Elag	Б

Parameter	Cas Numbe	r Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00198	0.00198		mg/kg	02.28.2020 17:37	U	1
Toluene	108-88-3	< 0.00198	0.00198		mg/kg	02.28.2020 17:37	U	1
Ethylbenzene	100-41-4	< 0.00198	0.00198		mg/kg	02.28.2020 17:37	U	1
m,p-Xylenes	179601-23-1	< 0.00397	0.00397		mg/kg	02.28.2020 17:37	U	1
o-Xylene	95-47-6	< 0.00198	0.00198		mg/kg	02.28.2020 17:37	U	1
Total Xylenes	1330-20-7	< 0.00198	0.00198		mg/kg	02.28.2020 17:37	U	1
Total BTEX		< 0.00198	0.00198		mg/kg	02.28.2020 17:37	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	96	%	70-130	02.28.2020 17:37		
1,4-Difluorobenzene		540-36-3	104	%	70-130	02.28.2020 17:37		



# **Certificate of Analytical Results 654041**

## LT Environmental, Inc., Arvada, CO

Thriller

Sample Id: <b>PH04A</b> Lab Sample Id: 654041-011		Matrix: Date Collec	Soil cted: 02.27.2020 14:20		Date Received:02.2 Sample Depth: 3 ft		:35
Analytical Method: Chloride by EP	A 300				Prep Method: E30	)0P	
Tech: MAB					% Moisture:		
Analyst: MAB		Date Prep:	02.28.2020 10:30		Basis: We	t Weight	
Seq Number: 3118156							
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	43.1	9.92	mg/kg	02.28.2020 12:16		1
Analytical Method: TPH by SW801 Tech: MAB Analyst: CAC Sea Number: 3118137	15 Mod	Date Prep:	02.28.2020 10:00		Prep Method: SW % Moisture: Basis: We	8015P t Weight	
Tech: MAB	15 Mod Cas Number	-	02.28.2020 10:00 RL	Units	% Moisture: Basis: We	t Weight	Dil
Tech: MAB Analyst: CAC Seq Number: 3118137 Parameter		-			% Moisture:		<b>Dil</b>
Tech: MAB Analyst: CAC Seq Number: 3118137 Parameter Gasoline Range Hydrocarbons (GRO)	Cas Number	Result	RL	Units mg/kg mg/kg	% Moisture: Basis: We Analysis Date	t Weight Flag	
Tech: MAB Analyst: CAC Seq Number: 3118137 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO)	Cas Number PHC610	Result <50.0	RL 50.0	mg/kg	% Moisture: Basis: We Analysis Date 02.28.2020 16:20	t Weight Flag	1
Tech: MAB Analyst: CAC Seq Number: 3118137	Cas Number PHC610 C10C28DRO	<b>Result</b> <50.0 67.8	<b>RL</b> 50.0 50.0	mg/kg mg/kg	% Moisture:           Basis:         We           Analysis Date           02.28.2020 16:20           02.28.2020 16:20	t Weight Flag U	1

Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
111-85-3	97	%	70-135	02.28.2020 16:20	
84-15-1	105	%	70-135	02.28.2020 16:20	
	111-85-3	111-85-3 97	111-85-3 97 %	111-85-3 97 % 70-135	111-85-3         97         %         70-135         02.28.2020 16:20



# **Certificate of Analytical Results 654041**

## LT Environmental, Inc., Arvada, CO

Sample Id: Lab Sample I	<b>PH04A</b> d: 654041-011		Matrix: Date Collecte	Soil d: 02.27.2020 14:20	Date Receive Sample Deptl	d:02.28.2020 08 n: 3 ft	:35
Analytical Mo	ethod: BTEX by EPA 80	21B			Prep Method:	SW5030B	
Tech:	MAB				% Moisture:		
Analyst:	MAB		Date Prep:	02.28.2020 10:34	Basis:	Wet Weight	
Seq Number:	3118140						
Parameter		Cas Number	Result RI	. 1	Inite Analysis D	lata Flag	Dil

Parameter	Cas Numbe	r Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	02.28.2020 17:57	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	02.28.2020 17:57	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	02.28.2020 17:57	U	1
m,p-Xylenes	179601-23-1	< 0.00400	0.00400		mg/kg	02.28.2020 17:57	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	02.28.2020 17:57	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	02.28.2020 17:57	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	02.28.2020 17:57	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	103	%	70-130	02.28.2020 17:57		
4-Bromofluorobenzene		460-00-4	95	%	70-130	02.28.2020 17:57		



# **Certificate of Analytical Results 654041**

#### LT Environmental, Inc., Arvada, CO

Thriller

Sample Id: <b>PH04B</b> Lab Sample Id: 654041-012		Matrix: Date Colle	Soil cted: 02.27.2020 14:35		Date Received:02.2 Sample Depth: 5 ft		:35
Analytical Method: Chloride by EF	PA 300				Prep Method: E30	00P	
Tech: MAB					% Moisture:		
Analyst: MAB		Date Prep:	02.28.2020 10:30		Basis: We	t Weight	
Seq Number: 3118156							
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	597	49.8	mg/kg	02.28.2020 12:33		5
Analytical Method: TPH by SW80 Tech: MAB	15 Mod				Prep Method: SW % Moisture:	78015P	
Analyst: CAC		Date Prep:	02.28.2020 10:00		Basis: We	t Weight	
Seq Number: 3118137							
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	02.28.2020 16:40	U	1
Diesel Range Organics (DRO)	C10C28DRO	252	49.9	mg/kg	02.28.2020 16:40		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	02.28.2020 16:40	U	1
Total GRO-DRO	PHC628	252	49.9	mg/kg	02.28.2020 16:40		1

Total GRO-DRO	PHC628	252	49.9		mg/kg	02.28.2020 16:40		1
Total TPH	PHC635	252	49.9		mg/kg	02.28.2020 16:40		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	113	%	70-135	02.28.2020 16:40		
o-Terphenyl		84-15-1	128	%	70-135	02.28.2020 16:40		



# **Certificate of Analytical Results 654041**

## LT Environmental, Inc., Arvada, CO

Sample Id: Lab Sample Id	<b>PH04B</b> d: 654041-012		Matrix: Date Collected	Soil d: 02.27.2020 14:35	Date Received Sample Depth	d:02.28.2020 08 1: 5 ft	:35
Analytical Me	ethod: BTEX by EPA 802	21B			Prep Method:	SW5030B	
Tech:	MAB				% Moisture:		
Analyst:	MAB		Date Prep:	02.28.2020 10:34	Basis:	Wet Weight	
Seq Number:	3118140						
Parameter		Cas Number	Result DI	,	Unita Analysia D	ata Flag	Dil

Parameter	Cas Numbe	r Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00199	0.00199		mg/kg	02.28.2020 18:18	U	1
Toluene	108-88-3	< 0.00199	0.00199		mg/kg	02.28.2020 18:18	U	1
Ethylbenzene	100-41-4	< 0.00199	0.00199		mg/kg	02.28.2020 18:18	U	1
m,p-Xylenes	179601-23-1	< 0.00398	0.00398		mg/kg	02.28.2020 18:18	U	1
o-Xylene	95-47-6	< 0.00199	0.00199		mg/kg	02.28.2020 18:18	U	1
Total Xylenes	1330-20-7	< 0.00199	0.00199		mg/kg	02.28.2020 18:18	U	1
Total BTEX		< 0.00199	0.00199		mg/kg	02.28.2020 18:18	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	97	%	70-130	02.28.2020 18:18		
1,4-Difluorobenzene		540-36-3	100	%	70-130	02.28.2020 18:18		



# **Certificate of Analytical Results 654041**

## LT Environmental, Inc., Arvada, CO

Thriller

Sample Id:PH05Lab Sample Id:654041-013		Matrix: Date Collec	Soil cted: 02.27.2020 15:00		Date Received:02. Sample Depth: 1 f		:35
Analytical Method: Chloride by EP	A 300				Prep Method: E3	00P	
Tech: MAB					% Moisture:		
Analyst: MAB		Date Prep:	02.28.2020 10:30		Basis: We	et Weight	
Seq Number: 3118156							
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	95.7	49.9	mg/kg	02.28.2020 12:39		5
Analytical Method:TPH by SW801Tech:MABAnalyst:CACSeq Number:3118137	15 Mod	Date Prep:	02.28.2020 10:00		Prep Method: SW % Moisture: Basis: We	/8015P et Weight	
Tech: MAB Analyst: CAC	15 Mod Cas Number	·	02.28.2020 10:00 RL	Units	% Moisture:		Dil
Tech: MAB Analyst: CAC Seq Number: 3118137		·		Units mg/kg	% Moisture: Basis: We	et Weight	<b>Dil</b>
Tech: MAB Analyst: CAC Seq Number: 3118137 Parameter	Cas Number	Result	RL		<ul> <li>Moisture:</li> <li>Basis: We</li> <li>Analysis Date</li> </ul>	et Weight Flag	
Tech: MAB Analyst: CAC Seq Number: 3118137 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO)	Cas Number PHC610	Result <50.1	<b>RL</b> 50.1	mg/kg	% Moisture:         Basis:       We         Analysis Date         02.28.2020 16:40	et Weight Flag	1
Tech: MAB Analyst: CAC Seq Number: 3118137 Parameter Gasoline Range Hydrocarbons (GRO)	Cas Number PHC610 C10C28DRO	<b>Result</b> <50.1 697	<b>RL</b> 50.1 50.1	mg/kg mg/kg	% Moisture:         Basis:       We         Analysis Date         02.28.2020 16:40         02.28.2020 16:40	et Weight Flag	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	02.28.2020 16:40	
o-Terphenyl	84-15-1	115	%	70-135	02.28.2020 16:40	



# **Certificate of Analytical Results 654041**

## LT Environmental, Inc., Arvada, CO

Thriller

Sample Id: <b>PH05</b> Lab Sample Id: 654041-013		Matrix: Date Collected	Soil d: 02.27.2020 15:00	Date Received Sample Depth	1:02.28.2020 08 1: 1 ft	:35
Analytical Method: BTEX I Tech: MAB	by EPA 8021B			Prep Method: % Moisture:	SW5030B	
Tech: MAB Analyst: MAB		Date Prep:	02.28.2020 10:34	% Moisture: Basis:	Wet Weight	
Seq Number: 3118140						
Parameter	Cas Number	Result DI		Unite Analysis D	oto Flog	ы

Parameter	Cas Numbe	er Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00250	0.00250		mg/kg	02.28.2020 18:38	U	1
Toluene	108-88-3	< 0.00250	0.00250		mg/kg	02.28.2020 18:38	U	1
Ethylbenzene	100-41-4	0.0181	0.0100		mg/kg	02.28.2020 18:38		1
m,p-Xylenes	179601-23-1	0.107	0.0200		mg/kg	02.28.2020 18:38		1
o-Xylene	95-47-6	0.0729	0.0100		mg/kg	02.28.2020 18:38		1
Total Xylenes	1330-20-7	0.180	0.0100		mg/kg	02.28.2020 18:38		1
Total BTEX		0.198	0.00250		mg/kg	02.28.2020 18:38		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	104	%	70-130	02.28.2020 18:38		
1,4-Difluorobenzene		540-36-3	97	%	70-130	02.28.2020 18:38		



# **Certificate of Analytical Results 654041**

## LT Environmental, Inc., Arvada, CO

Thriller

Sample Id: <b>PH05A</b> Lab Sample Id: 654041-014		Matrix: Date Collec	Soil cted: 02.27.2020 15:15		Date Received:02. Sample Depth: 3 ft		:35
Analytical Method: Chloride by EF	PA 300				Prep Method: E30	)0P	
Tech: MAB					% Moisture:		
Analyst: MAB		Date Prep:	02.28.2020 10:30		Basis: We	t Weight	
Seq Number: 3118156							
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	63.4	50.1	mg/kg	02.28.2020 12:56		5
Analytical Method: TPH by SW80 Tech: MAB Analyst: CAC Seq Number: 3118137	15 Mod	Date Prep:	02.28.2020 10:00		Prep Method: SW % Moisture: Basis: We	78015P t Weight	
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	02.28.2020 17:00	U	1
Diesel Range Organics (DRO)	C10C28DRO	73.1	50.2	mg/kg	02.28.2020 17:00		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	02.28.2020 17:00	U	1

Total TPH	PHC635	73.1	50.2		mg/kg	02.28.2020 17:00		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	109	%	70-135	02.28.2020 17:00		
o-Terphenyl		84-15-1	124	%	70-135	02.28.2020 17:00		



# **Certificate of Analytical Results 654041**

## LT Environmental, Inc., Arvada, CO

Sample Id: Lab Sample I	<b>PH05A</b> d: 654041-014		Matrix: Date Collecte	Soil d: 02.27.2020 15:15	Date Receive Sample Depth	d:02.28.2020 08 n: 3 ft	:35
Analytical M	ethod: BTEX by EPA 80	21B			Prep Method:	SW5030B	
Tech:	MAB				% Moisture:		
Analyst:	MAB		Date Prep:	02.28.2020 10:34	Basis:	Wet Weight	
Seq Number:	3118140						
Parameter		Cas Number	Result RI	. 1	Inite Analysis D	ata Flan	Dil

Parameter	Cas Numbe	r Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	02.28.2020 18:58	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	02.28.2020 18:58	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	02.28.2020 18:58	U	1
m,p-Xylenes	179601-23-1	< 0.00400	0.00400		mg/kg	02.28.2020 18:58	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	02.28.2020 18:58	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	02.28.2020 18:58	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	02.28.2020 18:58	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	103	%	70-130	02.28.2020 18:58		
1,4-Difluorobenzene		540-36-3	101	%	70-130	02.28.2020 18:58		



