

September 6, 2018

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

**RE: Closure Request
Poker Lake Unit (PLU) #151
Remediation Permit Number 2RP-3439
Eddy County, New Mexico**

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following letter report detailing excavation and confirmation soil sampling activities at the PLU #151 (Site) in Unit Letter B, Section 6, Township 24 South, Range 30 East, in Eddy County, New Mexico (Figure 1). The purpose of the excavation and soil sampling activities was to address impact to soil after fluid was released from a corroded swedge. The release of approximately 7 barrels (bbls) of produced water was discovered on December 7, 2015. Most of the release remained on the well pad, with the exception of 1.1 bbls that flowed off of the north side of the pad. No free-standing liquids were recovered. The failed swedge and connections were replaced with stainless steel parts. The former operator reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 on December 8, 2015, and was assigned Remediation Permit Number (RP) 2RP-3439. Although the release occurred while the facility was operated by the previous operator, XTO is the current operator and is committed to addressing any releases that remain unresolved. Based on the results of the confirmation sampling event conducted after impacted soil was removed, XTO is requesting no further action for this release event.

BACKGROUND

Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest water well data and known aquifer properties. The nearest permitted water well is C 02108, located approximately 1.59 miles southeast of the Site, with a depth to groundwater of 186 feet bgs and a total depth of 200 feet bgs. The closest surface water to the Site is an unnamed arroyo located approximately 412 feet northwest of the Site. The Site is greater than 200 feet from any private domestic water source and greater than 1,000 feet from a water source. Based on these criteria, the NMOCD site ranking for remediation action levels is 10, and the following remediation action levels apply: 10 milligrams per kilogram (mg/kg) benzene; 50 mg/kg benzene, toluene, ethylbenzene, and total xylenes (BTEX); and 1,000 mg/kg total petroleum



hydrocarbons (TPH). Based on standard practice in this region, LTE proposes a site-specific chloride action level of 600 mg/kg or within 10 percent (%) of the background concentrations.

EXCAVATION ACTIVITIES

Nine initial soil samples (SS01, SS02, SS03, SS04, SS05, SS06, SS07, SS08, and SS09) were collected between 0.5 foot and 1-foot bgs on the well pad and in the adjoining pasture to assess and delineate impacted soil. Based on the analytical results from SS01, SS03, and SS04, which exceeded site-specific remediation action levels, LTE excavated impacted soil on the well pad. Excavation activities within the release footprint commenced on June 26, 2018, and concluded on June 28, 2018. LTE observed surficial soil staining around the wellhead and extending toward the northwest corner of the well pad. To direct excavation activities, LTE screened soil samples for chloride using Hach® chloride QuanTab® test strips and for volatile aromatic hydrocarbons using a photo-ionization detector (PID) equipped with a 10.6 electron volt lamp in accordance with the NMOCD *Guidelines for Remediation of Leaks, Spills and Releases*, August 13, 1993.

The final excavation was approximately 8,400 square feet in area with a depth of approximately 2.5 feet bgs throughout the excavation. The horizontal extent of the excavation was approximately 108 feet by 78 feet and is illustrated on Figure 2. Approximately 480 cubic yards of impacted soil were removed using a trackhoe, loader, and hydro-vacuum. Impacted soil was transported and properly disposed of at Lea Land Landfill in Eunice, New Mexico, and R360 in Hobbs, New Mexico.

SOIL SAMPLING

LTE collected discrete confirmation samples from the sidewalls and floor of the excavation to monitor excavation progress and document removal of impacted soil. Three floor samples (FS01, FS02, and FS03) were collected within the excavation at 2.5 feet bgs. The sidewall samples (SW01, SW02, SW03, SW04, SW05, SW06, SW07, SW08, and SW09) were collected to represent approximately every 50 feet in lateral length of the sidewall or in areas that were discolored. Depths and locations of sidewall samples varied based on field observations by the on-site geologist in an attempt to accurately represent actual soil conditions within and around the excavation.

All soil samples were collected and placed directly into pre-cleaned glass jars, labeled with location, date, time, sampler, and method of analysis, and immediately placed on ice. The soil samples were shipped at 4 degrees Celsius (°C) under strict chain-of-custody procedures to Xenco Laboratories in Midland, Texas, for analysis of BTEX by United States Environmental Protection Agency (USEPA) Method 8021B, TPH-gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH-motor oil range organics (MRO) by USEPA Method 8015M, and chloride by USEPA Method 300.





ANALYTICAL RESULTS

Laboratory analytical results indicated that initial soil samples SS01, SS03, and SS01 exceeded the NMOCD remediation action levels. Upon excavation of the impacted soil, laboratory analytical results for the final confirmation soil samples (SW01 through SW09, and FS01, FS02, and FS03) indicated that BTEX, TPH, and chloride concentrations were compliant with the NMOCD site-specific remediation action levels. LTE ultimately collected eighteen final surficial, sidewall, and floor soil samples (SS02, SS05, SS06, SS07, SS08, SS09, SW01, SW02, SW03, SW04, SW05, SW06, SW07, SW08, SW09, FS01, FS02, and FS03) for release delineation and confirmation that impacted soil was removed from the excavation. Laboratory analytical results are presented on Figure 2, summarized in Table 2, and the complete laboratory analytical reports are included as Attachment 2.

CONCLUSIONS

The impacted soil was excavated and laboratory analytical results for the confirmation soil samples collected from the final excavation extent indicate that BTEX, TPH, and chloride concentrations are compliant with NMOCD site-specific remediation action levels. XTO has successfully removed the impacted soil at the Site and requests no further action for this release. An updated NMOCD Form C-141 is included with Attachment 1.

If you have any questions or comments, please do not hesitate to contact Adrian Baker at (432) 887-1255 or abaker@ltenv.com.

Sincerely,

LT ENVIRONMENTAL, INC.

Adrian Baker
Project Geologist

Ashley L. Ager, P.G.
Senior Geologist

cc: Kyle Littrell, XTO
Maria Pruett, NMOCD
Jim Amos, BLM
Shelly Tucker, BLM

Attachments:

Figure 1 - Site Location Map

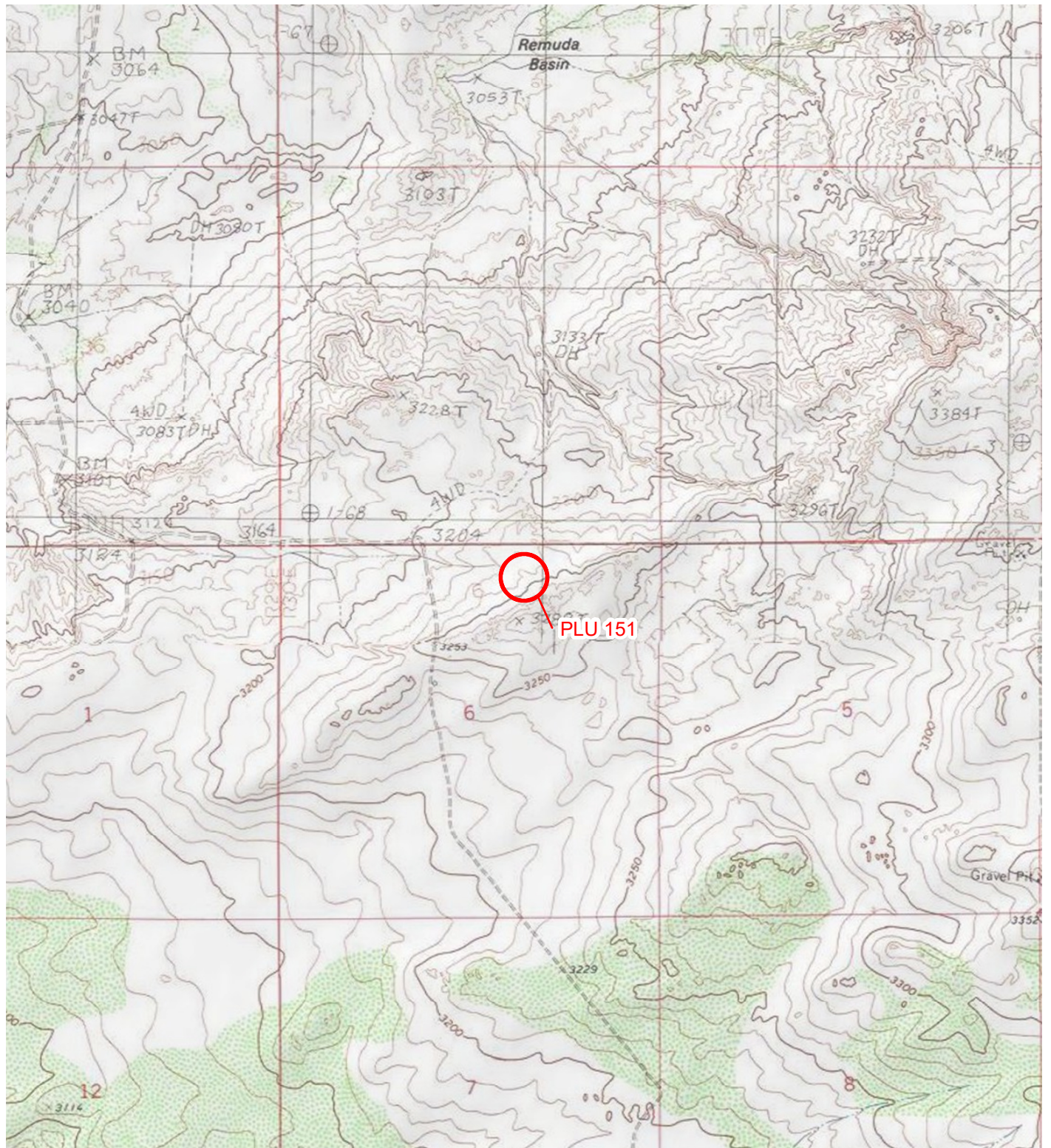
Figure 2 - Soil Sample Locations

Table 1 - Soil Analytical Results

Attachment 1 - Initial/Final NMOCD Form C-141 (2RP-3439)