# **Certificate of Analytical Results 654041**

#### LT Environmental, Inc., Arvada, CO

Thriller

Sample Id: <b>PH05B</b> Lab Sample Id: 654041-015		Matrix: Date Collec	Soil cted: 02.27.2020 15:30		Date Received:02.28.2020 08:3 Sample Depth: 5 ft		
Analytical Method: Chloride by EF	PA 300				Prep Method: E	300P	
Tech: MAB					% Moisture:		
Analyst: MAB		Date Prep:	02.28.2020 10:30		Basis: W	et Weight	
Seq Number: 3118156							
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	56.1	9.94	mg/kg	02.28.2020 13:01	l	1
Analytical Method: TPH by SW80 Tech: MAB	15 Mod				Prep Method: S	W0015D	
Analyst: CAC Seq Number: 3118137		Date Prep:	02.28.2020 10:00		% Moisture:	Vet Weight	
Analyst: CAC Seq Number: 3118137	Cas Number	·	02.28.2020 10:00 RL	Units	% Moisture:		Dil
Analyst: CAC	Cas Number PHC610	·		Units mg/kg	% Moisture: Basis: W	Vet Weight Flag	Dil
Analyst: CAC Seq Number: 3118137 Parameter		Result	RL		<ul> <li>% Moisture:</li> <li>Basis: W</li> <li>Analysis Date</li> </ul>	Vet Weight Flag	
Analyst: CAC Seq Number: 3118137 Parameter Gasoline Range Hydrocarbons (GRO)	PHC610	Result <49.9	<b>RL</b> 49.9	mg/kg	% Moisture: Basis: W Analysis Date 02.28.2020 13:31	Vet Weight Flag	
Analyst: CAC Seq Number: 3118137 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO)	PHC610 C10C28DRO	Result <49.9 95.7	<b>RL</b> 49.9 49.9	mg/kg mg/kg	<ul> <li>Moisture:</li> <li>Basis: W</li> <li>Analysis Date</li> <li>02.28.2020 13:31</li> <li>02.28.2020 13:31</li> </ul>	Vet Weight Flag I U I I U	1

Total IPH	PHC635	95.	7 49.9		mg/kg	02.28.2020 13:31	
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane		111-85-3	103	%	70-135	02.28.2020 13:31	
o-Terphenyl		84-15-1	119	%	70-135	02.28.2020 13:31	



# **Certificate of Analytical Results 654041**

## LT Environmental, Inc., Arvada, CO

Sample Id: Lab Sample I	<b>PH05B</b> d: 654041-015		Matrix: Date Collecte	Soil d: 02.27.2020 15:30	Date Receive Sample Dept	d:02.28.2020 08 h: 5 ft	:35
Analytical Mo	ethod: BTEX by EPA 80	21B			Prep Method:	: SW5030B	
Tech:	MAB				% Moisture:		
Analyst:	MAB		Date Prep:	02.28.2020 10:34	Basis:	Wet Weight	
Seq Number:	3118140						
Parameter		Cas Number	Result RI	. 1	Inite Analycic F	)sto Flag	Dil

Parameter	Cas Numbe	r Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	02.28.2020 16:15	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	02.28.2020 16:15	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	02.28.2020 16:15	U	1
m,p-Xylenes	179601-23-1	< 0.00401	0.00401		mg/kg	02.28.2020 16:15	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	02.28.2020 16:15	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	02.28.2020 16:15	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	02.28.2020 16:15	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	95	%	70-130	02.28.2020 16:15		
1,4-Difluorobenzene		540-36-3	102	%	70-130	02.28.2020 16:15		



# **Flagging Criteria**

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

\*\* Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.	ND Not Detected									
RL Reporting Limit										
MDL Method Detection Limit	SDL Sample De	tection Limit	LOD Limit of Detection							
PQL Practical Quantitation Limit	MQL Method Qu	antitation Limit	LOQ Limit of Quantitatio	n						
DL Method Detection Limit										
NC Non-Calculable	NC Non-Calculable									
SMP Client Sample		BLK	Method Blank							
BKS/LCS Blank Spike/Laboratory	Control Sample	BKSD/LCSD	Blank Spike Duplicate/Laboratory Control Sample Dup							
MD/SD Method Duplicate/Sam	ple Duplicate	MS	Matrix Spike	MSD: Matrix Spike Duplicate						
+ NELAC certification not offered	l for this compound.									

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



#### QC Summary 654041

## LT Environmental, Inc.

Thriller

Analytical Method:	•	EPA 30	)0						Pr	ep Metho				
Seq Number:	3118156			Matrix:					Date Prep: 02.28.20 LCSD Sample Id: 7697721					
MB Sample Id:	7697721-1-B		LCS Sample Id: 7697721-1-BKS						//21-1-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	02.28.2020 10:45		
Analytical Method:	Chloride by	EPA 3	)0						Pr	ep Metho	od: E30	00P		
Seq Number:	3118156				Matrix:					Date Pr	-	28.2020		
Parent Sample Id:	654041-001			MS Sar	nple Id:	654041-00	01 S		MS	e Id: 654	041-001 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	02.28.2020 11:02		
Analytical Method:	Chloride by	EPA 30	)0						Pr	ep Metho	od: E30	00P		
Seq Number:	3118156				Matrix:				Date Prep: 02.28.2020					
Parent Sample Id:	654041-011			MS Sar	nple Id:	654041-0	11 S		MS	D Sample	e Id: 654	041-011 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	02.28.2020 12:21		
Analytical Method:	TPH by SW	'8015 M	od						Pr	ep Metho	od: SW	8015P		
Sog Number	-		3118137			Salid		Solid 7697709-1-BKS			am. 02.2	00 2020		
Seq Number:	3118137				Matrix:		I-BKS		LCSI	Date Pr	-	28.2020 7709-1-BSD		
-	-			LCS Sar	nple Id:	7697709-3				O Sample	e Id: 769	7709-1-BSD		
MB Sample Id: Parameter	3118137 7697709-1-B	MB Result	Spike Amount	LCS Sar LCS Result	nple Id: LCS %Rec	7697709- LCSD Result	LCSD %Rec	Limits	%RPD	O Sample RPD Limit	e Id: 769 Units	7709-1-BSD Analysis Date	Flag	
MB Sample Id: <b>Parameter</b> Gasoline Range Hydrocarb	3118137 7697709-1-B ons (GRO)	<b>MB</b> <b>Result</b> <50.0	<b>Amount</b> 1000	LCS Sar LCS Result 967	nple Id: LCS %Rec 97	7697709-3 LCSD Result 907	<b>LCSD</b> %Rec 91	70-135	<b>%RPD</b> 6	D Sample RPD Limit 35	Units mg/kg	7709-1-BSD Analysis Date 02.28.2020 12:51	Flag	
MB Sample Id: <b>Parameter</b> Gasoline Range Hydrocarb	3118137 7697709-1-B ons (GRO)	MB Result	Amount	LCS Sar LCS Result	nple Id: LCS %Rec	7697709- LCSD Result	LCSD %Rec		%RPD	O Sample RPD Limit	e Id: 769 Units	7709-1-BSD Analysis Date	Flag	
MB Sample Id: Parameter Gasoline Range Hydrocarb Diesel Range Organics	3118137 7697709-1-B ons (GRO)	<b>MB</b> <b>Result</b> <50.0	<b>Amount</b> 1000	LCS Sar LCS Result 967 950 L	nple Id: LCS %Rec 97 95	7697709-3 LCSD Result 907	<b>LCSD</b> %Rec 91	70-135 70-135 D LCS	%RPD 6 7 D Li	D Sample RPD Limit 35	Units mg/kg	7709-1-BSD Analysis Date 02.28.2020 12:51	Flag	
MB Sample Id: Parameter	3118137 7697709-1-B ons (GRO)	MB Result <50.0 <50.0 MB	<b>Amount</b> 1000 1000 <b>MB</b>	LCS Sar LCS Result 967 950 L	nple Id: LCS %Rec 97 95 CS	7697709-3 LCSD Result 907 882 LCS	LCSD %Rec 91 88 LCSI	70-135 70-135 ) LCS c Fla	%RPD 6 7 D Li g	D Sample RPD Limit 35 35	e Id: 769 Units mg/kg mg/kg	7709-1-BSD Analysis Date 02.28.2020 12:51 02.28.2020 12:51 Analysis Date 02.28.2020 12:51	Flag	
MB Sample Id: Parameter Gasoline Range Hydrocarb Diesel Range Organics Surrogate	3118137 7697709-1-B ons (GRO)	MB Result <50.0 <50.0 MB %Rec	<b>Amount</b> 1000 1000 <b>MB</b>	LCS Sar LCS Result 967 950 L %	nple Id: LCS %Rec 97 95 CS Rec	7697709-3 LCSD Result 907 882 LCS	LCSD %Rec 91 88 LCSI %Re	70-135 70-135 D LCS c Fla	%RPD 6 7 D Li g 70	D Sample RPD Limit 35 35 mits	Units Units mg/kg mg/kg Units	7709-1-BSD Analysis Date 02.28.2020 12:51 02.28.2020 12:51 Analysis Date	Flag	
MB Sample Id: Parameter Gasoline Range Hydrocarb Diesel Range Organics Surrogate 1-Chlorooctane	3118137 7697709-1-B ons (GRO) (DRO)	MB Result <50.0 <50.0 MB %Rec 106 120	Amount 1000 1000 MB Flag	LCS Sar LCS Result 967 950 L %	mple Id: LCS %Rec 97 95 CS Rec 08	7697709-3 LCSD Result 907 882 LCS	LCSD %Rec 91 88 LCSI %Re 114	70-135 70-135 D LCS c Fla	%RPD 6 7 D Li g 70 70 70	D Sample <b>RPD</b> Limit 35 35 mits -135	Le Id: 769 Units mg/kg mg/kg Units %	7709-1-BSD Analysis Date 02.28.2020 12:51 02.28.2020 12:51 Analysis Date 02.28.2020 12:51	Flag	
MB Sample Id: Parameter Gasoline Range Hydrocarb Diesel Range Organics Surrogate 1-Chlorooctane o-Terphenyl	3118137 7697709-1-B ons (GRO) (DRO)	MB Result <50.0 <50.0 MB %Rec 106 120	Amount 1000 1000 MB Flag	LCS Sar LCS Result 967 950 L % 1 1	nple Id: LCS %Rec 97 95 CS Rec 08 12 Matrix:	7697709- LCSD Result 907 882 LCS Flag	LCSD %Rec 91 88 LCSI %Re 114 107	70-135 70-135 D LCS c Fla	%RPD 6 7 D Li g 70 70 70	D Sample <b>RPD</b> Limit 35 35 mits -135 -135	d: 769 Units mg/kg mg/kg Units % %	7709-1-BSD Analysis Date 02.28.2020 12:51 02.28.2020 12:51 Analysis Date 02.28.2020 12:51 02.28.2020 12:51	Flag	
MB Sample Id: Parameter Gasoline Range Hydrocarb Diesel Range Organics of Surrogate 1-Chlorooctane o-Terphenyl Analytical Method:	3118137 7697709-1-E ons (GRO) (DRO) <b>TPH by SW</b>	MB Result <50.0 <50.0 MB %Rec 106 120	Amount 1000 1000 MB Flag	LCS Sar LCS Result 967 950 L % 1 1	nple Id: LCS %Rec 97 95 CS Rec 08 12 Matrix:	7697709- LCSD Result 907 882 LCS Flag	LCSD %Rec 91 88 LCSI %Re 114 107	70-135 70-135 D LCS c Fla	%RPD 6 7 D Li g 70 70 70	D Sample <b>RPD</b> Limit 35 35 mits -135 -135 ep Metho	d: 769 Units mg/kg mg/kg Units % %	7709-1-BSD Analysis Date 02.28.2020 12:51 02.28.2020 12:51 Analysis Date 02.28.2020 12:51 02.28.2020 12:51 02.28.2020 12:51	Flag	

MS/MSD Percent Recovery Relative Percent Difference LCS/LCSD Recovery Log Difference LCS = Laboratory Control Sample A = Parent Result C = MS/LCS Result E = MSD/LCSD Result

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

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#### QC Summary 654041

#### LT Environmental, Inc.

#### Thriller

Analytical Method:					P	rep Meth	od: SW	8015P							
Seq Number:	Seq Number: 3118137				Matrix: Soil					Date Prep: 02.28.2020					
Parent Sample Id:	654041-01	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 Hydrocarbo	ons (GRO)	<49.8	995	735	74	831	83	70-135	12	35	mg/kg	02.28.2020 13:31			
Diesel Range Organics (	DRO)	95.7	995	902	81	976	88	70-135	8	35	mg/kg	02.28.2020 13:31			
Surrogate					1S Rec	MS Flag	MSD %Re			imits	Units	Analysis Date			
1-Chlorooctane				1	01		106	i	70	-135	%	02.28.2020 13:31			
o-Terphenyl				1	08		111		70	-135	%	02.28.2020 13:31			

Analytical Method:	BTEX by EPA 8021	P	rep Metho	od: SW	5030B							
Seq Number:	3118140		Matrix: Solid					Date Prep: 02.28.2020				
MB Sample Id:	7697713-1-BLK		LCS San	nple Id:	7697713-	I-BKS		LCS	D Sample	e Id: 769	7713-1-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	0.106	106	70-130	3	35	mg/kg	02.28.2020 11:09	
Toluene	< 0.00200	0.100	0.106	106	0.103	103	70-130	3	35	mg/kg	02.28.2020 11:09	
Ethylbenzene	< 0.00200	0.100	0.102	102	0.0993	99	71-129	3	35	mg/kg	02.28.2020 11:09	
m,p-Xylenes	< 0.00400	0.200	0.212	106	0.205	103	70-135	3	35	mg/kg	02.28.2020 11:09	
o-Xylene	< 0.00200	0.100	0.105	105	0.102	102	71-133	3	35	mg/kg	02.28.2020 11:09	
Surrogate	MB %Rec	MB Flag		CS Rec	LCS Flag	LCSI %Ree			imits	Units	Analysis Date	
1,4-Difluorobenzene	105		10	04		105		70	-130	%	02.28.2020 11:09	
4-Bromofluorobenzene	94		9	95		95		70	-130	%	02.28.2020 11:09	

<b>Analytical Method:</b> Seq Number: Parent Sample Id:	<b>BTEX by EPA 8021</b> 3118140 654041-015	B		Matrix: nple Id:	Soil 654041-01	5 S		Prep Method:         SW5030B           Date Prep:         02.28.2020           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
Benzene	< 0.00201	0.100	0.114	114	0.119	119	70-130	4	35	mg/kg	02.28.2020 11:50	
Toluene	< 0.00201	0.100	0.111	111	0.116	116	70-130	4	35	mg/kg	02.28.2020 11:50	
Ethylbenzene	< 0.00201	0.100	0.105	105	0.111	111	71-129	6	35	mg/kg	02.28.2020 11:50	
m,p-Xylenes	< 0.00402	0.201	0.214	106	0.233	117	70-135	9	35	mg/kg	02.28.2020 11:50	
o-Xylene	< 0.00201	0.100	0.106	106	0.111	111	71-133	5	35	mg/kg	02.28.2020 11:50	
Surrogate				1S Rec	MS Flag	MSD %Re			imits	Units	Analysis Date	
1,4-Difluorobenzene			1	02		103		70	-130	%	02.28.2020 11:50	