Attachment 2 - Laboratory Analytical Reports

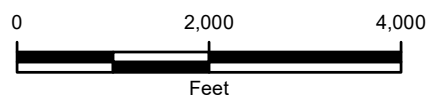




LEGEND

○ SITE LOCATION

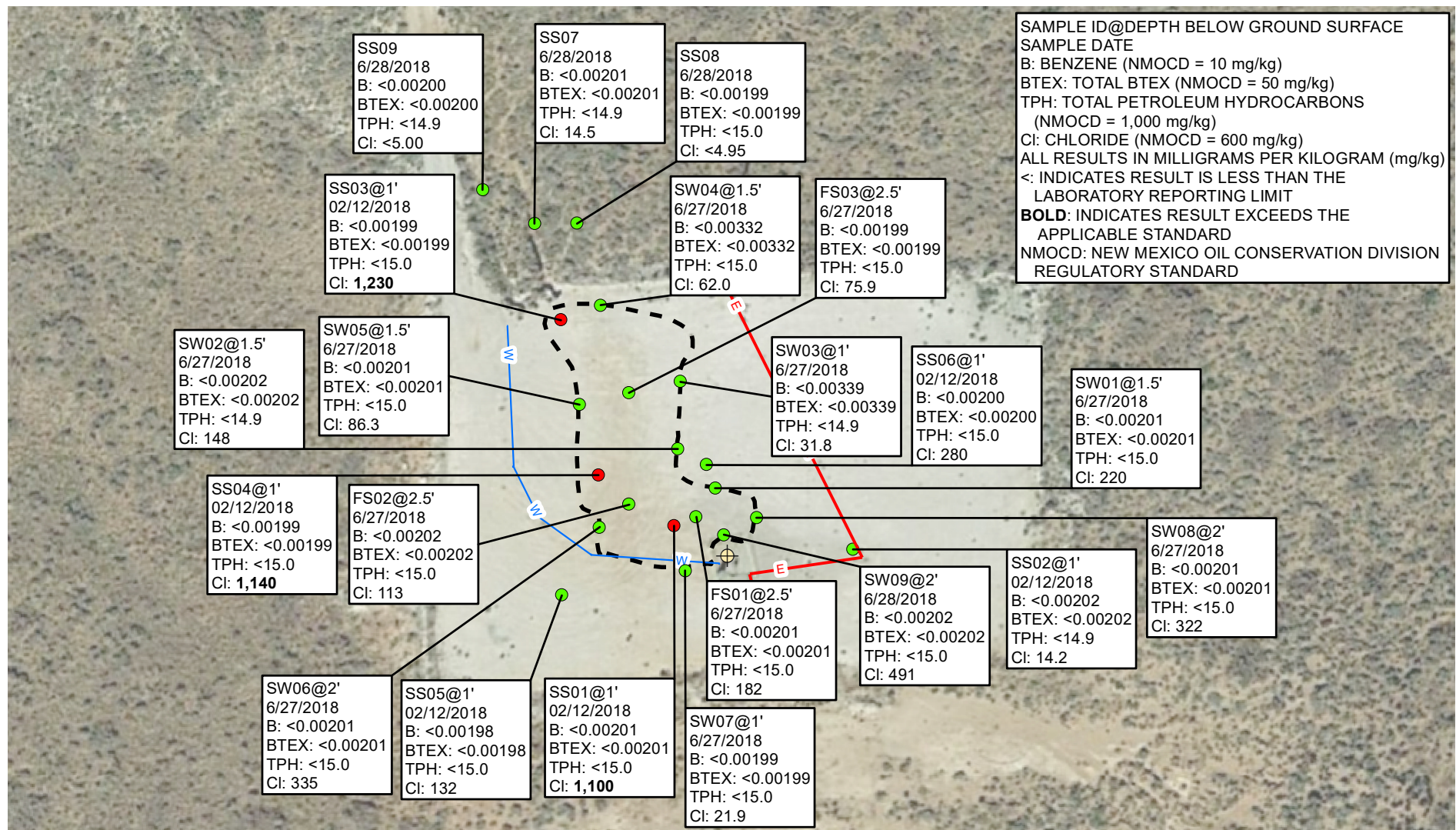
IMAGE COURTESY OF ESRI/USGS



NOTE: REMEDIATION PERMIT
NUMBER 2RP-3439

FIGURE 1
SITE LOCATION MAP
PLU 151
UNIT B SEC 6 T24S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.





LEGEND

- PRELIMINARY SOIL SAMPLE
- FINAL CONFIRMATION SOIL SAMPLE
- **W** WATER LINE (CAPPED)
- **E** ELECTRICAL LINE (DEAD)
- ⊕ PLUGGED AND ABANDONED WELLHEAD
- EXCAVATION EXTENT

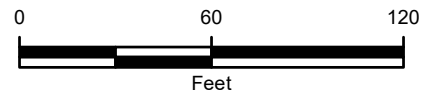


IMAGE COURTESY OF GOOGLE EARTH 2017

FIGURE 2
SOIL SAMPLE LOCATIONS
PLU 151
UNIT B SEC 6 T24S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.



NOTE: REMEDIATION PERMIT NUMBER 2RP-3439

TABLE 1
SOIL ANALYTICAL RESULTS
PLU #151
REMEDIATION PERMIT NUMBER 2RP-3439
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	C6-C10 Gasoline Range Organics (mg/kg)	C10-C28 Diesel Range Organics (mg/kg)	C28-C40 Motor Oil Range Organics (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
SS01	1	2/12/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	1,100
SS02	1	2/12/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<14.9	<14.9	<14.9	<14.9	14.2
SS03	1	2/12/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	1,230
SS04	1	2/12/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	1,140
SS05	1	2/12/2018	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	132
SS06	1	2/12/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	280
FS01	2.5	6/27/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	182
FS02	2.5	6/27/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	113
FS03	2.5	6/27/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	75.9
SW01	1.5	6/27/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	220
SW02	1.5	6/27/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<14.9	<14.9	<14.9	<14.9	148
SW03	1	6/27/2018	<0.00339	<0.00339	<0.00339	<0.00339	<0.00339	<14.9	<14.9	<14.9	<14.9	31.8
SW04	1.5	6/27/2018	<0.00332	<0.00332	<0.00332	<0.00332	<0.00332	<15.0	<15.0	<15.0	<15.0	62.0
SW05	1.5	6/27/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	86.3
SW06	2	6/27/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	335
SW07	1	6/27/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	21.9
SW08	2	6/27/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	322
SS07	0.5	6/28/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<14.9	<14.9	<14.9	<14.9	14.5
SS08	0.5	6/28/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<4.95
SS09	0.5	6/28/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<5.00
SW09	2	6/28/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	491
NMOCD Remediation Action Levels			10	NE	NE	NE	50	NE	NE	NE	1,000	600

Notes:

bgs - below ground surface

BTEX - benzene, toluene, ethylbenzene, and total xylenes

mg/kg - milligrams per kilogram

NE - not established

NMOCD - New Mexico Oil Conservation Division

TPH - total petroleum hydrocarbons

< - indicates result is below laboratory reporting limits

Bold indicates result exceeds the applicable regulatory standard.



NM OIL CONSERVATION
ARTESIA DISTRICT

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

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

DEC 08 2015

Form C-141
Revised August 8, 2011

RECEIVED Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR ☒ Initial Report ☐ Final Report

Name of Company: BOPCO, L.P. *8160737* **Contact:** Bradley Blevins

Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220 **Telephone No.** 575-887-7329

Facility Name: PLU 151 **Facility Type:** Exploration and Production

Surface Owner: Federal **Mineral Owner:** **API No.** 3001531595

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
B	6	24s	30E	510		1980		Eddy

Latitude: 32.25264 Longitude: 103.91865

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release: 7 barrels PW	Volume Recovered: None
Source of Release: Corrosion to 2x1 swedge	Date and Hour of Occurrence: 12-7-15 @ 3:00pm	Date and Hour of Discovery: 12-7-15 @ 3:38pm
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

BOPCO EHS was notified of a release that occurred when a hole developed in a 2x1 swedge caused by corrosion. A vacuum truck was called but no fluid was able to be recovered. The majority of the fluid stayed on the well pad with the exception of 1.1 barrels ran off the north side of the pad.

Describe Area Affected and Cleanup Action Taken.*

A vacuum truck was called but no fluid was able to be recovered. The majority of the fluid stayed on the well pad with the exception of 1.1 barrels ran off the north side of the pad. The failed swedge and connections were replaced with HP stainless steel.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOC 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 NMOC marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOC 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.