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

4-Bromofluorobenzene

 $\begin{array}{l} [D] = 100*(C-A) \ / \ B \\ RPD = 200* \ | \ (C-E) \ / \ (C+E) \ | \\ [D] = 100*(C) \ / \ [B] \\ Log \ Diff. = Log(Sample \ Duplicate) \ - \ Log(Original \ Sample) \end{array}$ 

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

122

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

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02.28.2020 11:50

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96

70-130

%
Final 1.000

eived by	y 00	D:	Relinquished by:			38 Circle Method(s) a	M			/	PHOSB	PtosA	PHos	PHOYB	PHOHA	Sample Identification	Sample Custody Seals:	Cooler Custody Seals:	Received Intact:	Temperature (°C):	SAMPLE RECEIPT	Sampler's Name:	P.O. Number:	Project Number:	Project Name:	Phone: (	City, State ZIP: N	Address: 3	Company Name: L	roject Manager:	Page 74 oj
_	0	a /mia	(Signature)	ble only for the cost of sam e of \$75.00 will be applied t	ument and relinguishment	Total     200.7 / 6010     200.8 / 6020:       Circle     Method(s) and     Metal(s) to be analyzed					¢				5	fication Matrix	: Yes No N/A	Yes No	Yes		PT Temp Blank:	Spencer Lo	2RP-4915	012918162	Thriller	(432) 236-3849	Midland, TX 79705	3300 North A Street	LT Environmental, Inc.,	Dan Moir	ABORATORIES
		na Briers	Received by: (Signature)	ples and shall not assume a o each project and a charge	of samples constitutes a val	8R					1530	1515	1 500	1435	2.27.20 1420	Date Sampled	Total Containers:	Gorrection Factor:	K	A Thermometer ID	ik: Yes No Wet Ice:			-		m			c., Permian office		Hoy M Hobbs,NM (575
		2	nature)	ny responsibility for any of \$5 for each sample su	id nurchase order from o	CRA 13PPM Texas 11 AI					5	S	-	2	w	Depth				$\Big\rangle$	Yes No	Due Date:	Rush: 24/4	Routine	Turn Around	mail: slo@ltenv.com	City, State ZIP:	Address:	Company Name:	Bill to: (if different)	uston,TX (281) 240-420 idland,TX (432-704-54- 392-7550) Phoenix,A
6	1 100	2 0940 00/ 80/	Date/Time Relinquished	A sence 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 cost 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.	client company to Xenco its affiliates and subcont	Sb As Ba Be B Cd C Sb As Ba Be Cd Cr		<i>m</i>	10 m	2	4 4 4				1 × × ×	Numb TPH (E BTEX ( Chlorid	EPA 8 (EPA	01:	5) 802 <sup>.</sup>	1)	rs				ANAL	Email: slo@ltenv.com, dmoir@ltenv.com, acole@ltenv.com	Carlsbad, NM 88220	3104 East Green Street	ne: XTO Energy	1) Kyle Littrell	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)
	0	Bring CITO	Relinquished by: (Signature) Received by: (Signature)	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 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.	ome and conditions	Cu Fe Pb Mg Mn Mo Ni K Se Ag SiC b Mn Mo Ni Se Ag Ti U																			ANALYSIS REQUEST	Deliverables: EDD ADa	Reporting:Level IIevel III	State of Project:	Program: UST/PST PRP Bro	Work Orde	TX (210) 509-3334 X (806)794-1296 D) Tampa,FL (813-620-2000) <u>www.xenco.com</u>
Revised Date 051418 Rev. 2018.1	100000	JENU OCI OCI E	lure) Date/Time		c	)2 Na Sr TI Sn U V Zn 1631/245.1/7470/7471:Ha										Sample Comments	lab, if received by 4:30pm	TAT starts the day received by the							Work Order Notes	ADaPT Other:			☐ PRP ☐ Brownfields ☐ RC ☐ uperfund [	Work Order Comments	m Page 1 of 1

. Released to Imaging: 9/14/2021 10:39:59 AM

Final 1.000

## **XENCO** Laboratories

## Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.	Acceptable Temperature Range: 0 - 6 degC							
Date/ Time Received: 02.28.2020 08.35.00 AM	Air and Metal samples Acceptable Range: Ambient							
Work Order #: 654041	Temperature Measuring device used : T-NM-007							
Sample Recei	pt 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?	Νο							
#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)?	Νο							
#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 Checklist reviewed by: Jessica Kramer

Date: 02.28.2020

Jessica Kramer

Date: 02.28.2020

for LT Environmental, Inc.

**Project Manager: Dan Moir** 

Thriller

012918162

#### 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): 654154 Thriller 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) 654154. 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. 654154 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,

fession kenner

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 654154

Thriller

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW01	S	02-28-20 12:25	0 - 5 ft	654154-001

.



# CASE NARRATIVE

Client Name: LT Environmental, Inc. Project Name: Thriller

 Project ID:
 012918162

 Work Order Number(s):
 654154

ORIES

Report Date: 02-MAR-20 Date Received: 02/28/2020

#### Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments: Batch: LBA-3118153 BTEX by EPA 8021B Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



 Project Id:
 012918162

 Contact:
 Dan Moir

**Project Location:** 

## Certificate of Analysis Summary 654154

LT Environmental, Inc., Arvada, CO Project Name: Thriller

Date Received in Lab: Fri Feb-28-20 03:20 pm Report Date: 02-MAR-20 Project Manager: Jessica Kramer

	Lab Id:	654154-001				
A state De sus stal	Field Id:	SW01				
Analysis Requested	Depth:	0-5 ft				
	Matrix:	SOIL				
	Sampled:	Feb-28-20 12:25				
BTEX by EPA 8021B	Extracted:	Feb-28-20 18:00	1		1	
	Analyzed:	Feb-29-20 00:42				
	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:	Feb-28-20 17:00				
	Analyzed:	Feb-28-20 21:19				
	Units/RL:	mg/kg RL				
Chloride		514 10.0				
TPH by SW8015 Mod	Extracted:	Feb-28-20 19:09				
	Analyzed:	Feb-29-20 07:43				
	Units/RL:	mg/kg RL				
Gasoline Range Hydrocarbons (GRO)		<50.1 50.1				
Diesel Range Organics (DRO)		79.1 50.1				
Motor Oil Range Hydrocarbons (MRO)		<50.1 50.1				
Total GRO-DRO		79.1 50.1				
Total TPH		79.1 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

fession kramer

Jessica Kramer Project Assistant

Page 5 of 12



## LT Environmental, Inc., Arvada, CO

Sample Id:SW01Lab Sample Id:654154-001		Matrix: Date Colle	Soil cted: 02.28.	.20 12.25	Date Received:02.28.20 15.20 Sample Depth: 0 - 5 ft					
Analytical Method: Chloride by EP.	A 300				P	Prep Method: E30	)0P			
Tech: MAB					9	6 Moisture:				
Analyst: MAB		Date Prep:	02.28.	.20 17.00	E	Basis: We	t Weight			
Seq Number: 3118170		-								
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil		
Chloride	16887-00-6	514	10.0		mg/kg	02.28.20 21.19		1		
Appletical Mathed, TDU by SW201	5 Mod				г	Mathadi SW	2001 <i>5</i> D			
Analytical Method:TPH by SW801Tech:MABAnalyst:MABSeq Number:3118192	5 Mod	Date Prep:	02.28.	20 19.09	9/	Prep Method: SW 6 Moisture: Basis: Wet	78015P t Weight			
Tech: MAB Analyst: MAB	5 Mod Cas Number	Date Prep: Result	02.28. RL	20 19.09	9/	6 Moisture:		Dil		
Tech:MABAnalyst:MABSeq Number:3118192		-		20 19.09	9 E	6 Moisture: Basis: We	t Weight	<b>Dil</b> 1		
Tech: MAB Analyst: MAB Seq Number: 3118192 Parameter	Cas Number	Result	RL	20 19.09	% E Units	6 Moisture: Basis: We Analysis Date	t Weight Flag			
Tech: MAB Analyst: MAB Seq Number: 3118192 Parameter Gasoline Range Hydrocarbons (GRO)	Cas Number PHC610	Result	<b>RL</b> 50.1	.20 19.09	% E Units mg/kg	6 Moisture: Basis: We Analysis Date 02.29.20 07.43	t Weight Flag	1		
Tech: MAB Analyst: MAB Seq Number: 3118192 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO)	Cas Number PHC610 C10C28DRO	Result <50.1 79.1	<b>RL</b> 50.1 50.1	20 19.09	9 E Units mg/kg mg/kg	6 Moisture: Basis: Wes Analysis Date 02.29.20 07.43 02.29.20 07.43	t Weight Flag U	1 1		
Tech: MAB Analyst: MAB Seq Number: 3118192 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) Motor Oil Range Hydrocarbons (MRO)	Cas Number PHC610 C10C28DRO PHCG2835	<b>Result</b> <50.1 79.1 <50.1	<b>RL</b> 50.1 50.1 50.1	20 19.09	9 E Units mg/kg mg/kg mg/kg	Analysis Date           02.29.20 07.43           02.29.20 07.43           02.29.20 07.43	t Weight Flag U	1 1 1		
Tech:       MAB         Analyst:       MAB         Seq Number:       3118192         Parameter       Gasoline Range Hydrocarbons (GRO)         Diesel Range Organics (DRO)       Motor Oil Range Hydrocarbons (MRO)         Total GRO-DRO       Karage Comparison (Comparison (	<b>Cas Number</b> PHC610 C10C28DRO PHCG2835 PHC628	Result <50.1 79.1 <50.1 79.1 79.1 79.1	<b>RL</b> 50.1 50.1 50.1 50.1 50.1 50.1 %	20 19.09 Units	9 E Units mg/kg mg/kg mg/kg mg/kg	Analysis Date           02.29.20 07.43           02.29.20 07.43           02.29.20 07.43           02.29.20 07.43           02.29.20 07.43	t Weight Flag U	1 1 1 1		
Tech: MAB Analyst: MAB Seq Number: 3118192 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) Motor Oil Range Hydrocarbons (MRO) Total GRO-DRO Total TPH	<b>Cas Number</b> PHC610 C10C28DRO PHCG2835 PHC628 PHC635	Result <50.1 79.1 <50.1 79.1 79.1 79.1	<b>RL</b> 50.1 50.1 50.1 50.1 50.1		9 E Units mg/kg mg/kg mg/kg mg/kg mg/kg	Analysis Date           02.29.20 07.43           02.29.20 07.43           02.29.20 07.43           02.29.20 07.43           02.29.20 07.43           02.29.20 07.43           02.29.20 07.43	t Weight Flag U U	1 1 1 1		



## LT Environmental, Inc., Arvada, CO

Sample Id:SW01Lab Sample Id:654154-001	Matrix: Soil Date Collected: 02.28.20 12.25	Date Received:02.28.20 15.20 Sample Depth: 0 - 5 ft
Analytical Method: BTEX by EPA 8021B Tech: MAB		Prep Method: SW5030B % Moisture:
Analyst: MAB Seq Number: 3118153	Date Prep: 02.28.20 18.00	Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	02.29.20 00.42	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	02.29.20 00.42	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	02.29.20 00.42	U	1
m,p-Xylenes	179601-23-1	< 0.00400	0.00400		mg/kg	02.29.20 00.42	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	02.29.20 00.42	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	02.29.20 00.42	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	02.29.20 00.42	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	108	%	70-130	02.29.20 00.42		
4-Bromofluorobenzene		460-00-4	92	%	70-130	02.29.20 00.42		



# **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 LimitSDLSample Detection LimitLOD Limit of Detection
- PQL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation
- DL Method Detection Limit
- NC Non-Calculable

SMP Clie	ent Sample	BLK	Method Blank						
BKS/LCS	S Blank Spike/Laboratory Control Sample	BKSD/LCSD	Blank Spike Duplicate/Labo	ratory Control Sample Duplicate					
MD/SD	Method Duplicate/Sample Duplicate	MS	Matrix Spike	MSD: Matrix Spike Duplicate					

- + NELAC certification not offered for this compound.
- \* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation





## QC Summary 654154

## LT Environmental, Inc.

Thriller

<b>Analytical Method:</b> Seq Number: MB Sample Id:	<b>Chloride by EPA 3</b> 3118170 7697767-1-BLK	600		Matrix: nple Id:	Solid 7697767-	1-BKS		Prep Meth Date Pr LCSD Sampl	rep: 02.2	8.20	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD RPD Lin	nit Units	Analysis Date	Flag
Chloride	<10.0	250	251	100	225	90	90-110	11 20	mg/kg	02.28.20 20:45	
Analytical Method: Seq Number:	<b>Chloride by EPA 3</b> 3118170	600		Matrix:				Prep Meth Date Pr	ep: 02.2	8.20	
Parent Sample Id:	654052-001			-	654052-0	01 S		MSD Sampl		052-001 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD RPD Lin	nit Units	Analysis Date	Flag
Chloride	45.5	200	258	106	260	107	90-110	1 20	mg/kg	02.28.20 21:02	
<b>Analytical Method:</b> Seq Number: Parent Sample Id: <b>Parameter</b> Chloride	<b>Chloride by EPA 3</b> 3118170 654164-001 <b>Parent Result</b> 216	500 Spike Amount 199		Matrix: nple Id: <b>MS</b> %Rec 103	Soil 654164-00 <b>MSD</b> Result 423	01 S MSD %Rec 104	<b>Limits</b> 90-110	Prep Meth Date Pr MSD Sampl <b>%RPD RPD Lin</b> 1 20	rep: 02.2 e Id: 654	8.20	Flag
<b>Analytical Method:</b> Seq Number: MB Sample Id: <b>Parameter</b>	<b>TPH by SW8015 M</b> 3118192 7697771-1-BLK MB Result	Iod Spike Amount		Matrix: nple Id: LCS %Rec	Solid 7697771- LCSD Result	l-BKS LCSD %Rec	Limits	Prep Meth Date Pr LCSD Sampl <b>%RPD RPD Lin</b>	rep: 02.2 e Id: 769	8015P 8.20 7771-1-BSD Analysis Date	Flag
Gasoline Range Hydrocarb	ons (GRO) <50.0	1000	885	89	910	91	70-135	3 35	mg/kg	02.29.20 06:24	
Diesel Range Organics	(DRO) <50.0	1000	961	96	987	99	70-135	3 35	mg/kg	02.29.20 06:24	
Surrogate	MB %Rec	MB Flag		CS Rec	LCS Flag	LCSI %Ree			Units	Analysis Date	
1-Chlorooctane	100			11		113		70-135	%	02.29.20 06:24	
o-Terphenyl	108		1	.09		111		70-135	%	02.29.20 06:24	

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8	015P	
Seq Number:	3118192	Matrix:	Solid	Date Prep:	02.28	8.20	
		MB Sample Id:	7697771-1-BLK				
Parameter		MB Result		τ	J <b>nits</b>	Analysis Date	Flag
Motor Oil Range Hydrocar	bons (MRO)	<50.0		n	ng/kg	02.29.20 06:05	

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

.

Page 9 of 12

#### Received by OCD: 4/8/2020 3:38:21 PM



## QC Summary 654154

## LT Environmental, Inc.

#### Thriller

Analytical Method: Seq Number:		Matrix:	Soil			Prep Method: SW8015P Date Prep: 02.28.20								
Parent Sample Id:	654051-02	29		MS Sample Id: 654051-029 S				MSD Sample Id: 654051-029 SD						
Parameter		Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag	
Gasoline Range Hydrocarb	ons (GRO)	<50.5	1010	964	95	906	91	70-135	6	35	mg/kg	03.02.20 12:44		
Diesel Range Organics	(DRO)	<50.5	1010	1190	118	1020	102	70-135	15	35	mg/kg	03.02.20 12:44		
Surrogate					IS Rec	MS Flag	MSD %Re		_	Limits	Units	Analysis Date		
1-Chlorooctane				1	15		115		7	0-135	%	03.02.20 12:44		
o-Terphenyl				1	28		114		7	0-135	%	03.02.20 12:44		

Analytical Method: Seq Number: MB Sample Id:	<b>BTEX by EPA 802</b> 3118153 7697768-1-BLK	1B	] LCS San	Matrix: ple Id:		1-BKS			Prep Metho Date Pre SD Sample	p: 02.2	5030B 8.20 7768-1-BSD	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPI	D RPD Limit	Units	Analysis Date	Flag
Benzene	< 0.00200	0.100	0.119	119	0.116	116	70-130	3	35	mg/kg	02.28.20 22:19	
Toluene	< 0.00200	0.100	0.108	108	0.106	106	70-130	2	35	mg/kg	02.28.20 22:19	
Ethylbenzene	< 0.00200	0.100	0.103	103	0.101	101	71-129	2	35	mg/kg	02.28.20 22:19	
m,p-Xylenes	< 0.00400	0.200	0.201	101	0.198	99	70-135	2	35	mg/kg	02.28.20 22:19	
o-Xylene	< 0.00200	0.100	0.103	103	0.101	101	71-133	2	35	mg/kg	02.28.20 22:19	
Surrogate	MB %Rec	MB Flag			LCS Flag	LCSD %Rec			Limits	Units	Analysis Date	
1,4-Difluorobenzene	108		1	11		110			70-130	%	02.28.20 22:19	
4-Bromofluorobenzene	92		8	88		88			70-130	%	02.28.20 22:19	

<b>Analytical Method:</b> Seq Number: Parent Sample Id:	<b>BTEX by EPA 802</b> 3118153 654051-024	1B	MS San	Matrix: nple Id:		24 S			Prep Methoo Date Prej SD Sample	p: 02.2	5030B 8.20 051-024 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPE	RPD Limit	Units	Analysis Date	Flag
Benzene	< 0.00199	0.0994	0.113	114	0.104	104	70-130	8	35	mg/kg	02.28.20 23:00	
Toluene	< 0.00199	0.0994	0.104	105	0.0941	94	70-130	10	35	mg/kg	02.28.20 23:00	
Ethylbenzene	< 0.00199	0.0994	0.0990	100	0.0878	88	71-129	12	35	mg/kg	02.28.20 23:00	
m,p-Xylenes	< 0.00398	0.199	0.192	96	0.170	85	70-135	12	35	mg/kg	02.28.20 23:00	
o-Xylene	< 0.00199	0.0994	0.0973	98	0.0873	87	71-133	11	35	mg/kg	02.28.20 23:00	
Surrogate				1S Rec	MS Flag	MSD %Ree		-	Limits	Units	Analysis Date	
1,4-Difluorobenzene			1	10		109		7	70-130	%	02.28.20 23:00	
4-Bromofluorobenzene			ç	92		89		1	70-130	%	02.28.20 23:00	

MS/MSD Percent Recovery Relative Percent Difference LCS/LCSD Recovery Log Difference [D] = 100\*(C-A) / B RPD = 200\* | (C-E) / (C+E) | [D] = 100 \* (C) / [B] Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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-	BURATURIES	Hobbs.NM (575	-392-7550) Phoenix.AJ	2 (480-355-0900) Atlanta	Hobbs.NM (575-392-7550) Phoenix.AZ (480-355-0900) Atlanta GA (770-449-8800) Tampa FL (813-620-2000)	(813-620-2000) www.xenco.com	co.com Page of
Project Manager:	Dan Moir		Bill to: (if different)	) Kyle Littrell			Comments
	LT Environmental, Inc.,	c., Permian office	Company Name:			Program: UST/PST	PRP Brownfields RRC Puperfund
_	3300 North A Street		Address:		1 Street		
City, State ZIP:	Midland, TX 79705		City, State ZIP:	Carlsbad, NM 88220	3220	Reporting:Level IIevel III	I ST/UST RRP evel IV
	(432) 236-3849	E	mail: slo@ltenv.com	Email: slo@ltenv.com, dmoir@ltenv.com, acole@ltenv.com	cole@ltenv.com	Deliverables: EDD	Other:
Project Name:	Thriller		Turn Around		ALYSIS	REQUEST	Work Order Notes
Project Number:	012918162		Routine				
P.O. Number:		71	Ξ				
Sampler's Name:	Spencer Lo		Due Date:				
SAMPLE RECEIPT	IPT Temp Blank:	ik: Yes No Wet Ice:	(Tes) No	S			
Temperature (°C):	D'L	Thermometer ID		)			
Received Intact:	NO NO	T-NU	to	) 3021)			
Cooler Custody Seals:	Yes No	A Correction Factor:	-0.2	015 0=8			TAT starts the day recevied by the
Sample Custody Seals:		Total Containers:		PA 8 EPA			lab, if received by 4:30pm
Sample Identification	ification Matrix	x Date Time Sampled Sampled	Depth	Numb TPH (E BTEX ( Chloric			Sample Comments
SW01	s s	2/28/2020 1225	0-5	×			
/							
/							
	1		0				
			H	0			
			1				
						/	
<b></b>	otal         200.7 / 6010         200.8 / 6020:           Circle         Method(s)         and         Metal(s)         to be analyzed	8R	CRA 13PPM Texas 11 AI	Sb As Ba Be Sb As Ba Be	B Cd Ca Cr Co C Cd Cr Co Cu Pb	u Fe Pb Mg Mn Mo Ni K Se Ag Mn Mo Ni Se Ag TI U	SiO2 Na Sr TI Sn U V Zn 1631 / 245.1 / 7470 / 7471 : Hg
8/2020 service: Signature of this do lice: Signa	ocument and relinquishment able only for the cost of sam ge of \$75.00 will be applied	of samples constitutes a vali ples and shall not assume ar io each project and a charge	id purchase order from c ny responsibility for any l of \$5 for each sample su	lient company to Xenco, its losses or expenses incurre bmitted to Xenco, but not	s affiliates and subcontractors. It as of by the client if such losses are du analyzed. These terms will be enforc	ice: 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 arvice. 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 (enco. 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)	(Signature)	) Received by: (Signature)	nature)	Date/Time	Relinquished by: (Signature)	ature) Received by: (Signature)	signature) Date/Time
A.	2 4	ANA	MN 3	2/28/20 15:20	N		
					<b>D</b> -		

. Released to Imaging: 9/14/2021 10:39:59 AM

Final 1.000

Received by OCD: 4/8/2020 3:38:21 PM



# **XENCO Laboratories**



Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc. Date/ Time Received: 02/28/2020 03:20:00 PM Work Order #: 654154

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

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	t	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 Checklist reviewed by: Jessica Veamer

Date: 02/28/2020

Jessica Kramer

Date: 02/28/2020

for LT Environmental, Inc.

**Project Manager: Dan Moir** 

Thriller

012918162

#### 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): 654157 Thriller 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) 654157. 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. 654157 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,

fession kenner

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 654157

Thriller

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	02-28-20 11:15	0 - 5 ft	654157-001
FS02	S	02-28-20 12:40	0 - 5 ft	654157-002
SW02	S	02-28-20 12:10	0 - 5 ft	654157-003

.



# CASE NARRATIVE

Client Name: LT Environmental, Inc. Project Name: Thriller

 Project ID:
 012918162

 Work Order Number(s):
 654157

ORIES

Report Date: 02-MAR-20 Date Received: 02/28/2020

#### Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments: Batch: LBA-3118153 BTEX by EPA 8021B Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



**Project Id:** 012918162 **Contact:** Dan Moir

**Project Location:** 

Certificate of Analysis Summary 654157

LT Environmental, Inc., Arvada, CO **Project Name: Thriller** 

Date Received in Lab: Fri Feb-28-20 03:20 pm Report Date: 02-MAR-20 Project Manager: Jessica Kramer

	Lab Id:	654157-0	001	654157-0	002	654157-0	003		
Analysis Doguested	Field Id:	FS01		FS02		SW02	!		
Analysis Requested	Depth:	0-5 ft		0-5 ft		0-5 ft			
	Matrix:	SOIL		SOIL		SOIL			
	Sampled:	Feb-28-20	11:15	Feb-28-20	12:40	Feb-28-20	12:10		
BTEX by EPA 8021B	Extracted:	Feb-28-20	18:00	Feb-28-20	18:00	Feb-28-20	18:00		
	Analyzed:	Feb-29-20	01:02	Feb-29-20	01:23	Feb-29-20	01:43		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzene		< 0.00200	0.00200	< 0.00198	0.00198	< 0.00199	0.00199		
Toluene		< 0.00200	0.00200	< 0.00198	0.00198	< 0.00199	0.00199		
Ethylbenzene		< 0.00200	0.00200	< 0.00198	0.00198	< 0.00199	0.00199		
m,p-Xylenes		< 0.00399	0.00399	< 0.00397	0.00397	< 0.00398	0.00398		
o-Xylene		0.0101	0.00200	< 0.00198	0.00198	< 0.00199	0.00199		
Total Xylenes		0.0101	0.00200	< 0.00198	0.00198	< 0.00199	0.00199		
Total BTEX		0.0101	0.00200	< 0.00198	0.00198	< 0.00199	0.00199		
Chloride by EPA 300	Extracted:	Feb-28-20	17:00	Feb-28-20	17:00	Feb-28-20	17:00		
	Analyzed:	Feb-28-20	21:24	Feb-28-20	21:30	Feb-28-20	21:36		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		506	10.1	734	9.92	33.4	9.98		
TPH by SW8015 Mod	Extracted:	Feb-28-20	19:09	Feb-28-20	19:09	Feb-28-20	19:09		
	Analyzed:	Feb-29-20	07:43	Feb-29-20	08:03	Feb-29-20	08:03		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)		< 50.1	50.1	<50.0	50.0	< 50.1	50.1		
Diesel Range Organics (DRO)		<50.1	50.1	<50.0	50.0	64.0	50.1		
Motor Oil Range Hydrocarbons (MRO)		<50.1	50.1	<50.0	50.0	<50.1	50.1		
Total GRO-DRO		<50.1	50.1	<50.0	50.0	64.0	50.1		
Total TPH		<50.1	50.1	<50.0	50.0	64.0	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

fession kenner

Jessica Kramer Project Assistant

Final 1.000



## LT Environmental, Inc., Arvada, CO

Thriller

Sample Id: FS01		Matrix:	Soil		Γ	Date Received:02.2	28.20 15.2	0
Lab Sample Id: 654157-001		Date Collec	cted: 02.28.	20 11.15	S	ample Depth: 0 - 3	5 ft	
Analytical Method: Chloride by EP	PA 300				P	Prep Method: E30	00P	
Tech: MAB					9	6 Moisture:		
Analyst: MAB		Date Prep:	02.28.	20 17.00	E	Basis: Wet	t Weight	
Seq Number: 3118170		Ĩ						
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	506	10.1		mg/kg	02.28.20 21.24		1
Analytical Method: TPH by SW801	15 Mod				P	rep Method: SW	8015P	
Analytical Method: TPH by SW801 Tech: MAB Analyst: MAB Seq Number: 3118192	15 Mod	Date Prep:	02.28.	20 19.09	9	6 Moisture:	8015P t Weight	
Tech: MAB Analyst: MAB Seq Number: 3118192	15 Mod Cas Number	Date Prep: Result	02.28. <b>RL</b>	20 19.09	9	6 Moisture:		Dil
Tech: MAB Analyst: MAB Seq Number: 3118192 Parameter				20 19.09	% E	6 Moisture: Basis: Wet	t Weight	<b>Dil</b>
Tech: MAB Analyst: MAB Seq Number: 3118192 Parameter Gasoline Range Hydrocarbons (GRO)	Cas Number	Result	RL	20 19.09	9 E Units	6 Moisture: Basis: Wet Analysis Date	t Weight Flag	
Tech: MAB Analyst: MAB Seq Number: 3118192 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO)	Cas Number PHC610	<b>Result</b> <50.1	<b>RL</b> 50.1	20 19.09	% E Units mg/kg	6 Moisture: Basis: Wet Analysis Date 02.29.20 07.43	t Weight Flag U	1
Tech: MAB Analyst: MAB	Cas Number PHC610 C10C28DRO	<b>Result</b> <50.1 <50.1	<b>RL</b> 50.1 50.1	20 19.09	9 E Units mg/kg mg/kg	6 Moisture: Basis: Wet Analysis Date 02.29.20 07.43 02.29.20 07.43	t Weight Flag U U	1
Tech: MAB Analyst: MAB Seq Number: 3118192 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) Motor Oil Range Hydrocarbons (MRO) Fotal GRO-DRO	Cas Number PHC610 C10C28DRO PHCG2835	<b>Result</b> <50.1 <50.1 <50.1	<b>RL</b> 50.1 50.1 50.1	20 19.09	9 E Units mg/kg mg/kg mg/kg	6 Moisture: Basis: Wet 02.29.20 07.43 02.29.20 07.43 02.29.20 07.43	t Weight Flag U U U	1 1 1
Tech: MAB Analyst: MAB Seq Number: 3118192 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) Motor Oil Range Hydrocarbons (MRO)	Cas Number PHC610 C10C28DRO PHCG2835 PHC628	Result           <50.1	<b>RL</b> 50.1 50.1 50.1 50.1 50.1 50.1 %	20 19.09 Units	9 E Units mg/kg mg/kg mg/kg mg/kg	Analysis Date           02.29.20 07.43           02.29.20 07.43           02.29.20 07.43           02.29.20 07.43           02.29.20 07.43	t Weight Flag U U U U U	1 1 1 1
Tech: MAB Analyst: MAB Seq Number: 3118192 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) Motor Oil Range Hydrocarbons (MRO) Total GRO-DRO Total TPH	<b>Cas Number</b> PHC610 C10C28DRO PHCG2835 PHC628 PHC635	Result           <50.1	<b>RL</b> 50.1 50.1 50.1 50.1 50.1 50.1		9 E Units mg/kg mg/kg mg/kg mg/kg mg/kg	6 Moisture: Basis: Wet 02.29.20 07.43 02.29.20 07.43 02.29.20 07.43 02.29.20 07.43 02.29.20 07.43 02.29.20 07.43	t Weight Flag U U U U U U	1 1 1 1