Signature: <i>Bradley Blevins</i>	OIL CONSERVATION DIVISION	
Printed Name: Bradley Blevins	Approved by Environmental Specialist: <i>[Signature]</i>	
Title: Assistant Remediation Foreman	Approval Date: 12/10/15	Expiration Date: N/A
E-mail Address: bblevins@basspet.com	Conditions of Approval: Remediation per O.C.D. Rules & Guidelines	Attached ☐
Date: 12-8-15 Phone: 432-214-3704	SUBMIT REMEDIATION PROPOSAL NO	

* Attach Additional Sheets If Necessary

LATER THAN: 1/15/16

2RP-3439

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

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

Form C-141
Revised April 3, 2017

Submit 1 Copy to appropriate District Office in
accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company XTO Energy	Contact Kyle Littrell
Address 3104 E Greene Street Carlsbad, N.M. 88220	Telephone No. 432-221-7331
Facility Name PLU 151	Facility Type Exploration and Production

Surface Owner Federal	Mineral Owner Federal	API No. 30-015-31595
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LOCATION OF RELEASE

Unit Letter B	Section 6	Township 24S	Range 30E	Feet from the 510	North/South Line North	Feet from the 1980	East/West Line East	County Eddy
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Latitude N 32.25264 Longitude -103.91865 NAD83

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release 7 bbls PW	Volume Recovered 0 bbls
Source of Release Corrosion to 2x1 swedge	Date and Hour of Occurrence 12-7-15 @ 3:00pm	Date and Hour of Discovery 12-7-15 @ 3:38 pm
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom?	
By Whom? Amy Ruth	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	
If a Watercourse was Impacted, Describe Fully.* N/A		

Describe Cause of Problem and Remedial Action Taken.*

BOPCO EHS was notified of the release that occurred when a hole developed in a 2x1 swedge caused by corrosion. A vacuum truck was called but no fluid was able to be recovered. The majority of the fluid stayed on the well pad with the exception of 1.1 barrels ran off the north side of the pad.

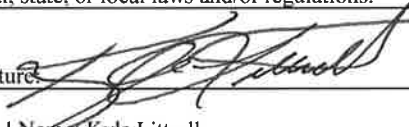
Describe Area Affected and Cleanup Action Taken.*

The majority of the fluid stayed on the well pad with the exception of 1.1 barrels ran off the the north side of the pad. The failed swedge and connections were replaced with HP stainless steel.

The impacted soil was excavated, and confirmation soil samples were collected from the side walls and bottom of the excavation on February 12, 2018, June 27, 2018 and June 28, 2018. Laboratory analytical results from 18 confirmation soil samples indicate concentrations of BTEX, TPH, and chloride do not exceed NMOCD remediation action levels. Based on the results of confirmation samples, XTO requests no further action for this release and will backfill with clean caliche and re-contour.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

OIL CONSERVATION DIVISION

Signature: 	Approved by Environmental Specialist:		
Printed Name: Kyle Littrell			
Title: SH&E Coordinator	Approval Date:	Expiration Date:	
E-mail Address: Kyle_Littrell@xtoenergy.com	Conditions of Approval:		Attached ☐
Date: 8/27/2018	Phone: 432-221-7331		

* Attach Additional Sheets If Necessary



Analytical Report 576509

**for
LT Environmental, Inc.**

Project Manager: Adrian Baker

PLU 151

22-FEB-18

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-17-23), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab code: TX01468):

Texas (T104704295-17-15), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab code: TX00127): Texas (T104704221-17-12)

Xenco-Lubbock (EPA Lab code: TX00139): Texas (T104704219-17-16)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-17-13)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)

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

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)



22-FEB-18

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

Reference: XENCO Report No(s): **576509**
PLU 151
Project Address: NM

Adrian Baker:

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) 576509. 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. 576509 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Odessa Laboratory Director

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 576509



LT Environmental, Inc., Arvada, CO

PLU 151

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	02-12-18 11:45	12 In	576509-001
SS02	S	02-12-18 11:50	12 In	576509-002
SS03	S	02-12-18 12:00	12 In	576509-003
SS04	S	02-12-18 12:15	12 In	576509-004
SS05	S	02-12-18 12:30	12 In	576509-005
SS06	S	02-12-18 12:40	12 In	576509-006



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *PLU 151*

Project ID:

Work Order Number(s): 576509

Report Date: 22-FEB-18

Date Received: 02/14/2018

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3041711 BTEX by EPA 8021B

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



Certificate of Analysis Summary 576509

LT Environmental, Inc., Arvada, CO

Project Name: PLU 151



Project Id:

Contact: Adrian Baker

Project Location: NM

Date Received in Lab: Wed Feb-14-18 06:00 pm

Report Date: 22-FEB-18

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	576509-001	576509-002	576509-003	576509-004	576509-005	576509-006
	Field Id:	SS01	SS02	SS03	SS04	SS05	SS06
	Depth:	12- In	12- In	12- In	12- In	12- In	12- In
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Feb-12-18 11:45	Feb-12-18 11:50	Feb-12-18 12:00	Feb-12-18 12:15	Feb-12-18 12:30	Feb-12-18 12:40
BTEX by EPA 8021B	Extracted:	Feb-16-18 10:00	Feb-16-18 10:00	Feb-16-18 10:00	Feb-16-18 10:00	Feb-16-18 10:00	Feb-16-18 10:00
	Analyzed:	Feb-17-18 17:12	Feb-17-18 18:24	Feb-17-18 18:07	Feb-17-18 18:43	Feb-17-18 19:01	Feb-17-18 19:20
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00201 0.00201	<0.00202 0.00202	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200
Toluene		<0.00201 0.00201	<0.00202 0.00202	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200
Ethylbenzene		<0.00201 0.00201	<0.00202 0.00202	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200
m,p-Xylenes		<0.00402 0.00402	<0.00403 0.00403	<0.00398 0.00398	<0.00398 0.00398	<0.00396 0.00396	<0.00401 0.00401
o-Xylene		<0.00201 0.00201	<0.00202 0.00202	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200
Total Xylenes		<0.00201 0.00201	<0.00202 0.00202	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200
Total BTEX		<0.00201 0.00201	<0.00202 0.00202	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200
Inorganic Anions by EPA 300	Extracted:	Feb-21-18 14:00	Feb-21-18 14:00	Feb-21-18 14:00	Feb-21-18 14:00	Feb-21-18 14:00	Feb-21-18 14:00
	Analyzed:	Feb-22-18 02:53	Feb-22-18 03:15	Feb-22-18 03:22	Feb-22-18 03:29	Feb-22-18 03:37	Feb-22-18 03:44
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		1100 24.5	14.2 4.91	1230 98.2	1140 100	132 25.0	280 24.6
TPH by SW8015 Mod	Extracted:	Feb-18-18 14:00	Feb-18-18 14:00	Feb-18-18 14:00	Feb-18-18 14:00	Feb-18-18 14:00	Feb-18-18 14:00
	Analyzed:	Feb-19-18 03:08	Feb-19-18 03:29	Feb-19-18 03:51	Feb-19-18 04:13	Feb-19-18 04:33	Feb-19-18 05:36
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Diesel Range Organics (DRO)		<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Oil Range Hydrocarbons (ORO)		<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total TPH		<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0

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 - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Jessica Kramer

Jessica Kramer
Odessa Laboratory Director



Certificate of Analytical Results 576509



LT Environmental, Inc., Arvada, CO

PLU 151

Sample Id: **SS01** Matrix: Soil Date Received: 02.14.18 18.00
Lab Sample Id: 576509-001 Date Collected: 02.12.18 11.45 Sample Depth: 12 In
Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
Tech: LRI % Moisture:
Analyst: AMB Date Prep: 02.21.18 14.00 Basis: Wet Weight
Seq Number: 3041796

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1100	24.5	mg/kg	02.22.18 02.53		5

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: ARM % Moisture:
Analyst: ARM Date Prep: 02.18.18 14.00 Basis: Wet Weight
Seq Number: 3041598

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.19.18 03.08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.19.18 03.08	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	02.19.18 03.08	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.19.18 03.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	02.19.18 03.08	
o-Terphenyl	84-15-1	107	%	70-135	02.19.18 03.08	



Certificate of Analytical Results 576509



LT Environmental, Inc., Arvada, CO

PLU 151

Sample Id: **SS01**
Lab Sample Id: 576509-001

Matrix: Soil
Date Collected: 02.12.18 11.45

Date Received: 02.14.18 18.00
Sample Depth: 12 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 02.16.18 10.00

Basis: Wet Weight

Seq Number: 3041711

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	02.17.18 17.12	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	02.17.18 17.12	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	02.17.18 17.12	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	02.17.18 17.12	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	02.17.18 17.12	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	02.17.18 17.12	U	1
Total BTEX		<0.00201	0.00201	mg/kg	02.17.18 17.12	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	120	%	80-120	02.17.18 17.12		
1,4-Difluorobenzene	540-36-3	81	%	80-120	02.17.18 17.12		



Certificate of Analytical Results 576509



LT Environmental, Inc., Arvada, CO

PLU 151

Sample Id: SS02 Matrix: Soil Date Received: 02.14.18 18.00
Lab Sample Id: 576509-002 Date Collected: 02.12.18 11.50 Sample Depth: 12 In
Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
Tech: LRI % Moisture:
Analyst: AMB Date Prep: 02.21.18 14.00 Basis: Wet Weight
Seq Number: 3041796

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	14.2	4.91	mg/kg	02.22.18 03.15		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: ARM % Moisture:
Analyst: ARM Date Prep: 02.18.18 14.00 Basis: Wet Weight
Seq Number: 3041598

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	02.19.18 03.29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	02.19.18 03.29	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	02.19.18 03.29	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	02.19.18 03.29	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	112	%	70-135	02.19.18 03.29		
o-Terphenyl	84-15-1	113	%	70-135	02.19.18 03.29		



Certificate of Analytical Results 576509



LT Environmental, Inc., Arvada, CO

PLU 151

Sample Id: SS02
Lab Sample Id: 576509-002

Matrix: Soil
Date Collected: 02.12.18 11.50

Date Received: 02.14.18 18.00
Sample Depth: 12 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 02.16.18 10.00

Basis: Wet Weight

Seq Number: 3041711

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	02.17.18 18.24	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	02.17.18 18.24	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	02.17.18 18.24	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	02.17.18 18.24	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	02.17.18 18.24	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	02.17.18 18.24	U	1
Total BTEX		<0.00202	0.00202	mg/kg	02.17.18 18.24	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	82	%	80-120	02.17.18 18.24		
4-Bromofluorobenzene	460-00-4	118	%	80-120	02.17.18 18.24		



Certificate of Analytical Results 576509



LT Environmental, Inc., Arvada, CO

PLU 151

Sample Id: **SS03** Matrix: Soil Date Received: 02.14.18 18.00
Lab Sample Id: 576509-003 Date Collected: 02.12.18 12.00 Sample Depth: 12 In
Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
Tech: LRI % Moisture:
Analyst: AMB Date Prep: 02.21.18 14.00 Basis: Wet Weight
Seq Number: 3041796

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1230	98.2	mg/kg	02.22.18 03.22		20

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: ARM % Moisture:
Analyst: ARM Date Prep: 02.18.18 14.00 Basis: Wet Weight
Seq Number: 3041598

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.19.18 03.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.19.18 03.51	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	02.19.18 03.51	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.19.18 03.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	02.19.18 03.51	
o-Terphenyl	84-15-1	105	%	70-135	02.19.18 03.51	



Certificate of Analytical Results 576509



LT Environmental, Inc., Arvada, CO

PLU 151

Sample Id: SS03
Lab Sample Id: 576509-003

Matrix: Soil
Date Collected: 02.12.18 12.00

Date Received: 02.14.18 18.00
Sample Depth: 12 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 02.16.18 10.00

Basis: Wet Weight

Seq Number: 3041711

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.17.18 18.07	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.17.18 18.07	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.17.18 18.07	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.17.18 18.07	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.17.18 18.07	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	02.17.18 18.07	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.17.18 18.07	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	120	%	80-120	02.17.18 18.07		
1,4-Difluorobenzene	540-36-3	82	%	80-120	02.17.18 18.07		



Certificate of Analytical Results 576509



LT Environmental, Inc., Arvada, CO

PLU 151

Sample Id: **SS04** Matrix: Soil Date Received: 02.14.18 18.00
Lab Sample Id: 576509-004 Date Collected: 02.12.18 12.15 Sample Depth: 12 In
Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
Tech: LRI % Moisture:
Analyst: AMB Date Prep: 02.21.18 14.00 Basis: Wet Weight
Seq Number: 3041796

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1140	100	mg/kg	02.22.18 03.29		20

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: ARM % Moisture:
Analyst: ARM Date Prep: 02.18.18 14.00 Basis: Wet Weight
Seq Number: 3041598

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.19.18 04.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.19.18 04.13	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	02.19.18 04.13	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.19.18 04.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	02.19.18 04.13	
o-Terphenyl	84-15-1	101	%	70-135	02.19.18 04.13	



Certificate of Analytical Results 576509



LT Environmental, Inc., Arvada, CO

PLU 151

Sample Id: **SS04**
Lab Sample Id: 576509-004

Matrix: Soil
Date Collected: 02.12.18 12.15

Date Received: 02.14.18 18.00
Sample Depth: 12 In

Analytical Method: BTEX by EPA 8021B

Tech: ALJ

Analyst: ALJ

Seq Number: 3041711

Date Prep: 02.16.18 10.00

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	02.17.18 18.43	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.17.18 18.43	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.17.18 18.43	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.17.18 18.43	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.17.18 18.43	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	02.17.18 18.43	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.17.18 18.43	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	114	%	80-120	02.17.18 18.43		
1,4-Difluorobenzene	540-36-3	85	%	80-120	02.17.18 18.43		



Certificate of Analytical Results 576509



LT Environmental, Inc., Arvada, CO

PLU 151

Sample Id: SS05 Matrix: Soil Date Received: 02.14.18 18.00
Lab Sample Id: 576509-005 Date Collected: 02.12.18 12.30 Sample Depth: 12 In
Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
Tech: LRI % Moisture:
Analyst: AMB Date Prep: 02.21.18 14.00 Basis: Wet Weight
Seq Number: 3041796

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	132	25.0	mg/kg	02.22.18 03.37		5

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: ARM % Moisture:
Analyst: ARM Date Prep: 02.18.18 14.00 Basis: Wet Weight
Seq Number: 3041598

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.19.18 04.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.19.18 04.33	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	02.19.18 04.33	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.19.18 04.33	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	104	%	70-135	02.19.18 04.33		
o-Terphenyl	84-15-1	104	%	70-135	02.19.18 04.33		



Certificate of Analytical Results 576509



LT Environmental, Inc., Arvada, CO

PLU 151

Sample Id: SS05
Lab Sample Id: 576509-005

Matrix: Soil
Date Collected: 02.12.18 12.30

Date Received: 02.14.18 18.00
Sample Depth: 12 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 02.16.18 10.00

Basis: Wet Weight

Seq Number: 3041711

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	02.17.18 19.01	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	02.17.18 19.01	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	02.17.18 19.01	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	02.17.18 19.01	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	02.17.18 19.01	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	02.17.18 19.01	U	1
Total BTEX		<0.00198	0.00198	mg/kg	02.17.18 19.01	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	86	%	80-120	02.17.18 19.01		
4-Bromofluorobenzene	460-00-4	112	%	80-120	02.17.18 19.01		



Certificate of Analytical Results 576509



LT Environmental, Inc., Arvada, CO

PLU 151

Sample Id: **SS06** Matrix: Soil Date Received: 02.14.18 18.00
Lab Sample Id: 576509-006 Date Collected: 02.12.18 12.40 Sample Depth: 12 In
Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
Tech: LRI % Moisture:
Analyst: AMB Date Prep: 02.21.18 14.00 Basis: Wet Weight
Seq Number: 3041796

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	280	24.6	mg/kg	02.22.18 03.44		5

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: ARM % Moisture:
Analyst: ARM Date Prep: 02.18.18 14.00 Basis: Wet Weight
Seq Number: 3041598

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.19.18 05.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.19.18 05.36	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	02.19.18 05.36	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.19.18 05.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-135	02.19.18 05.36	
o-Terphenyl	84-15-1	115	%	70-135	02.19.18 05.36	



Certificate of Analytical Results 576509



LT Environmental, Inc., Arvada, CO

PLU 151

Sample Id: **SS06**
Lab Sample Id: 576509-006

Matrix: Soil
Date Collected: 02.12.18 12.40

Date Received: 02.14.18 18.00
Sample Depth: 12 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 02.16.18 10.00

Basis: Wet Weight

Seq Number: 3041711

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.17.18 19.20	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.17.18 19.20	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.17.18 19.20	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	02.17.18 19.20	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.17.18 19.20	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.17.18 19.20	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.17.18 19.20	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	114	%	80-120	02.17.18 19.20		
1,4-Difluorobenzene	540-36-3	86	%	80-120	02.17.18 19.20		

- 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

+ NELAC certification not offered for this compound.

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

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QC Summary 576509

LT Environmental, Inc.

PLU 151

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3041796

MB Sample Id: 7639569-1-BLK

Matrix: Solid

LCS Sample Id: 7639569-1-BKS

Prep Method: E300P

Date Prep: 02.21.18

LCSD Sample Id: 7639569-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	259	250	259	104	259	104	90-110	0	20	mg/kg	02.22.18 01:54	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3041796

Parent Sample Id: 576508-001

Matrix: Soil

MS Sample Id: 576508-001 S

Prep Method: E300P

Date Prep: 02.21.18

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Chloride	23.9	248	291	108	90-110	mg/kg	02.22.18 02:16	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3041796

Parent Sample Id: 576512-001

Matrix: Soil

MS Sample Id: 576512-001 S

Prep Method: E300P

Date Prep: 02.21.18

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Chloride	1780	2430	2910	47	90-110	mg/kg	02.22.18 03:59	X

Analytical Method: TPH by SW8015 Mod

Seq Number: 3041598

MB Sample Id: 7639461-1-BLK

Matrix: Solid

LCS Sample Id: 7639461-1-BKS

Prep Method: TX1005P

Date Prep: 02.18.18

LCSD Sample Id: 7639461-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	1020	102	1010	101	70-135	1	35	mg/kg	02.19.18 00:05	
Diesel Range Organics (DRO)	<15.0	1000	893	89	866	87	70-135	3	35	mg/kg	02.19.18 00:05	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	101		101		103		70-135	%	02.19.18 00:05
o-Terphenyl	105		103		99		70-135	%	02.19.18 00:05

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

$[D] = 100 * (C-A) / B$
 $RPD = 200 * |(C-E) / (C+E)|$
 $[D] = 100 * (C) / [B]$

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

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



QC Summary 576509

LT Environmental, Inc.