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## LT Environmental, Inc., Arvada, CO

Sample Id:FS01Lab Sample Id:654157-001	Matrix: Soil Date Collected: 02.28.20 11.15	Date Received:02.28.20 15.20 Sample Depth: 0 - 5 ft
Analytical Method: BTEX by EPA 8021B Tech: MAB		Prep Method: SW5030B % Moisture:
Analyst:MABSeq Number:3118153	Date Prep: 02.28.20 18.00	Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	02.29.20 01.02	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	02.29.20 01.02	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	02.29.20 01.02	U	1
m,p-Xylenes	179601-23-1	< 0.00399	0.00399		mg/kg	02.29.20 01.02	U	1
o-Xylene	95-47-6	0.0101	0.00200		mg/kg	02.29.20 01.02		1
Total Xylenes	1330-20-7	0.0101	0.00200		mg/kg	02.29.20 01.02		1
Total BTEX		0.0101	0.00200		mg/kg	02.29.20 01.02		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	112	%	70-130	02.29.20 01.02		
4-Bromofluorobenzene		460-00-4	95	%	70-130	02.29.20 01.02		



## LT Environmental, Inc., Arvada, CO

Thriller

Sample Id: FS02 Lab Sample Id: 654157-002		Matrix: Soil Date Collected: 02.28.20 12.40				Date Received:02.28.20 15.20 Sample Depth: 0 - 5 ft			
Analytical Method: Chloride by EP	A 300				P	Prep Method: E30	)0P		
Tech: MAB						6 Moisture:			
Analyst: MAB		Date Prep:	02.28	.20 17.00	E	Basis: We	t Weight		
Seq Number: 3118170		Dute Trep.					0		
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil	
Chloride	16887-00-6	734	9.92		mg/kg	02.28.20 21.30		1	
Analytical Method: TPH by SW801	15 Mod				P	Prep Method: SW	8015P		
Analytical Method: TPH by SW801 Tech: MAB Analyst: MAB Seq Number: 3118192	15 Mod	Date Prep:	02.28	.20 19.09	%	Prep Method: SW 6 Moisture: Basis: We	8015P t Weight		
Tech: MAB Analyst: MAB	15 Mod Cas Number	Date Prep: <b>Result</b>	02.28 RL	.20 19.09	%	6 Moisture:		Dil	
Tech: MAB Analyst: MAB Seq Number: 3118192		-		.20 19.09	9 E	6 Moisture: Basis: We	t Weight	<b>Dil</b>	
Tech: MAB Analyst: MAB Seq Number: 3118192 Parameter	Cas Number	Result	RL	.20 19.09	% E Units	6 Moisture: Basis: We Analysis Date	t Weight Flag		
Tech: MAB Analyst: MAB Seq Number: 3118192 Parameter Gasoline Range Hydrocarbons (GRO)	Cas Number PHC610	Result <50.0	<b>RL</b> 50.0	.20 19.09	% Units mg/kg	6 Moisture: Basis: We Analysis Date 02.29.20 08.03	t Weight Flag U	1	
Tech: MAB Analyst: MAB Seq Number: 3118192 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO)	Cas Number PHC610 C10C28DRO	<b>Result</b> <50.0 <50.0	<b>RL</b> 50.0 50.0	.20 19.09	9 E Units mg/kg mg/kg	6 Moisture: Basis: West Analysis Date 02.29.20 08.03 02.29.20 08.03	t Weight Flag U U	1 1	
Tech: MAB Analyst: MAB Seq Number: 3118192 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) Motor Oil Range Hydrocarbons (MRO)	Cas Number PHC610 C10C28DRO PHCG2835	Result <50.0 <50.0 <50.0	<b>RL</b> 50.0 50.0 50.0	.20 19.09	9 E Units mg/kg mg/kg mg/kg	6 Moisture:         3asis:       Wei <b>Analysis Date</b> 02.29.20 08.03         02.29.20 08.03         02.29.20 08.03         02.29.20 08.03	t Weight Flag U U U	1 1 1	
Tech: MAB Analyst: MAB Seq Number: 3118192 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) Motor Oil Range Hydrocarbons (MRO) Total GRO-DRO	Cas Number PHC610 C10C28DRO PHCG2835 PHC628	Result           <50.0	<b>RL</b> 50.0 50.0 50.0 50.0 50.0 50.0 %	.20 19.09 Units	9 E Units mg/kg mg/kg mg/kg mg/kg	Analysis Date           02.29.20 08.03           02.29.20 08.03           02.29.20 08.03           02.29.20 08.03           02.29.20 08.03           02.29.20 08.03	t Weight Flag U U U U U	1 1 1 1	
Tech: MAB Analyst: MAB Seq Number: 3118192 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) Motor Oil Range Hydrocarbons (MRO) Total GRO-DRO Total TPH	<b>Cas Number</b> PHC610 C10C28DRO PHCG2835 PHC628 PHC635	Result           <50.0	<b>RL</b> 50.0 50.0 50.0 50.0 50.0		9 E Units mg/kg mg/kg mg/kg mg/kg mg/kg	6 Moisture:         Basis:       Wei         Analysis Date         02.29.20 08.03         02.29.20 08.03         02.29.20 08.03         02.29.20 08.03         02.29.20 08.03         02.29.20 08.03         02.29.20 08.03         02.29.20 08.03	t Weight Flag U U U U U U	1 1 1 1	

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## LT Environmental, Inc., Arvada, CO

Sample Id:FS02Lab Sample Id:654157-002	Matrix: Soil Date Collected: 02.28.20 12.40	Date Received:02.28.20 15.20 Sample Depth: 0 - 5 ft
Analytical Method: BTEX by EPA 8021B Tech: MAB		Prep Method: SW5030B % Moisture:
Analyst: MAB Seq Number: 3118153	Date Prep: 02.28.20 18.00	Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00198	0.00198		mg/kg	02.29.20 01.23	U	1
Toluene	108-88-3	< 0.00198	0.00198		mg/kg	02.29.20 01.23	U	1
Ethylbenzene	100-41-4	< 0.00198	0.00198		mg/kg	02.29.20 01.23	U	1
m,p-Xylenes	179601-23-1	< 0.00397	0.00397		mg/kg	02.29.20 01.23	U	1
o-Xylene	95-47-6	< 0.00198	0.00198		mg/kg	02.29.20 01.23	U	1
Total Xylenes	1330-20-7	< 0.00198	0.00198		mg/kg	02.29.20 01.23	U	1
Total BTEX		< 0.00198	0.00198		mg/kg	02.29.20 01.23	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	92	%	70-130	02.29.20 01.23		
1,4-Difluorobenzene		540-36-3	111	%	70-130	02.29.20 01.23		



## LT Environmental, Inc., Arvada, CO

Sample Id: SW02		Matrix:	Soil		Γ	Date Received:02.2	28.20 15.2	0
Lab Sample Id: 654157-003		Date Colle	ected: 02.28.	20 12.10	S	Sample Depth: 0 -	5 ft	
Analytical Method: Chloride by EP	A 300				F	Prep Method: E30	)0P	
Tech: MAB					9	% Moisture:		
Analyst: MAB		Date Prep:	02.28.	20 17.00	E	Basis: We	t Weight	
Seq Number: 3118170		ľ						
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	33.4	9.98		mg/kg	02.28.20 21.36		1
Analytical Method: TPH by SW801	15 Mod				F	Prep Method: SW	8015P	
Analytical Method: TPH by SW801 Tech: MAB Analyst: MAB Seq Number: 3118192	15 Mod	Date Prep:	02.28.	20 19.09	9	% Moisture:	8015P t Weight	
Tech: MAB Analyst: MAB	15 Mod Cas Number	Date Prep: Result	02.28. RL	20 19.09	9	% Moisture:		Dil
Tech: MAB Analyst: MAB Seq Number: 3118192 Parameter				20 19.09	9 E	6 Moisture: Basis: We	t Weight	<b>Dil</b>
Tech: MAB Analyst: MAB Seq Number: 3118192 Parameter Gasoline Range Hydrocarbons (GRO)	Cas Number	Result	RL	20 19.09	9 E Units	<ul> <li>Moisture:</li> <li>Basis: We</li> <li>Analysis Date</li> </ul>	t Weight Flag	
Tech: MAB Analyst: MAB Seq Number: 3118192	Cas Number PHC610	Result <50.1	<b>RL</b> 50.1	20 19.09	9 E Units mg/kg	Moisture: Basis: We Analysis Date 02.29.20 08.03	t Weight Flag	1
Tech: MAB Analyst: MAB Seq Number: 3118192 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO)	Cas Number PHC610 C10C28DRO	Result <50.1 64.0	<b>RL</b> 50.1 50.1	20 19.09	9 E Units mg/kg mg/kg	<ul> <li>Moisture:</li> <li>Basis: We</li> <li>Analysis Date</li> <li>02.29.20 08.03</li> <li>02.29.20 08.03</li> </ul>	t Weight Flag U	1
Tech: MAB Analyst: MAB Seq Number: 3118192 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) Motor Oil Range Hydrocarbons (MRO)	Cas Number PHC610 C10C28DRO PHCG2835	<b>Result</b> <50.1 64.0 <50.1	<b>RL</b> 50.1 50.1 50.1	20 19.09	9 E Units mg/kg mg/kg mg/kg	<ul> <li>Moisture:</li> <li>Basis: We</li> <li>Analysis Date</li> <li>02.29.20 08.03</li> <li>02.29.20 08.03</li> <li>02.29.20 08.03</li> <li>02.29.20 08.03</li> </ul>	t Weight Flag U	1 1 1
Tech: MAB Analyst: MAB Seq Number: 3118192 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) Motor Oil Range Hydrocarbons (MRO)	Cas Number PHC610 C10C28DRO PHCG2835 PHC628	Result <50.1 64.0 <50.1 64.0 64.0	<b>RL</b> 50.1 50.1 50.1 50.1 50.1 50.1 %	20 19.09 Units	9 E Units mg/kg mg/kg mg/kg mg/kg	<ul> <li>Moisture:</li> <li>Basis: We</li> <li>Analysis Date</li> <li>02.29.20 08.03</li> <li>02.29.20 08.03</li> <li>02.29.20 08.03</li> <li>02.29.20 08.03</li> <li>02.29.20 08.03</li> </ul>	t Weight Flag U	1 1 1 1
Tech: MAB Analyst: MAB Seq Number: 3118192 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) Motor Oil Range Hydrocarbons (MRO) Total GRO-DRO Fotal TPH	<b>Cas Number</b> PHC610 C10C28DRO PHCG2835 PHC628 PHC635	Result <50.1 64.0 <50.1 64.0 64.0	<b>RL</b> 50.1 50.1 50.1 50.1 50.1		9 E Units mg/kg mg/kg mg/kg mg/kg mg/kg	6 Moisture:         Basis:       We         Analysis Date         02.29.20 08.03         02.29.20 08.03         02.29.20 08.03         02.29.20 08.03         02.29.20 08.03         02.29.20 08.03         02.29.20 08.03         02.29.20 08.03         02.29.20 08.03	t Weight Flag U U	1 1 1 1



## LT Environmental, Inc., Arvada, CO

Sample Id:SW02Lab Sample Id:654157-003	Matrix: Soil Date Collected: 02.28.20 12.10	Date Received:02.28.20 15.20 Sample Depth: 0 - 5 ft
Analytical Method: BTEX by EPA 8021B Tech: MAB		Prep Method: SW5030B % Moisture:
Analyst:MABSeq Number:3118153	Date Prep: 02.28.20 18.00	Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00199	0.00199		mg/kg	02.29.20 01.43	U	1
Toluene	108-88-3	< 0.00199	0.00199		mg/kg	02.29.20 01.43	U	1
Ethylbenzene	100-41-4	< 0.00199	0.00199		mg/kg	02.29.20 01.43	U	1
m,p-Xylenes	179601-23-1	< 0.00398	0.00398		mg/kg	02.29.20 01.43	U	1
o-Xylene	95-47-6	< 0.00199	0.00199		mg/kg	02.29.20 01.43	U	1
Total Xylenes	1330-20-7	< 0.00199	0.00199		mg/kg	02.29.20 01.43	U	1
Total BTEX		< 0.00199	0.00199		mg/kg	02.29.20 01.43	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	89	%	70-130	02.29.20 01.43		
1,4-Difluorobenzene		540-36-3	89	%	70-130	02.29.20 01.43		



# **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 LimitSDLSample Detection LimitLOD Limit of Detection
- PQL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation
- DL Method Detection Limit
- NC Non-Calculable

SMP Clie	ent Sample	BLK	Method Blank	
BKS/LCS	S Blank Spike/Laboratory Control Sample	BKSD/LCSD	Blank Spike Duplicate/Labo	ratory Control Sample Duplicate
MD/SD	Method Duplicate/Sample Duplicate	MS	Matrix Spike	MSD: Matrix Spike Duplicate

- + NELAC certification not offered for this compound.
- \* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation





## QC Summary 654157

# LT Environmental, Inc.

Thriller

Analytical Method: Seq Number: MB Sample Id:	3118170 7697767-1-BLK		LCS Sar	-	7697767-			Prep Meth Date P LCSD Samp	rep: 02.2 e Id: 7693	8.20 7767-1-BSD	
Parameter	MB Result	~	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD RPD Lin	nit Units	Analysis Date	Flag
Chloride	<10.0	250	251	100	225	90	90-110	11 20	mg/kg	02.28.20 20:45	
<b>Analytical Method:</b> Seq Number: Parent Sample Id:	<b>Chloride by EPA</b> 3118170 654052-001	300		Matrix:	Soil 654052-0	01 S		Prep Meth Date P MSD Sampl	rep: 02.2	.8.20	
Parameter	Parent	-	MS	MS	MSD	MSD	Limits	%RPD RPD Lin		Analysis	Flag
Chloride	Result 45.		Result 258	%Rec 106	Result 260	<b>%Rec</b> 107	90-110	1 20	mg/kg	<b>Date</b> 02.28.20 21:02	
Chloride	45	200	238	100	200	107	90-110	1 20	iiig/kg	02.28.20 21.02	
<b>Analytical Method:</b> Seq Number: Parent Sample Id:	<b>Chloride by EPA</b> 3118170 654164-001	300		Matrix: nple Id:	Soil 654164-0	01 S		Prep Meth Date P MSD Sampl	rep: 02.2	8.20	
Parameter	Parent	Spike	MS	MS	MSD	MSD	Limits	%RPD RPD Lin	nit Units	Analysis	
I al allietel	Result	-	Result	%Rec	Docult						Flag
Chloride	Result 210	Amount	Result 420	<b>%Rec</b> 103	Result 423	% <b>Rec</b> 104	90-110	1 20	mg/kg	Date 02.28.20 22:27	Flag
	210	<b>Amount</b> 5 199	420	103 Matrix:	423	<b>%Rec</b> 104	90-110	1 20 Prep Meth Date P LCSD Samp	mg/kg nod: SW8 rep: 02.2	Date 02.28.20 22:27 8015P 88.20	Flag
Chloride Analytical Method: Seq Number:	210 <b>TPH by SW8015</b> 3118192	Amount 5 199 Mod Spike	420	103 Matrix:	423 Solid	<b>%Rec</b> 104	90-110 Limits	Prep Meth Date P	mg/kg hod: SW8 rep: 02.2 e Id: 769	Date 02.28.20 22:27 8015P 88.20	Flag Flag
Chloride Analytical Method: Seq Number: MB Sample Id: Parameter Gasoline Range Hydrocarbo	210 TPH by SW8015 3118192 7697771-1-BLK MB Result ons (GRO) <50.0	Amount 5 199 Mod Spike Amount 0 1000	420 LCS Sar LCS Result 885	103 Matrix: nple Id: <b>LCS</b> %Rec 89	423 Solid 7697771- LCSD Result 910	%Rec 104 1-BKS LCSD %Rec 91	<b>Limits</b> 70-135	Prep Meth Date P LCSD Samp %RPD RPD Lin 3 35	mg/kg nod: SW8 rep: 02.2 e Id: 7697 nit Units mg/kg	Date 02.28.20 22:27 8015P 88.20 7771-1-BSD Analysis Date 02.29.20 06:24	5
Chloride Analytical Method: Seq Number: MB Sample Id: Parameter	210 TPH by SW8015 3118192 7697771-1-BLK MB Result ons (GRO) <50.0	Amount 5 199 Mod Spike Amount 0 1000	420 LCS Sar LCS Result	103 Matrix: nple Id: <b>LCS</b> %Rec	423 Solid 7697771- LCSD Result	%Rec 104 1-BKS LCSD %Rec	Limits	Prep Meth Date P LCSD Samp <b>%RPD RPD Lin</b>	mg/kg hod: SW8 rep: 02.2 e Id: 7697 hit Units	Date 02.28.20 22:27 8015P 88.20 7771-1-BSD Analysis Date	5
Chloride Analytical Method: Seq Number: MB Sample Id: Parameter Gasoline Range Hydrocarbo	210 TPH by SW8015 3118192 7697771-1-BLK MB Result ons (GRO) <50.0	Amount 5 199 Mod Spike Amount 0 1000 0 1000 MB	420 LCS Sar LCS Result 885 961 L	103 Matrix: nple Id: <b>LCS</b> %Rec 89 96 CS	423 Solid 7697771- LCSD Result 910	%Rec 104 1-BKS LCSD %Rec 91	Limits 70-135 70-135 0 LCS	Prep Meth Date P LCSD Samp %RPD RPD Lin 3 35 3 35 D Limits	mg/kg nod: SW8 rep: 02.2 e Id: 7697 nit Units mg/kg	Date 02.28.20 22:27 8015P 88.20 7771-1-BSD Analysis Date 02.29.20 06:24	5
Chloride Analytical Method: Seq Number: MB Sample Id: Parameter Gasoline Range Hydrocarbo Diesel Range Organics (	216 TPH by SW8015 3118192 7697771-1-BLK MB Result ons (GRO) <50.0 DRO) <50.0 MB	Amount           5         199           Mod         Spike           Amount         1000           0         1000           MB         Flag	420 LCS Sar LCS Result 885 961 L % 1	103 Matrix: nple Id: <b>LCS</b> %Rec 89 96 CS	423 Solid 7697771- LCSD Result 910 987 LCS	%Rec 104 1-BKS LCSD %Rec 91 99 LCSI	Limits 70-135 70-135 0 LCS	Prep Meth Date P LCSD Samp %RPD RPD Lin 3 35 3 35 D Limits	mg/kg nod: SW8 rep: 02.2 e Id: 769 <b>nit Units</b> mg/kg mg/kg	Date 02.28.20 22:27 8015P 88.20 7771-1-BSD Analysis Date 02.29.20 06:24 02.29.20 06:24 02.29.20 06:24	5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8	015P	
Seq Number:	3118192	Matrix:	Solid	Date Prep:	02.28	3.20	
		MB Sample Id:	7697771-1-BLK				
Parameter		MB Result		U	Inits	Analysis Date	Flag
Motor Oil Range Hydrocar	bons (MRO)	<50.0		m	ng/kg	02.29.20 06:05	

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

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#### Received by OCD: 4/8/2020 3:38:21 PM



## QC Summary 654157

## LT Environmental, Inc.

#### Thriller

Analytical Method: Seq Number:	<b>TPH by S</b> 3118192	W8015 M	Matrix: Soil Date Prep: 02.28.20										
Parent Sample Id:	654051-02	9		MS San	nple Id:	654051-02	29 S		M	SD Sample 1	ld: 6540	051-029 SD	
Parameter		Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPE	ORPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbo	ns (GRO)	< 50.5	1010	964	95	906	91	70-135	6	35	mg/kg	03.02.20 12:44	
Diesel Range Organics (I	DRO)	< 50.5	1010	1190	118	1020	102	70-135	15	35	mg/kg	03.02.20 12:44	
Surrogate					1S Rec	MS Flag	MSD %Re		-	Limits	Units	Analysis Date	
1-Chlorooctane				1	15		115		7	70-135	%	03.02.20 12:44	
o-Terphenyl				1	28		114		7	70-135	%	03.02.20 12:44	

Analytical Method: Seq Number: MB Sample Id:	<b>BTEX by EPA 802</b> 3118153 7697768-1-BLK	ep: 02.2	SW5030B 02.28.20 7697768-1-BSD									
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPI	) RPD Lim	it Units	Analysis Date	Flag
Benzene	< 0.00200	0.100	0.119	119	0.116	116	70-130	3	35	mg/kg	02.28.20 22:19	
Toluene	< 0.00200	0.100	0.108	108	0.106	106	70-130	2	35	mg/kg	02.28.20 22:19	
Ethylbenzene	< 0.00200	0.100	0.103	103	0.101	101	71-129	2	35	mg/kg	02.28.20 22:19	
m,p-Xylenes	< 0.00400	0.200	0.201	101	0.198	99	70-135	2	35	mg/kg	02.28.20 22:19	
o-Xylene	< 0.00200	0.100	0.103	103	0.101	101	71-133	2	35	mg/kg	02.28.20 22:19	
Surrogate	MB %Rec	MB Flag			LCS Flag	LCSI %Re			Limits	Units	Analysis Date	
1,4-Difluorobenzene	108		1	11		110			70-130	%	02.28.20 22:19	
4-Bromofluorobenzene	92		8	88		88			70-130	%	02.28.20 22:19	

<b>Analytical Method:</b> Seq Number: Parent Sample Id:	<b>BTEX by EPA 802</b> 3118153 654051-024	1B	MS San	Matrix: nple Id:	Soil 654051-02	24 S		M	5030B 8.20 051-024 SD			
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPI	ORPD Limit	Units	Analysis Date	Flag
Benzene	< 0.00199	0.0994	0.113	114	0.104	104	70-130	8	35	mg/kg	02.28.20 23:00	
Toluene	< 0.00199	0.0994	0.104	105	0.0941	94	70-130	10	35	mg/kg	02.28.20 23:00	
Ethylbenzene	< 0.00199	0.0994	0.0990	100	0.0878	88	71-129	12	35	mg/kg	02.28.20 23:00	
m,p-Xylenes	< 0.00398	0.199	0.192	96	0.170	85	70-135	12	35	mg/kg	02.28.20 23:00	
o-Xylene	< 0.00199	0.0994	0.0973	98	0.0873	87	71-133	11	35	mg/kg	02.28.20 23:00	
Surrogate				IS Rec	MS Flag	MSD %Ree		-	Limits	Units	Analysis Date	
1,4-Difluorobenzene			1	10		109		,	70-130	%	02.28.20 23:00	
4-Bromofluorobenzene			ç	02		89		,	70-130	%	02.28.20 23:00	

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

.

ved by	OCD:	8/20 arvice. Xenco will be liable only for the liable only for	Circle Method(s) an	7 Total 200.7 / 6010	M				SW02	FS02	1.001	E601	Sample Identification	Sample Custody Seals:	Cooler Custody Seals:	Received Intact:	Temperature (°C):	SAMPLE RECEIPT	Sampler's Name:	P.O. Number:	Project Number:	Project Name:			ZIP:		Company Name:	Project Manager:	ge 102 o
	a l	nily for the cost of samples a \$75.00 will be applied to eac	Circle Method(s) and Metal(s) to be analyzed s: Signature of this document and relinquishment of samples	200 8 / 6020-					S				2	3	Yes No NIA	(Yes) No	1. 6	T Temp Blank:	Spencer Lo		012918162	Thriller	(432) 230-3049	(100) 000 00 00 00	lidland TY 70705	3300 North A Street	LT Environmental Inc	Dan Moir	
		Ind shall not assume any re- h project and a charge of st	Zed TCLP / SPLP						2/28/2020 1210	2/28/2020 1240	2/28/2020 1115	0	Date Time	Total Containers:	Correction Factor:	イーンとう	The	No Wet Ice:		Ru			Email:			remian office	D		Hobbs NM (575.
	Life) Date/Ti Life) Date/Ti	sponsibility for any losses for each sample submitte	TCLP / SPLP 6010: 8RCRA 1						0-5 1	0-5 1	0-5 1	Depth		g	-0.2	ŭ		No	Due Date:	Rush: 24H	Routine	Turn Around	slo@ltenv.com,	City, State ZIP:	Address:	Company Name:	Bill to: (if different)	Jaz-1300) Phoenix,AZ (4	ston, TX (281) 240-4200 [ lland, TX (432-704-5440)
6 4	Date/Time	ompany to Xenco, its affil or expenses incurred by d to Xenco, but not analy	Sb As Ba Be B C Sb As Ba Be Cd				10	P1	×	×	× × ×	BTE	(EPA X (EP) ride (I	A 0:	=80	20							dmoir@ltenv.com, acole@ltenv.com	Carlsbad, NM 88220	3104 East Green Street	XTO Energy	Kyle Littrell	80-355-0900) Atlanta,(	Dallas,TX (214) 902-0300 San Antor EL Paso,TX (915)585-3443 Lubboc
	Relinquished by: (Signature)	Provide a vision provides 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 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)	B Cd Ca Cr Co Cu Fe Pb Mg Mn N Cd Cr Co Cu Pb Mn Mo Ni Se Ag																			ANAI VSIS DEDI IEST	le@ltenv.com	20	Street			Tiourus, Ivin (27, 2-322-1330) Frioenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813-620-2000)	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
	re) Received by: (Signature)	is standard terms and conditions circumstances beyond the contro inless previously negotiated.	Pb Mg Mn Mo Ni K Se A Ao Ni Se Ag Ti U																				Deliverables: EDD	Reporting:Level II Lev	State of Project:	Program: UST/PST PRP Brownfields RRC			
Rev	(Signature)	-	g SiO2 Na Sr 1631 / 245									Sam	lab, if	TAT starts							WC	l	ADaPT		[	RP Brownfields	š	www.xenco.com Page	Work Order No:
	Date/Time		TI Sn U V Zn 5.1/7470 /7471 : Hg		/	/						Sample Comments	lab, if received by 4:30pm	the day population but the							WORK Order Notes		ň	RRP Nevel IV		RRC Tunerfund		of	+ c   c a

. Released to Imaging: 9/14/2021 10:39:59 AM

Final 1.000

Received by OCD: 4/8/2020 3:38:21 PM



# **XENCO Laboratories**



Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc. Date/ Time Received: 02/28/2020 03:20:00 PM Work Order #: 654157

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

Temperature Measuring device used : T-NM-007

Sample Receipt Che	cklist	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 Checklist reviewed by: Jessica Veamer

Date: 02/28/2020

Jessica Kramer

Date: 02/28/2020

for LT Environmental, Inc.

**Project Manager: Dan Moir** 

Thriller

012918162

#### 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): 654160 Thriller 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) 654160. 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. 654160 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,

Jession Vermer

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

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Page 2 of 16



# Sample Cross Reference 654160

## LT Environmental, Inc., Arvada, CO

Thriller

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH06	S	02-28-20 13:10	1 ft	654160-001
PH06A	S	02-28-20 13:20	3 ft	654160-002
PH06B	S	02-28-20 13:30	5 ft	654160-003

.