PLU 151

Analytical Method: TPH by SW8015 Mod

Seq Number: 3041598

Parent Sample Id: 576507-002

Matrix: Soil

MS Sample Id: 576507-002 S

Prep Method: TX1005P

Date Prep: 02.18.18

MSD Sample Id: 576507-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	997	1070	107	1130	113	70-135	5	35	mg/kg	02.19.18 01:27	
Diesel Range Organics (DRO)	<15.0	997	975	98	1080	108	70-135	10	35	mg/kg	02.19.18 01:27	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	113		118		70-135	%	02.19.18 01:27
o-Terphenyl	114		117		70-135	%	02.19.18 01:27

Analytical Method: BTEX by EPA 8021B

Seq Number: 3041711

MB Sample Id: 7639451-1-BLK

Matrix: Solid

LCS Sample Id: 7639451-1-BKS

Prep Method: SW5030B

Date Prep: 02.16.18

LCSD Sample Id: 7639451-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0884	88	0.0915	92	70-130	3	35	mg/kg	02.17.18 12:35	
Toluene	<0.00202	0.101	0.0901	89	0.0914	91	70-130	1	35	mg/kg	02.17.18 12:35	
Ethylbenzene	<0.00202	0.101	0.0939	93	0.0952	95	71-129	1	35	mg/kg	02.17.18 12:35	
m,p-Xylenes	<0.00403	0.202	0.183	91	0.186	93	70-135	2	35	mg/kg	02.17.18 12:35	
o-Xylene	<0.00202	0.101	0.0928	92	0.0943	94	71-133	2	35	mg/kg	02.17.18 12:35	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	85		92		92		80-120	%	02.17.18 12:35
4-Bromofluorobenzene	100		112		113		80-120	%	02.17.18 12:35

Analytical Method: BTEX by EPA 8021B

Seq Number: 3041711

Parent Sample Id: 576509-003

Matrix: Soil

MS Sample Id: 576509-003 S

Prep Method: SW5030B

Date Prep: 02.16.18

MSD Sample Id: 576509-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.0772	78	0.0848	85	70-130	9	35	mg/kg	02.17.18 13:12	
Toluene	<0.00199	0.0996	0.0737	74	0.0836	84	70-130	13	35	mg/kg	02.17.18 13:12	
Ethylbenzene	<0.00199	0.0996	0.0748	75	0.0848	85	71-129	13	35	mg/kg	02.17.18 13:12	
m,p-Xylenes	<0.00398	0.199	0.146	73	0.166	83	70-135	13	35	mg/kg	02.17.18 13:12	
o-Xylene	<0.00199	0.0996	0.0737	74	0.0837	84	71-133	13	35	mg/kg	02.17.18 13:12	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	84		85		80-120	%	02.17.18 13:12
4-Bromofluorobenzene	106		116		80-120	%	02.17.18 13:12

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

$[D] = 100 * (C-A) / B$
 $RPD = 200 * |(C-E) / (C+E)|$
 $[D] = 100 * (C) / [B]$

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

Setting the Standard since 1990
Stafford, Texas (281-240-4200)
Dallas Texas (214-902-0300)

San Antonio, Texas (210-509-3334)
Midland, Texas (432-704-5251)

Phoenix, Arizona (480-355-0900)

www.xenoco.com

Client / Reporting Information				Project Information				Analytical Information				Matrix Codes								
Company Name / Branch: LTE / Permian				Project Name/Number: PLU 151																
Company Address: 3300 N. A Street Bldg 1 Suite 103 Midland TX 79705				Project Location: NM																
Email: Abaker@lternv.com				Invoice To: XTO Energy - Kyle Litrell																
Phone No: 432-704-5178																				
Project Contact: Adrian Baker				PO Number: 30-015-31595																
Samples Name: XXXXXXXXXXXX																				
No.		Field ID / Point of Collection		Collection		Number of preserved bottles						BTEX EPA Method 8021 TPH EPA Method 8015 Chloride EPA Method 300.1								
				Sample Depth	Date	Time	Matrix	# of bottles	HI	NaOH/Zn Acetate	HNO3					H2SO4	NaOH	NaHSO4	MeOH	NONE
1		SS01		12"	2-12-18	11:45	S	1												
2		SS02				12:00														
3		SS03				12:15														
4		SS04				12:30														
5		SS05				12:40														
6		SS06																		
7																				
8																				
9																				
10																				
Turnaround Time (Business days)				Data Deliverable Information																
☐ Same Day TAT ☐ Next Day EMERGENCY ☐ 2 Day EMERGENCY ☒ 3 Day EMERGENCY				☐ 5 Day TAT ☐ 7 Day TAT ☐ Contract TAT ☒ STANDARD TAT				☒ Level II Std QC ☐ Level III Std QC+ Forms ☐ Level 3 (CLP Forms) ☐ TRRP Checklist				☐ Level IV (Full Data Pkg /raw data) ☐ TRRP Level IV ☐ UST / RG -411								
TAT Starts Day received by Lab, If received by 5:00 pm																				
Relinquished by Sampler:				SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY																
1		Date Time: 2-14-18		Received By: [Signature]		Relinquished By: [Signature]		Date Time: 2-14-18		Received By: [Signature]		Relinquished By: [Signature]								
3		Date Time:		Received By:		Relinquished By:		Date Time:		Received By:		Relinquished By:								
5		Date Time:		Received By:		Relinquished By:		Date Time:		Received By:		Relinquished By:								
FED-EX / UPS: Tracking #																				
Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75 will be applied to each project. Xenco's liability will be limited to the cost of samples. Any samples received by Xenco but not analyzed will be invoiced at \$5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.																				

Temp: 3.9 IR ID: R-8

CF: (0-6: -0.2°C)

(6-23: +0.2°C)

Corrected Temp: 3.7

Samples: Danny Burns

API: 30-015-31595

2RP-3439



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

Date/ Time Received: 02/14/2018 06:00:00 PM

Work Order #: 576509

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	3.7
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#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:

Connie Hernandez

Connie Hernandez

Date: 02/15/2018

Checklist reviewed by:

Jessica Kramer

Jessica Kramer

Date: 02/15/2018

Analytical Report 591023

for
LT Environmental, Inc.

Project Manager: Adrian Baker

PLU 151

12-JUL-18

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-18-26), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-17-12)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-17-16)

Xenco-Odessa (EPA Lab Code: TX00158): Texas (T104704400-18-15)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)

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

Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)

Xenco-Atlanta (LELAP Lab ID #04176)

Xenco-Tampa: Florida (E87429)

Xenco-Lakeland: Florida (E84098)



12-JUL-18

Project Manager: **Adrian Baker**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **591023**

PLU 151

Project Address: NM 2RP 3439

Adrian Baker:

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) 591023. 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. 591023 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Project Assistant

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Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America



Sample Cross Reference 591023



LT Environmental, Inc., Arvada, CO

PLU 151

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS07	S	06-28-18 08:45	6 In	591023-001
SS08	S	06-28-18 08:50	6 In	591023-002
SS09	S	06-28-18 08:55	6 In	591023-003
SW09	S	06-28-18 10:10	2 In	591023-004



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *PLU 151*

Project ID:
Work Order Number(s): 591023

Report Date: 12-JUL-18
Date Received: 06/30/2018

Sample receipt non conformance and comments:

Per client email request, sample depth were correct. New version of report generated. JKR 07/12/18

Sample receipt non conformance and comments per sample:

None

Analytical non conformance and comments:

Batch: LBA-3055726 Inorganic Anions by EPA 300

Lab Sample ID 591023-003 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 591023-002, -003, -004.

The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3055790 BTEX by EPA 8021B

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



Certificate of Analysis Summary 591023

LT Environmental, Inc., Arvada, CO

Project Name: PLU 151



Project Id:

Contact: Adrian Baker

Project Location: NM 2RP 3439

Date Received in Lab: Sat Jun-30-18 09:00 am

Report Date: 12-JUL-18

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	591023-001	591023-002	591023-003	591023-004		
	Field Id:	SS07	SS08	SS09	SW09		
	Depth:	6- In	6- In	6- In	2- In		
	Matrix:	SOIL	SOIL	SOIL	SOIL		
	Sampled:	Jun-28-18 08:45	Jun-28-18 08:50	Jun-28-18 08:55	Jun-28-18 10:10		
BTEX by EPA 8021B	Extracted:	Jul-07-18 07:45	Jul-07-18 07:45	Jul-07-18 07:45	Jul-07-18 07:45		
	Analyzed:	Jul-07-18 20:46	Jul-07-18 21:04	Jul-07-18 16:53	Jul-07-18 21:22		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Benzene		<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202		
Toluene		<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202		
Ethylbenzene		<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202		
m,p-Xylenes		<0.00402 0.00402	<0.00398 0.00398	<0.00399 0.00399	<0.00403 0.00403		
o-Xylene		<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202		
Total Xylenes		<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202		
Total BTEX		<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202		
Inorganic Anions by EPA 300	Extracted:	Jul-05-18 16:30	Jul-06-18 08:45	Jul-06-18 08:45	Jul-06-18 08:45		
	Analyzed:	Jul-06-18 00:57	Jul-06-18 18:19	Jul-06-18 19:34	Jul-06-18 18:35		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		14.5 5.00	<4.95 4.95	<5.00 5.00	491 4.99		
TPH by SW8015 Mod	Extracted:	Jul-07-18 08:00	Jul-07-18 08:00	Jul-07-18 08:00	Jul-07-18 08:00		
	Analyzed:	Jul-07-18 16:44	Jul-07-18 17:04	Jul-07-18 17:24	Jul-07-18 17:44		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Gasoline Range Hydrocarbons (GRO)		<14.9 14.9	<15.0 15.0	<14.9 14.9	<15.0 15.0		
Diesel Range Organics (DRO)		<14.9 14.9	<15.0 15.0	<14.9 14.9	<15.0 15.0		
Oil Range Hydrocarbons (ORO)		<14.9 14.9	<15.0 15.0	<14.9 14.9	<15.0 15.0		
Total TPH		<14.9 14.9	<15.0 15.0	<14.9 14.9	<15.0 15.0		

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 - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analytical Results 591023