# CASE NARRATIVE

Client Name: LT Environmental, Inc. Project Name: Thriller

 Project ID:
 012918162

 Work Order Number(s):
 654160

ORIES

Report Date: 02-MAR-20 Date Received: 02/28/2020

#### Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments: Batch: LBA-3118153 BTEX by EPA 8021B Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



**Project Id:** 012918162 **Contact:** 

**Project Location:** 

## Dan Moir

## Certificate of Analysis Summary 654160

LT Environmental, Inc., Arvada, CO **Project Name: Thriller** 

Date Received in Lab: Fri Feb-28-20 03:20 pm Report Date: 02-MAR-20 Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	654160-001		654160-0	002	654160-003			
	Field Id:	PH06		PH06A		PH06B			
	Depth:	1- ft		3- ft		5- ft			
	Matrix:	SOIL		SOIL		SOIL			
	Sampled:	Feb-28-20 13:10		Feb-28-20	13:20	Feb-28-20 13:30			
BTEX by EPA 8021B	Extracted:	Feb-28-20	Feb-28-20 18:00		Feb-28-20 18:00		18:00	Î	
	Analyzed:	Feb-29-20	02:03	Feb-29-20	02:24	Feb-29-20	02:44		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzene		< 0.00200	0.00200	< 0.00200	0.00200	< 0.00199	0.00199		
Toluene		< 0.00200	0.00200	< 0.00200	0.00200	< 0.00199	0.00199		
Ethylbenzene		< 0.00200	0.00200	< 0.00200	0.00200	<0.00199	0.00199		
m,p-Xylenes		< 0.00400	0.00400	< 0.00399	0.00399	< 0.00398	0.00398		
o-Xylene		< 0.00200	0.00200	< 0.00200	0.00200	< 0.00199	0.00199		
Total Xylenes		< 0.00200	0.00200	< 0.00200	0.00200	< 0.00199	0.00199		
Total BTEX		< 0.00200	0.00200	< 0.00200	0.00200	< 0.00199	0.00199		
Chloride by EPA 300	Extracted:	Feb-28-20 17:00		Feb-28-20 17:00		Feb-28-20 17:00			
	Analyzed:	Feb-28-20	21:53	Feb-28-20 21:58		Feb-28-20 22:04			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		59.1	9.96	10.7	9.84	36.3	9.98		
TPH by SW8015 Mod	Extracted:			Feb-28-20 19:09 Feb-29-20 08:23		Feb-28-20 19:09 Feb-29-20 08:42			
	Analyzed:								
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)	·	<50.0	50.0	<50.1	50.1	<50.0	50.0		
Diesel Range Organics (DRO)		<50.0	50.0	<50.1	50.1	<50.0	50.0		
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<50.1	50.1	<50.0	50.0		
Total GRO-DRO		<50.0	50.0	<50.1	50.1	<50.0	50.0		
Total TPH		<50.0	50.0	<50.1	50.1	<50.0	50.0		

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

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

fession kramer

Jessica Kramer Project Assistant


### LT Environmental, Inc., Arvada, CO

Thriller

Sample Id: PH06		Matrix: Soil			Date Received:02.28.20 15.20			
Lab Sample Id: 654160-001		Date Collec	cted: 02.28.	20 13.10	S	Sample Depth: 1 ft		
Analytical Method: Chloride by EP.	A 300				Р	rep Method: E30	0P	
Tech: MAB					%	6 Moisture:		
Analyst: MAB		Date Prep:	02.28.	20 17.00	В	asis: We	t Weight	
Seq Number: 3118170		1						
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	59.1	9.96		mg/kg	02.28.20 21.53		1
Analytical Method: TPH by SW801	15 Mod				Р	rep Method: SW	8015P	
Analytical Method: TPH by SW801 Tech: MAB Analyst: MAB Seq Number: 3118192	15 Mod	Date Prep:	02.28.	20 19.09	%	rep Method: SW 6 Moisture: 8asis: Wet	8015P t Weight	
Tech: MAB Analyst: MAB Seq Number: 3118192	15 Mod Cas Number	Date Prep: Result	02.28. <b>RL</b>	20 19.09	%	6 Moisture:		Dil
Tech: MAB Analyst: MAB Seq Number: 3118192 Parameter		-		20 19.09	% B	6 Moisture: Basis: Web	t Weight	<b>Dil</b> 1
Tech: MAB Analyst: MAB Seq Number: 3118192 Parameter Gasoline Range Hydrocarbons (GRO)	Cas Number	Result	RL	20 19.09	% E Units	6 Moisture: Basis: Wet Analysis Date	t Weight Flag	
Tech: MAB Analyst: MAB Seq Number: 3118192 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO)	Cas Number PHC610	Result <50.0	<b>RL</b> 50.0	20 19.09	% E Units mg/kg	6 Moisture: Basis: Wet Analysis Date 03.02.20 13.45	t Weight Flag U	1
Tech: MAB Analyst: MAB	Cas Number PHC610 C10C28DRO	<b>Result</b> <50.0 <50.0	<b>RL</b> 50.0 50.0	20 19.09	% E Units mg/kg mg/kg	6 Moisture: Basis: Wet Analysis Date 03.02.20 13.45 03.02.20 13.45	t Weight Flag U U	1
Tech: MAB Analyst: MAB Seq Number: 3118192 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) Motor Oil Range Hydrocarbons (MRO) Fotal GRO-DRO	Cas Number PHC610 C10C28DRO PHCG2835	<b>Result</b> <50.0 <50.0 <50.0	<b>RL</b> 50.0 50.0 50.0	20 19.09	% E Units mg/kg mg/kg mg/kg	Moisture:           Basis:         Wet           03.02.20         13.45           03.02.20         13.45           03.02.20         13.45           03.02.20         13.45	t Weight Flag U U U	1 1 1
Tech: MAB Analyst: MAB Seq Number: 3118192 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) Motor Oil Range Hydrocarbons (MRO) Fotal GRO-DRO	Cas Number PHC610 C10C28DRO PHCG2835 PHC628	Result           <50.0	<b>RL</b> 50.0 50.0 50.0 50.0 50.0 50.0 %	20 19.09 Units	% E Units mg/kg mg/kg mg/kg mg/kg	Moisture:           Basis:         Wet           Analysis Date           03.02.20 13.45           03.02.20 13.45           03.02.20 13.45           03.02.20 13.45           03.02.20 13.45           03.02.20 13.45	t Weight Flag U U U U U	1 1 1 1
Tech: MAB Analyst: MAB Seq Number: 3118192 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) Motor Oil Range Hydrocarbons (MRO) Fotal GRO-DRO Fotal TPH	<b>Cas Number</b> PHC610 C10C28DRO PHCG2835 PHC628 PHC635	Result           <50.0	<b>RL</b> 50.0 50.0 50.0 50.0 50.0 50.0		% E Units mg/kg mg/kg mg/kg mg/kg mg/kg	Moisture:           Basis:         Wet           Analysis Date           03.02.20 13.45           03.02.20 13.45           03.02.20 13.45           03.02.20 13.45           03.02.20 13.45           03.02.20 13.45           03.02.20 13.45           03.02.20 13.45           03.02.20 13.45           03.02.20 13.45	t Weight Flag U U U U U U	1 1 1 1

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### LT Environmental, Inc., Arvada, CO

Sample Id:PH06Lab Sample Id:654160-001	Matrix: Soil Date Collected: 02.28.20 13.10	Date Received:02.28.20 15.20 Sample Depth: 1 ft
Analytical Method: BTEX by EPA 8021B Tech: MAB		Prep Method: SW5030B % Moisture:
Analyst: MAB Seq Number: 3118153	Date Prep: 02.28.20 18.00	Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	02.29.20 02.03	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	02.29.20 02.03	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	02.29.20 02.03	U	1
m,p-Xylenes	179601-23-1	< 0.00400	0.00400		mg/kg	02.29.20 02.03	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	02.29.20 02.03	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	02.29.20 02.03	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	02.29.20 02.03	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	89	%	70-130	02.29.20 02.03		
1,4-Difluorobenzene		540-36-3	107	%	70-130	02.29.20 02.03		



### LT Environmental, Inc., Arvada, CO

Sample Id:PH06ALab Sample Id:654160-002		Matrix: Date Colle	Soil ected: 02.28	.20 13.20		Date Received:02.28.20 15.20 Sample Depth: 3 ft		
Analytical Method: Chloride by EP	PA 300				F	Prep Method: E30	90P	
Tech: MAB					9	% Moisture:		
Analyst: MAB		Date Prep:	02.28	.20 17.00	E	Basis: We	t Weight	
Seq Number: 3118170		-						
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	10.7	9.84		mg/kg	02.28.20 21.58		1
Analytical Method: TPH by SW801	15 Mod				F	Prep Method: SW	78015P	
Analytical Method: TPH by SW801 Tech: MAB Analyst: MAB Seq Number: 3118192	15 Mod	Date Prep:	02.28	.20 19.09	9	% Moisture:	78015P t Weight	
Tech: MAB Analyst: MAB	15 Mod Cas Number	Date Prep: <b>Result</b>	02.28. RL	.20 19.09	9	% Moisture:		Dil
Tech: MAB Analyst: MAB Seq Number: 3118192 Parameter		-		.20 19.09	9 E	Moisture: Basis: We	t Weight	<b>Dil</b>
Tech:MABAnalyst:MABSeq Number:3118192	Cas Number	Result	RL	.20 19.09	9 E Units	Moisture: Basis: We Analysis Date	t Weight Flag	
Tech: MAB Analyst: MAB Seq Number: 3118192 Parameter Gasoline Range Hydrocarbons (GRO)	Cas Number PHC610	<b>Result</b> <50.1	<b>RL</b> 50.1	.20 19.09	9 E Units mg/kg	Moisture: Basis: We Analysis Date 02.29.20 08.23	t Weight Flag U	1
Tech: MAB Analyst: MAB Seq Number: 3118192 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO)	Cas Number PHC610 C10C28DRO	<b>Result</b> <50.1 <50.1	<b>RL</b> 50.1 50.1	.20 19.09	9 E Units mg/kg mg/kg	Moisture: Basis: We Analysis Date 02.29.20 08.23 02.29.20 08.23	t Weight Flag U U	1 1
Tech: MAB Analyst: MAB Seq Number: 3118192 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) Motor Oil Range Hydrocarbons (MRO)	Cas Number PHC610 C10C28DRO PHCG2835	<b>Result</b> <50.1 <50.1 <50.1	<b>RL</b> 50.1 50.1 50.1	.20 19.09	9 E Units mg/kg mg/kg mg/kg	Moisture: Basis: We Analysis Date 02.29.20 08.23 02.29.20 08.23 02.29.20 08.23	t Weight Flag U U U	1 1 1
Tech: MAB Analyst: MAB Seq Number: 3118192 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) Motor Oil Range Hydrocarbons (MRO) Total GRO-DRO	Cas Number PHC610 C10C28DRO PHCG2835 PHC628	Result           <50.1	<b>RL</b> 50.1 50.1 50.1 50.1 50.1 50.1 %	.20 19.09 Units	9 E Units mg/kg mg/kg mg/kg mg/kg	Moisture: Basis: We Analysis Date 02.29.20 08.23 02.29.20 08.23 02.29.20 08.23 02.29.20 08.23	t Weight Flag U U U U U	1 1 1 1
Tech: MAB Analyst: MAB Seq Number: 3118192 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) Motor Oil Range Hydrocarbons (MRO) Total GRO-DRO Total TPH	<b>Cas Number</b> PHC610 C10C28DRO PHCG2835 PHC628 PHC635	Result           <50.1	<b>RL</b> 50.1 50.1 50.1 50.1 50.1		9 E Units mg/kg mg/kg mg/kg mg/kg mg/kg	Moisture: Basis: We Analysis Date 02.29.20 08.23 02.29.20 08.23 02.29.20 08.23 02.29.20 08.23 02.29.20 08.23 02.29.20 08.23	t Weight Flag U U U U U U U	1 1 1 1



### LT Environmental, Inc., Arvada, CO

Sample Id:PH06ALab Sample Id:654160-002	Matrix: Soil Date Collected: 02.28.20 13.20	Date Received:02.28.20 15.20 Sample Depth: 3 ft
Analytical Method: BTEX by EPA 8021B Tech: MAB		Prep Method: SW5030B % Moisture:
Analyst: MAB Seq Number: 3118153	Date Prep: 02.28.20 18.00	Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	02.29.20 02.24	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	02.29.20 02.24	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	02.29.20 02.24	U	1
m,p-Xylenes	179601-23-1	< 0.00399	0.00399		mg/kg	02.29.20 02.24	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	02.29.20 02.24	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	02.29.20 02.24	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	02.29.20 02.24	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	110	%	70-130	02.29.20 02.24		
4-Bromofluorobenzene		460-00-4	89	%	70-130	02.29.20 02.24		



### LT Environmental, Inc., Arvada, CO

Sample Id: PH06B		Matrix:				Date Received:02.28.20 15.20			
Lab Sample Id: 654160-003		Date Colle	cted: 02.28	.20 13.30	S	Sample Depth: 5 ft			
Analytical Method: Chloride by EP	PA 300				F	Prep Method: E30	)0P		
Tech: MAB					9	6 Moisture:			
Analyst: MAB		Date Prep:	02.28	.20 17.00	E	Basis: We	t Weight		
Seq Number: 3118170									
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil	
Chloride	16887-00-6	36.3	9.98		mg/kg	02.28.20 22.04		1	
					_				
Analytical Method: TPH by SW801 Tech: MAB Analyst: MAB Seq Number: 3118192	15 Mod	Date Prep:	02.28	.20 19.09	9	Prep Method: SW 6 Moisture: 3asis: We	78015P t Weight		
Tech: MAB Analyst: MAB	15 Mod Cas Number	Date Prep: <b>Result</b>	02.28 RL	.20 19.09	9	6 Moisture:		Dil	
Tech: MAB Analyst: MAB Seq Number: 3118192 Parameter				.20 19.09	9 E	6 Moisture: Basis: We	t Weight	<b>Dil</b> 1	
Tech: MAB Analyst: MAB Seq Number: 3118192 Parameter Gasoline Range Hydrocarbons (GRO)	Cas Number	Result	RL	.20 19.09	9 E Units	6 Moisture: Basis: We Analysis Date	t Weight Flag		
Tech: MAB Analyst: MAB Seq Number: 3118192 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO)	Cas Number PHC610	Result <50.0	<b>RL</b> 50.0	.20 19.09	9 E Units mg/kg	6 Moisture: Basis: We Analysis Date 02.29.20 08.42	t Weight Flag U	1	
Tech: MAB Analyst: MAB Seq Number: 3118192	Cas Number PHC610 C10C28DRO	<b>Result</b> <50.0 <50.0	<b>RL</b> 50.0 50.0	.20 19.09	9 E Units mg/kg mg/kg	6 Moisture: Basis: West Analysis Date 02.29.20 08.42 02.29.20 08.42	t Weight Flag U U	1	
Tech: MAB Analyst: MAB Seq Number: 3118192 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) Motor Oil Range Hydrocarbons (MRO) Total GRO-DRO	Cas Number PHC610 C10C28DRO PHCG2835	<b>Result</b> <50.0 <50.0	<b>RL</b> 50.0 50.0 50.0	.20 19.09	9 E Units mg/kg mg/kg mg/kg	6 Moisture: Basis: Wer 02.29.20 08.42 02.29.20 08.42 02.29.20 08.42	t Weight Flag U U U	1 1 1	
Tech: MAB Analyst: MAB Seq Number: 3118192 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) Motor Oil Range Hydrocarbons (MRO)	<b>Cas Number</b> PHC610 C10C28DRO PHCG2835 PHC628	Result           <50.0	<b>RL</b> 50.0 50.0 50.0 50.0 50.0 50.0 %	.20 19.09 Units	9 E Units mg/kg mg/kg mg/kg mg/kg	Analysis Date           02.29.20 08.42           02.29.20 08.42           02.29.20 08.42           02.29.20 08.42           02.29.20 08.42	t Weight Flag U U U U U	1 1 1 1	
Tech: MAB Analyst: MAB Seq Number: 3118192 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) Motor Oil Range Hydrocarbons (MRO) Total GRO-DRO Total TPH	<b>Cas Number</b> PHC610 C10C28DRO PHCG2835 PHC628 PHC635	Result           <50.0	<b>RL</b> 50.0 50.0 50.0 50.0 50.0		9 E Units mg/kg mg/kg mg/kg mg/kg mg/kg	6 Moisture: Basis: Wer 02.29.20 08.42 02.29.20 08.42 02.29.20 08.42 02.29.20 08.42 02.29.20 08.42 02.29.20 08.42	t Weight Flag U U U U U U	1 1 1 1	