LT Environmental, Inc., Arvada, CO

PLU 151

Sample Id: SS07 Matrix: Soil Date Received: 06.30.18 09.00
Lab Sample Id: 591023-001 Date Collected: 06.28.18 08.45 Sample Depth: 6 In
Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
Tech: SCM % Moisture:
Analyst: SCM Date Prep: 07.05.18 16.30 Basis: Wet Weight
Seq Number: 3055724

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	14.5	5.00	mg/kg	07.06.18 00.57		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: ARM % Moisture:
Analyst: ARM Date Prep: 07.07.18 08.00 Basis: Wet Weight
Seq Number: 3055921

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	07.07.18 16.44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	07.07.18 16.44	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	07.07.18 16.44	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	07.07.18 16.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	07.07.18 16.44	
o-Terphenyl	84-15-1	98	%	70-135	07.07.18 16.44	



Certificate of Analytical Results 591023



LT Environmental, Inc., Arvada, CO

PLU 151

Sample Id: SS07
Lab Sample Id: 591023-001

Matrix: Soil
Date Collected: 06.28.18 08.45

Date Received: 06.30.18 09.00
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Tech: ALJ

Analyst: ALJ

Seq Number: 3055790

Date Prep: 07.07.18 07.45

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.07.18 20.46	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.07.18 20.46	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.07.18 20.46	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.07.18 20.46	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.07.18 20.46	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.07.18 20.46	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.07.18 20.46	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	119	%	70-130	07.07.18 20.46		
4-Bromofluorobenzene	460-00-4	106	%	70-130	07.07.18 20.46		



Certificate of Analytical Results 591023



LT Environmental, Inc., Arvada, CO

PLU 151

Sample Id: **SS08**
Lab Sample Id: 591023-002

Matrix: Soil
Date Collected: 06.28.18 08.50

Date Received: 06.30.18 09.00
Sample Depth: 6 In

Analytical Method: Inorganic Anions by EPA 300
Tech: SCM
Analyst: SCM
Seq Number: 3055726

Date Prep: 07.06.18 08.45

Prep Method: E300P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	07.06.18 18.19	U	1

Analytical Method: TPH by SW8015 Mod
Tech: ARM
Analyst: ARM
Seq Number: 3055921

Date Prep: 07.07.18 08.00

Prep Method: TX1005P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.07.18 17.04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.07.18 17.04	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.07.18 17.04	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.07.18 17.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	07.07.18 17.04	
o-Terphenyl	84-15-1	91	%	70-135	07.07.18 17.04	



Certificate of Analytical Results 591023



LT Environmental, Inc., Arvada, CO

PLU 151

Sample Id: **SS08**
Lab Sample Id: 591023-002

Matrix: Soil
Date Collected: 06.28.18 08.50

Date Received: 06.30.18 09.00
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Tech: ALJ

Analyst: ALJ

Seq Number: 3055790

Date Prep: 07.07.18 07.45

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	07.07.18 21.04	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.07.18 21.04	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.07.18 21.04	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.07.18 21.04	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.07.18 21.04	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.07.18 21.04	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.07.18 21.04	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	113	%	70-130	07.07.18 21.04		
1,4-Difluorobenzene	540-36-3	100	%	70-130	07.07.18 21.04		



Certificate of Analytical Results 591023



LT Environmental, Inc., Arvada, CO

PLU 151

Sample Id: **SS09** Matrix: Soil Date Received: 06.30.18 09.00
Lab Sample Id: 591023-003 Date Collected: 06.28.18 08.55 Sample Depth: 6 In
Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
Tech: SCM % Moisture:
Analyst: SCM Date Prep: 07.06.18 08.45 Basis: Wet Weight
Seq Number: 3055726

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	07.06.18 19.34	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: ARM % Moisture:
Analyst: ARM Date Prep: 07.07.18 08.00 Basis: Wet Weight
Seq Number: 3055921

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	07.07.18 17.24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	07.07.18 17.24	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	07.07.18 17.24	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	07.07.18 17.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	07.07.18 17.24	
o-Terphenyl	84-15-1	97	%	70-135	07.07.18 17.24	



Certificate of Analytical Results 591023



LT Environmental, Inc., Arvada, CO

PLU 151

Sample Id: SS09
Lab Sample Id: 591023-003

Matrix: Soil
Date Collected: 06.28.18 08.55

Date Received: 06.30.18 09.00
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.07.18 07.45

Basis: Wet Weight

Seq Number: 3055790

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.07.18 16.53	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.07.18 16.53	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.07.18 16.53	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.07.18 16.53	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.07.18 16.53	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.07.18 16.53	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.07.18 16.53	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	76	%	70-130	07.07.18 16.53		
1,4-Difluorobenzene	540-36-3	77	%	70-130	07.07.18 16.53		



Certificate of Analytical Results 591023



LT Environmental, Inc., Arvada, CO

PLU 151

Sample Id: **SW09** Matrix: Soil Date Received: 06.30.18 09.00
Lab Sample Id: 591023-004 Date Collected: 06.28.18 10.10 Sample Depth: 2 In
Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
Tech: SCM % Moisture:
Analyst: SCM Date Prep: 07.06.18 08.45 Basis: Wet Weight
Seq Number: 3055726

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	491	4.99	mg/kg	07.06.18 18.35		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: ARM % Moisture:
Analyst: ARM Date Prep: 07.07.18 08.00 Basis: Wet Weight
Seq Number: 3055921

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.07.18 17.44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.07.18 17.44	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.07.18 17.44	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.07.18 17.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	07.07.18 17.44	
o-Terphenyl	84-15-1	95	%	70-135	07.07.18 17.44	



Certificate of Analytical Results 591023



LT Environmental, Inc., Arvada, CO

PLU 151

Sample Id: **SW09**
Lab Sample Id: 591023-004

Matrix: Soil
Date Collected: 06.28.18 10.10

Date Received: 06.30.18 09.00
Sample Depth: 2 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.07.18 07.45

Basis: Wet Weight

Seq Number: 3055790

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.07.18 21.22	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.07.18 21.22	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.07.18 21.22	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	07.07.18 21.22	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.07.18 21.22	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.07.18 21.22	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.07.18 21.22	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	83	%	70-130	07.07.18 21.22		
4-Bromofluorobenzene	460-00-4	90	%	70-130	07.07.18 21.22		

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



QC Summary 591023

LT Environmental, Inc. PLU 151

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3055724

MB Sample Id: 7657873-1-BLK

Matrix: Solid

LCS Sample Id: 7657873-1-BKS

Prep Method: E300P

Date Prep: 07.05.18

LCSD Sample Id: 7657873-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.99	250	236	94	244	98	90-110	3	20	mg/kg	07.05.18 22:21	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3055726

MB Sample Id: 7657951-1-BLK

Matrix: Solid

LCS Sample Id: 7657951-1-BKS

Prep Method: E300P

Date Prep: 07.06.18

LCSD Sample Id: 7657951-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	267	107	271	108	90-110	1	20	mg/kg	07.06.18 18:08	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3055724

Parent Sample Id: 591014-001

Matrix: Soil

MS Sample Id: 591014-001 S

Prep Method: E300P

Date Prep: 07.05.18

MSD Sample Id: 591014-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	154	249	392	96	399	98	90-110	2	20	mg/kg	07.05.18 22:37	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3055724

Parent Sample Id: 591015-007

Matrix: Soil

MS Sample Id: 591015-007 S

Prep Method: E300P

Date Prep: 07.05.18

MSD Sample Id: 591015-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	6.36	246	237	94	249	99	90-110	5	20	mg/kg	07.05.18 23:53	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3055726

Parent Sample Id: 591023-002

Matrix: Soil

MS Sample Id: 591023-002 S

Prep Method: E300P

Date Prep: 07.06.18

MSD Sample Id: 591023-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.95	248	273	110	275	111	90-110	1	20	mg/kg	07.06.18 18:24	X

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

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

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

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



QC Summary 591023

LT Environmental, Inc.

PLU 151

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3055726

Parent Sample Id: 591023-003

Matrix: Soil

MS Sample Id: 591023-003 S

Prep Method: E300P

Date Prep: 07.06.18

MSD Sample Id: 591023-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	256	102	256	102	90-110	0	20	mg/kg	07.06.18 19:40	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3055921

MB Sample Id: 7658081-1-BLK

Matrix: Solid

LCS Sample Id: 7658081-1-BKS

Prep Method: TX1005P

Date Prep: 07.07.18

LCSD Sample Id: 7658081-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	953	95	986	99	70-135	3	20	mg/kg	07.07.18 10:10	
Diesel Range Organics (DRO)	<15.0	1000	986	99	1020	102	70-135	3	20	mg/kg	07.07.18 10:10	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	98		118		117		70-135	%	07.07.18 10:10
o-Terphenyl	105		107		108		70-135	%	07.07.18 10:10

Analytical Method: TPH by SW8015 Mod

Seq Number: 3055921

Parent Sample Id: 591015-001

Matrix: Soil

MS Sample Id: 591015-001 S

Prep Method: TX1005P

Date Prep: 07.07.18

MSD Sample Id: 591015-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	998	970	97	949	95	70-135	2	20	mg/kg	07.07.18 11:09	
Diesel Range Organics (DRO)	59.6	998	1080	102	1060	100	70-135	2	20	mg/kg	07.07.18 11:09	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	119		115		70-135	%	07.07.18 11:09
o-Terphenyl	105		107		70-135	%	07.07.18 11:09

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

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

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

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



QC Summary 591023

LT Environmental, Inc.