### LT Environmental, Inc., Arvada, CO

Sample Id:PH06BLab Sample Id:654160-003	Matrix: Soil Date Collected: 02.28.20 13.30	Date Received:02.28.20 15.20 Sample Depth: 5 ft
Analytical Method:BTEX by EPA 8021BTech:MABAnalyst:MABSeq Number:3118153	Date Prep: 02.28.20 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	02.29.20 02.44	U	1
Toluene	108-88-3	< 0.00199	0.00199		mg/kg	02.29.20 02.44	U	1
Ethylbenzene	100-41-4	< 0.00199	0.00199		mg/kg	02.29.20 02.44	U	1
m,p-Xylenes	179601-23-1	< 0.00398	0.00398		mg/kg	02.29.20 02.44	U	1
o-Xylene	95-47-6	< 0.00199	0.00199		mg/kg	02.29.20 02.44	U	1
Total Xylenes	1330-20-7	< 0.00199	0.00199		mg/kg	02.29.20 02.44	U	1
Total BTEX		< 0.00199	0.00199		mg/kg	02.29.20 02.44	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	92	%	70-130	02.29.20 02.44		
1,4-Difluorobenzene		540-36-3	109	%	70-130	02.29.20 02.44		



# **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 Clie	ent Sample	BLK	Method Blank	
BKS/LCS	S Blank Spike/Laboratory Control Sample	BKSD/LCSD	Blank Spike Duplicate/Labo	ratory Control Sample Duplicate
MD/SD	Method Duplicate/Sample Duplicate	MS	Matrix Spike	MSD: Matrix Spike Duplicate

- + NELAC certification not offered for this compound.
- \* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation





### QC Summary 654160

## LT Environmental, Inc.

Thriller

<b>Analytical Method:</b> Seq Number: MB Sample Id:	<b>Chloride by EPA 3</b> 3118170 7697767-1-BLK	600		Matrix: nple Id:	Solid 7697767-	1-BKS		Prep Metl Date P LCSD Samp	Prep: 02.2	8.20	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD RPD Lin	mit Units	Analysis Date	Flag
Chloride	<10.0	250	251	100	225	90	90-110	11 20	mg/kg	02.28.20 20:45	
·	Chloride by EPA 3	300						Prep Meth			
Seq Number:	3118170			Matrix:		01.0		Date P	-		
Parent Sample Id:	654052-001				654052-0	01 S		MSD Samp		52-001 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD RPD Liı	nit Units	Analysis Date	Flag
Chloride	45.5	200	258	106	260	107	90-110	1 20	mg/kg	02.28.20 21:02	
Analytical Method:	Chloride by EPA 3	300						Prep Met	hod: E30	0P	
Seq Number:	3118170			Matrix:				Date P	-		
Parent Sample Id:	654164-001		MS Sar	nple Id:	654164-0	01 S		MSD Samp	le Id: 654	164-001 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD RPD Lin	mit Units	Analysis Date	Flag
Chloride	216	199	420	103	423	104	90-110	1 20	mg/kg	02.28.20 22:27	
•	TPH by SW8015 M	ſod		Madaian	C -1: J			Prep Metl		8015P	
Seq Number:	3118192			Matrix:	Solia 7697771-	1 BKS		Date P LCSD Samp	-		
MB Sample Id:	7697771-1-BLK	<b>G</b> . <b>1</b>		-			<b>T</b> • • • •	-			
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD RPD Lin	nit Units	Analysis Date	Flag
Gasoline Range Hydrocarb		1000	885	89	910	91	70-135	3 35	mg/kg	02.29.20 06:24	
Diesel Range Organics	(DRO) <50.0	1000	961	96	987	99	70-135	3 35	mg/kg	02.29.20 06:24	
~	MB	MB	L	CS	LCS	LCSI	) LCS	D Limits	Units	Analysis	
Surrogate	%Rec		%	Rec	Flag	%Re		g		Date	
Surrogate 1-Chlorooctane o-Terphenyl			1	Rec 11 .09	Flag			g 70-135 70-135	%	•	

Analytical Method:TPH bySeq Number:3118192		Prep Method: Date Prep:		
<b>Parameter</b> Motor Oil Range Hydrocarbons (MRO)	MB Result <50.0	-	nits Analysis Date g/kg 02.29.20 06:05	Flag

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

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### Received by OCD: 4/8/2020 3:38:21 PM



### QC Summary 654160

## LT Environmental, Inc.

### Thriller

Analytical Method: Seq Number:	<b>TPH by S</b> 3118192	SW8015 M	lod		Matrix:	Soil			]	Prep Methoo Date Prep		8015P 8.20	
Parent Sample Id:	654051-02	29		MS Sar	nple Id:	654051-02	29 S		M	SD Sample	(d: 6540	051-029 SD	
Parameter		Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPE	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarb	ons (GRO)	< 50.5	1010	964	95	906	91	70-135	6	35	mg/kg	03.02.20 12:44	
Diesel Range Organics	(DRO)	<50.5	1010	1190	118	1020	102	70-135	15	35	mg/kg	03.02.20 12:44	
Surrogate					IS Rec	MS Flag	MSE %Re		-	Limits	Units	Analysis Date	
1-Chlorooctane				1	15		115		7	70-135	%	03.02.20 12:44	
o-Terphenyl				1	28		114		7	70-135	%	03.02.20 12:44	

<b>Analytical Method:</b> Seq Number: MB Sample Id:	<b>BTEX by EPA 802</b> 3118153 7697768-1-BLK	1B	] LCS San	Matrix: ple Id:		1-BKS			Prep Metho Date Prej SD Sample	p: 02.2	5030B 8.20 7768-1-BSD	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RP	D RPD Limit	Units	Analysis Date	Flag
Benzene	< 0.00200	0.100	0.119	119	0.116	116	70-130	3	35	mg/kg	02.28.20 22:19	
Toluene	< 0.00200	0.100	0.108	108	0.106	106	70-130	2	35	mg/kg	02.28.20 22:19	
Ethylbenzene	< 0.00200	0.100	0.103	103	0.101	101	71-129	2	35	mg/kg	02.28.20 22:19	
m,p-Xylenes	< 0.00400	0.200	0.201	101	0.198	99	70-135	2	35	mg/kg	02.28.20 22:19	
o-Xylene	< 0.00200	0.100	0.103	103	0.101	101	71-133	2	35	mg/kg	02.28.20 22:19	
Surrogate	MB %Rec	MB Flag			LCS Flag	LCSE %Rec			Limits	Units	Analysis Date	
1,4-Difluorobenzene	108		1	11		110			70-130	%	02.28.20 22:19	
4-Bromofluorobenzene	92		8	88		88			70-130	%	02.28.20 22:19	

<b>Analytical Method:</b> Seq Number: Parent Sample Id:	<b>BTEX by EPA 802</b> 3118153 654051-024	1B	MS San	Matrix: nple Id:		24 S			Prep Metho Date Pre SD Sample	p: 02.2	5030B 8.20 051-024 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	0.113	114	0.104	104	70-130	8	35	mg/kg	02.28.20 23:00	
Toluene	< 0.00199	0.0994	0.104	105	0.0941	94	70-130	10	35	mg/kg	02.28.20 23:00	
Ethylbenzene	< 0.00199	0.0994	0.0990	100	0.0878	88	71-129	12	35	mg/kg	02.28.20 23:00	
m,p-Xylenes	< 0.00398	0.199	0.192	96	0.170	85	70-135	12	35	mg/kg	02.28.20 23:00	
o-Xylene	< 0.00199	0.0994	0.0973	98	0.0873	87	71-133	11	35	mg/kg	02.28.20 23:00	
Surrogate				AS Rec	MS Flag	MSD %Ree		-	Limits	Units	Analysis Date	
1,4-Difluorobenzene			1	10		109		7	0-130	%	02.28.20 23:00	
4-Bromofluorobenzene			ç	92		89		7	0-130	%	02.28.20 23:00	

MS/MSD Percent Recovery Relative Percent Difference LCS/LCSD Recovery Log Difference [D] = 100\*(C-A) / B RPD = 200\* | (C-E) / (C+E) | [D] = 100 \* (C) / [B] Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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re 118		Hous	ton,TX (281) 240-4200 land,TX (432-704-5440	Dallas,TX (214) 902-0300 San Antonio, ) EL Paso,TX (915)585-3443 Lubbock,T	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 (575-3	392-7550) Phoenix,AZ	(480-355-0900) Atlanta	Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)	-620-2000) www.xenco.com	Page ( of )
<sup>o</sup> roject Manager:	Dan Moir		Bill to: (if different)	Kyle Littrell			
Company Name:	LT Environmental, Inc.	., Permian office	Company Name:			Program: UST/PST PRP Brownfields	Ids RRC Juperfund
	3300 North A Street		Address:		Street		
City, State ZIP:	Midland, TX 79705		City, State ZIP:	Carlsbad, NM 88220	220	Reporting:Level II Level III ST/UST	
Phone:	(432) 236-3849	Em	Email: slo@ltenv.com,	slo@ltenv.com, dmoir@ltenv.com, acole@ltenv.com	ole@ltenv.com	Deliverables: EDD ADaPT	Other:
Project Name:	Thriller	Υ Υ	Turn Around		ANALYSIS REQUEST	ST	Work Order Notes
Project Number:	012918162		Routine				
P.O. Number:		R	4H				
Sampler's Name:	Spencer Lo		Due Date:				
SAMPLE RECEIPT	IPT Temp Blank:	: Yes No Wet Ice:	(Yes No				
Temperature (°C):	Jul o	The		)			
Cooler Clistody Sealer	Van	T-NM-	400	5) 8021			
Sample Custody Seals:	Yes No	Total Containers:	CN	PA 80 EPA 0		1	TAT starts the day received by the lab, if received by 4:30pm
Sample Identification	ification Matrix	Date Time Sampled Sampled	d Depth	TPH (E BTEX ( Chlorid			Sample Comments
PH06	S	2/28/2020 1310	-	××			
PHO6A	A S	2/28/2020 1320	3 1	× ×			
PH06B	S	2/28/2020 1330	5	x x x			
				land Cay			
			10				
PM							
Circle Method(s) a	otal         200.7 / 6010         200.8 / 6020:           Circle Method(s) and Metal(s) to be analyzed	8R	CRA 13PPM Texas 11 AI	I Sb As Ba Be B Cd Ca Cr A Sb As Ba Be Cd Cr Co C	3 Cd Ca Cr Co Cu Fe Pb Mg Mn N Cd Cr Co Cu Pb Mn Mo Ni Se Ag	Ao Ni K Se Ag SiC TI U	12 Na Sr Ti Sn U V Zn 1631 / 245.1 / 7470 / 7471 : Ha
8/2020 tice: Signature of this do service. Xenco will be lia (enco. A minimum charge	cument and relinquishment of able only for the cost of sampl ge of \$75.00 will be applied to	samples constitutes a valid es and shall not assume any each project and a charge of	purchase order from clie responsibility for any los \$5 for each sample subr	nt company to Xenco, its ses or expenses incurred nitted to Xenco, but not a	tice: 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 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 (enco. 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.	s standard terms and conditions circumstances beyond the control nless previously negotiated.	
	(Signature)	Received by: (Signature)	iture)	Date/Time	Relinquished by: (Signature)	re) Received by: (Signature)	Date/Time
y OCI	6	AAAAA	2	29/20 15:20	4 4		
d b	-				σ		

. Released to Imaging: 9/14/2021 10:39:59 AM

Final 1.000

Received by OCD: 4/8/2020 3:38:21 PM



## **XENCO Laboratories**



Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc. Date/ Time Received: 02/28/2020 03:20:00 PM Work Order #: 654160

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

Temperature Measuring device used : T-NM-007

Sample Receipt Che	cklist	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 Checklist reviewed by: Jessica Veamer

Date: 02/28/2020

Jessica Kramer

Date: 02/28/2020

District I 1625 N. French Dr., Hobbs, NM 88240 Phone:(575) 393-6161 Fax:(575) 393-0720 District II

811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

District IV 1220 S. St Francis Dr., Santa Fe, NM 87505 Phone: (505) 476-3470 Fax: (505) 476-3462

## **State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division** 1220 S. St Francis Dr. Santa Fe, NM 87505

CONDITIONS

Operator:	OGRID:
XTO ENERGY, INC	5380
6401 Holiday Hill Road	Action Number:
Midland, TX 79707	4882
	Action Type:
	[C-141] Release Corrective Action (C-141)

#### CONDITIONS

Created By	Condition	Condition Date
bbillings	None	9/14/2021

Page 120 of 120 CONDITIONS

Action 4882

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