PLU 151

Analytical Method: BTEX by EPA 8021B

Seq Number: 3055790

MB Sample Id: 7657996-1-BLK

Matrix: Solid

LCS Sample Id: 7657996-1-BKS

Prep Method: SW5030B

Date Prep: 07.07.18

LCSD Sample Id: 7657996-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.0928	93	0.0923	91	70-130	1	35	mg/kg	07.07.18 15:05	
Toluene	<0.00201	0.100	0.0940	94	0.0945	94	70-130	1	35	mg/kg	07.07.18 15:05	
Ethylbenzene	<0.00201	0.100	0.0936	94	0.0934	92	70-130	0	35	mg/kg	07.07.18 15:05	
m,p-Xylenes	<0.00402	0.201	0.189	94	0.195	97	70-130	3	35	mg/kg	07.07.18 15:05	
o-Xylene	<0.00201	0.100	0.0891	89	0.0988	98	70-130	10	35	mg/kg	07.07.18 15:05	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	120		101		99		70-130	%	07.07.18 15:05
4-Bromofluorobenzene	88		80		88		70-130	%	07.07.18 15:05

Analytical Method: BTEX by EPA 8021B

Seq Number: 3055790

Parent Sample Id: 591023-003

Matrix: Soil

MS Sample Id: 591023-003 S

Prep Method: SW5030B

Date Prep: 07.07.18

MSD Sample Id: 591023-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0834	83	0.0819	81	70-130	2	35	mg/kg	07.07.18 15:41	
Toluene	<0.00200	0.100	0.0840	84	0.0776	77	70-130	8	35	mg/kg	07.07.18 15:41	
Ethylbenzene	<0.00200	0.100	0.0815	82	0.0771	76	70-130	6	35	mg/kg	07.07.18 15:41	
m,p-Xylenes	<0.00401	0.200	0.165	83	0.157	78	70-130	5	35	mg/kg	07.07.18 15:41	
o-Xylene	<0.00200	0.100	0.0793	79	0.0763	76	70-130	4	35	mg/kg	07.07.18 15:41	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	110		83		70-130	%	07.07.18 15:41
4-Bromofluorobenzene	83		78		70-130	%	07.07.18 15:41

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

Setting the Standard since 1990
Stafford, Texas (281-240-4200)
Dallas Texas (214-902-0300)

San Antonio, Texas (210-509-3334)
Midland, Texas (432-704-5251)

Phoenix: Arizona (480-355-0900)

www.xenoco.com

Client / Reporting Information				Project Information				Analytical Information				Matrix Codes				
Company Name / Branch: LT Environmental, Inc. - Permian Office				Project Name/Number: PLU 151												
Company Address: 3300 North "A" Street, Building 1, Unit #103, Midland, TX 79705				Project Location: N/A												
Email: Abaker@LTENV.com Adrian Baker				Phone No: (432) 704-5178				Invoice To: XTO Energy - Kyle Litrell								
Sampler's Name Lynda Lankford				PO Number:												
No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE		
1	SS 07	6"	06/18/18	8:45	S	1										
2	SS 08	6"		8:50	S	1										
3	SS 09	6"		8:55	S	1										
4	SW 09	2'		10:10	S	1										
5																
6																
7																
8																
9																
10																
Turnaround Time (Business days)				Data Deliverable Information				Notes:								
☐ Same Day TAT				☐ 5 Day TAT				☐ Level II Std QC				☐ Level IV (Full Data Pkg /raw data)				
☐ Next Day EMERGENCY				☐ 7 Day TAT				☐ Level III Std QC + Forms				☐ TRRP Level IV				
☐ 2 Day EMERGENCY				☒ Contract TAT				☐ Level 3 (CLP Forms)				☐ UST / RG -411				
☐ 3 Day EMERGENCY								☐ TRRP Checklist								
TAT Starts Day received by Lab, if received by 5:00 pm																
Relinquished by Sampler:				Date Time:				Received By:				Date Time:				
1				06/18/18 16:00				X				06/29/18 15:30				
Relinquished by:				Date Time:				Received By:				Date Time:				
3								4								
Relinquished by:				Date Time:				Received By:				Date Time:				
5								5								
FED-EX / UPS: Tracking #				27449051739												
On file				☒				Cooler Temp.				Thermo. Corr. Factor				
3.5				108				2.0								

ORIGIN ID:MAFA (806) 794-1296
XENCO
XENCO
1211 W. FLORIDA AVE
MIDLAND, TX 79701
UNITED STATES US

SHIP DATE: 29 JUN 18
ACTWGT: 40.00 LB
CAD: 1018131061NET3980
DIMS: 25x15x16 IN
BILL RECIPIENT

TO XENCO

FEDEX OFFICE PRINT & SHIP CENTER
FEDEX OFFICE PRINT & SHIP CENTER
200 W INTERSTATE 20

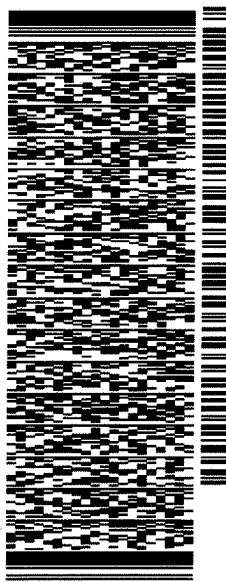
MIDLAND TX 79701

(806) 794-1296

REF:

INV:

DEPT:



J181118012601uv

552J293DFDCA5

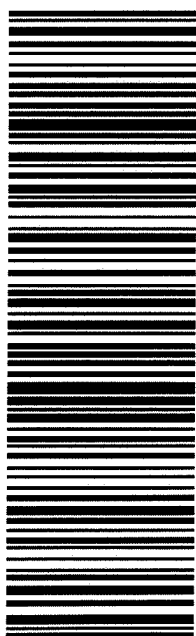
TRK# 7726 0705 2739
0201

SATURDAY HOLD
PRIORITY OVERNIGHT

HLD

41 MAFA

MAFKI
LBB
TX-US



After printing this label:

1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

Date/ Time Received: 06/30/2018 09:00:00 AM

Work Order #: 591023

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	3.2
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#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)?	N/A
#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:

Brianna Teel

Brianna Teel

Date: 07/02/2018

Checklist reviewed by:

Jessica Kramer

Jessica Kramer

Date: 07/02/2018

Analytical Report 591031

for
LT Environmental, Inc.

Project Manager: Adrian Baker

PLU 151

10-JUL-18

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-18-26), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-17-12)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-17-16)

Xenco-Odessa (EPA Lab Code: TX00158): Texas (T104704400-18-15)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)

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

Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)

Xenco-Atlanta (LELAP Lab ID #04176)

Xenco-Tampa: Florida (E87429)

Xenco-Lakeland: Florida (E84098)



10-JUL-18

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

Reference: XENCO Report No(s): **591031**
PLU 151
Project Address: NM 2RP-3439

Adrian Baker:

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) 591031. 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. 591031 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer
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 591031



LT Environmental, Inc., Arvada, CO

PLU 151

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	06-27-18 10:10	3 ft	591031-001
FS02	S	06-27-18 12:25	2.5 ft	591031-002
FS03	S	06-27-18 12:20	2.5 ft	591031-003
SW01	S	06-27-18 10:25	2.5 ft	591031-004
SW02	S	06-27-18 10:20	1.5 ft	591031-005
SW03	S	06-27-18 10:15	1 ft	591031-006
SW04	S	06-27-18 12:00	1.5 ft	591031-007
SW05	S	06-27-18 12:05	1.5 ft	591031-008
SW06	S	06-27-18 15:45	2 ft	591031-009
SW07	S	06-27-18 16:40	1 ft	591031-010
SW08	S	06-27-18 10:20	2 ft	591031-011



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *PLU 151*

Project ID:

Work Order Number(s): *591031*

Report Date: *10-JUL-18*

Date Received: *07/02/2018*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3055793 BTEX by EPA 8021B

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

Batch: LBA-3055798 BTEX by EPA 8021B

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



Certificate of Analysis Summary 591031

LT Environmental, Inc., Arvada, CO

Project Name: PLU 151



Project Id:

Contact: Adrian Baker

Project Location: NM 2RP-3439

Date Received in Lab: Mon Jul-02-18 08:10 am

Report Date: 10-JUL-18

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	591031-001	591031-002	591031-003	591031-004	591031-005	591031-006
	Field Id:	FS01	FS02	FS03	SW01	SW02	SW03
	Depth:	3- ft	2.5- ft	2.5- ft	2.5- ft	1.5- ft	1- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Jun-27-18 10:10	Jun-27-18 12:25	Jun-27-18 12:20	Jun-27-18 10:25	Jun-27-18 10:20	Jun-27-18 10:15
BTEX by EPA 8021B	Extracted:	Jul-07-18 08:15	Jul-07-18 08:15	Jul-07-18 08:15	Jul-07-18 08:15	Jul-07-18 08:15	Jul-08-18 08:00
	Analyzed:	Jul-08-18 04:14	Jul-08-18 05:08	Jul-08-18 05:26	Jul-08-18 05:44	Jul-08-18 06:02	Jul-08-18 10:44
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00201 0.00201	<0.00202 0.00202	<0.00199 0.00199	<0.00201 0.00201	<0.00202 0.00202	<0.00339 0.00339
Toluene		<0.00201 0.00201	<0.00202 0.00202	<0.00199 0.00199	<0.00201 0.00201	<0.00202 0.00202	<0.00339 0.00339
Ethylbenzene		<0.00201 0.00201	<0.00202 0.00202	<0.00199 0.00199	<0.00201 0.00201	<0.00202 0.00202	<0.00339 0.00339
m,p-Xylenes		<0.00402 0.00402	<0.00404 0.00404	<0.00398 0.00398	<0.00402 0.00402	<0.00404 0.00404	<0.00678 0.00678
o-Xylene		<0.00201 0.00201	<0.00202 0.00202	<0.00199 0.00199	<0.00201 0.00201	<0.00202 0.00202	<0.00339 0.00339
Total Xylenes		<0.00201 0.00201	<0.00202 0.00202	<0.00199 0.00199	<0.00201 0.00201	<0.00202 0.00202	<0.00339 0.00339
Total BTEX		<0.00201 0.00201	<0.00202 0.00202	<0.00199 0.00199	<0.00201 0.00201	<0.00202 0.00202	<0.00339 0.00339
Inorganic Anions by EPA 300	Extracted:	Jul-06-18 08:45	Jul-06-18 08:45	Jul-06-18 08:45	Jul-06-18 12:30	Jul-06-18 12:30	Jul-06-18 12:30
	Analyzed:	Jul-06-18 20:34	Jul-06-18 20:39	Jul-06-18 20:45	Jul-06-18 21:33	Jul-06-18 21:39	Jul-06-18 21:44
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		182 4.94	113 5.00	75.9 4.95	220 4.96	148 4.90	31.8 4.90
TPH by SW8015 Mod	Extracted:	Jul-08-18 10:00	Jul-08-18 10:00	Jul-08-18 10:00	Jul-08-18 10:00	Jul-08-18 10:00	Jul-08-18 10:00
	Analyzed:	Jul-08-18 12:35	Jul-08-18 13:34	Jul-08-18 13:54	Jul-08-18 14:14	Jul-08-18 14:34	Jul-08-18 14:54
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<14.9 14.9
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<14.9 14.9
Oil Range Hydrocarbons (ORO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<14.9 14.9
Total TPH		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<14.9 14.9

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

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 591031

LT Environmental, Inc., Arvada, CO

Project Name: PLU 151



Project Id:

Contact: Adrian Baker

Project Location: NM 2RP-3439

Date Received in Lab: Mon Jul-02-18 08:10 am

Report Date: 10-JUL-18

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	591031-007	591031-008	591031-009	591031-010	591031-011	
	Field Id:	SW04	SW05	SW06	SW07	SW08	
	Depth:	1.5- ft	1.5- ft	2- ft	1- ft	2- ft	
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	
	Sampled:	Jun-27-18 12:00	Jun-27-18 12:05	Jun-27-18 15:45	Jun-27-18 16:40	Jun-27-18 10:20	
BTEX by EPA 8021B	Extracted:	Jul-08-18 08:00	Jul-07-18 08:15	Jul-07-18 08:15	Jul-07-18 08:15	Jul-08-18 08:00	
	Analyzed:	Jul-08-18 11:02	Jul-08-18 06:55	Jul-08-18 07:12	Jul-08-18 07:29	Jul-08-18 10:08	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Benzene		<0.00332 0.00332	<0.00201 0.00201	<0.00201 0.00201	<0.00199 0.00199	<0.00201 0.00201	
Toluene		<0.00332 0.00332	<0.00201 0.00201	<0.00201 0.00201	<0.00199 0.00199	<0.00201 0.00201	
Ethylbenzene		<0.00332 0.00332	<0.00201 0.00201	<0.00201 0.00201	<0.00199 0.00199	<0.00201 0.00201	
m,p-Xylenes		<0.00664 0.00664	<0.00402 0.00402	<0.00402 0.00402	<0.00398 0.00398	<0.00402 0.00402	
o-Xylene		<0.00332 0.00332	<0.00201 0.00201	<0.00201 0.00201	<0.00199 0.00199	<0.00201 0.00201	
Total Xylenes		<0.00332 0.00332	<0.00201 0.00201	<0.00201 0.00201	<0.00199 0.00199	<0.00201 0.00201	
Total BTEX		<0.00332 0.00332	<0.00201 0.00201	<0.00201 0.00201	<0.00199 0.00199	<0.00201 0.00201	
Inorganic Anions by EPA 300	Extracted:	Jul-06-18 12:30	Jul-06-18 12:30	Jul-06-18 12:30	Jul-06-18 12:30	Jul-06-18 12:30	
	Analyzed:	Jul-06-18 21:49	Jul-06-18 21:17	Jul-06-18 22:06	Jul-06-18 22:11	Jul-06-18 22:16	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		62.0 5.00	86.3 4.96	335 4.96	21.9 4.98	322 4.97	
TPH by SW8015 Mod	Extracted:	Jul-08-18 10:00	Jul-08-18 10:00	Jul-08-18 10:00	Jul-08-18 10:00	Jul-08-18 10:00	
	Analyzed:	Jul-08-18 15:13	Jul-08-18 15:33	Jul-08-18 15:53	Jul-08-18 16:12	Jul-08-18 17:11	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	
Oil Range Hydrocarbons (ORO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	
Total TPH		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	

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

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analytical Results 591031



LT Environmental, Inc., Arvada, CO

PLU 151

Sample Id: **FS01** Matrix: Soil Date Received: 07.02.18 08.10
Lab Sample Id: 591031-001 Date Collected: 06.27.18 10.10 Sample Depth: 3 ft
Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
Tech: SCM % Moisture:
Analyst: SCM Date Prep: 07.06.18 08.45 Basis: Wet Weight
Seq Number: 3055726

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	182	4.94	mg/kg	07.06.18 20.34		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: ARM % Moisture:
Analyst: ARM Date Prep: 07.08.18 10.00 Basis: Wet Weight
Seq Number: 3055931

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.08.18 12.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.08.18 12.35	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.08.18 12.35	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.08.18 12.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	07.08.18 12.35	
o-Terphenyl	84-15-1	111	%	70-135	07.08.18 12.35	



Certificate of Analytical Results 591031



LT Environmental, Inc., Arvada, CO

PLU 151

Sample Id: **FS01**
Lab Sample Id: 591031-001

Matrix: Soil
Date Collected: 06.27.18 10.10

Date Received: 07.02.18 08.10
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALJ

Analyst: ALJ

Seq Number: 3055793

Date Prep: 07.07.18 08.15

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.08.18 04.14	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.08.18 04.14	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.08.18 04.14	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.08.18 04.14	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.08.18 04.14	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.08.18 04.14	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.08.18 04.14	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	93	%	70-130	07.08.18 04.14		
4-Bromofluorobenzene	460-00-4	85	%	70-130	07.08.18 04.14		



Certificate of Analytical Results 591031



LT Environmental, Inc., Arvada, CO

PLU 151

Sample Id: **FS02** Matrix: Soil Date Received: 07.02.18 08.10
Lab Sample Id: 591031-002 Date Collected: 06.27.18 12.25 Sample Depth: 2.5 ft
Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
Tech: SCM % Moisture:
Analyst: SCM Date Prep: 07.06.18 08.45 Basis: Wet Weight
Seq Number: 3055726

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	113	5.00	mg/kg	07.06.18 20.39		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: ARM % Moisture:
Analyst: ARM Date Prep: 07.08.18 10.00 Basis: Wet Weight
Seq Number: 3055931

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.08.18 13.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.08.18 13.34	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.08.18 13.34	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.08.18 13.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	07.08.18 13.34	
o-Terphenyl	84-15-1	97	%	70-135	07.08.18 13.34	



Certificate of Analytical Results 591031



LT Environmental, Inc., Arvada, CO

PLU 151

Sample Id: **FS02**
Lab Sample Id: 591031-002

Matrix: Soil
Date Collected: 06.27.18 12.25

Date Received: 07.02.18 08.10
Sample Depth: 2.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.07.18 08.15

Basis: Wet Weight

Seq Number: 3055793

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.08.18 05.08	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.08.18 05.08	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.08.18 05.08	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	07.08.18 05.08	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.08.18 05.08	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.08.18 05.08	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.08.18 05.08	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	106	%	70-130	07.08.18 05.08		
4-Bromofluorobenzene	460-00-4	85	%	70-130	07.08.18 05.08		



Certificate of Analytical Results 591031



LT Environmental, Inc., Arvada, CO

PLU 151

Sample Id: **FS03** Matrix: Soil Date Received: 07.02.18 08.10
Lab Sample Id: 591031-003 Date Collected: 06.27.18 12.20 Sample Depth: 2.5 ft
Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
Tech: SCM % Moisture:
Analyst: SCM Date Prep: 07.06.18 08.45 Basis: Wet Weight
Seq Number: 3055726

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	75.9	4.95	mg/kg	07.06.18 20.45		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: ARM % Moisture:
Analyst: ARM Date Prep: 07.08.18 10.00 Basis: Wet Weight
Seq Number: 3055931

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.08.18 13.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.08.18 13.54	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.08.18 13.54	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.08.18 13.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	07.08.18 13.54	
o-Terphenyl	84-15-1	102	%	70-135	07.08.18 13.54	



Certificate of Analytical Results 591031



LT Environmental, Inc., Arvada, CO

PLU 151

Sample Id: **FS03**
Lab Sample Id: 591031-003

Matrix: Soil
Date Collected: 06.27.18 12.20

Date Received: 07.02.18 08.10
Sample Depth: 2.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALJ

Analyst: ALJ

Seq Number: 3055793

Date Prep: 07.07.18 08.15

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	07.08.18 05.26	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.08.18 05.26	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.08.18 05.26	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.08.18 05.26	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.08.18 05.26	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.08.18 05.26	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.08.18 05.26	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	81	%	70-130	07.08.18 05.26		
1,4-Difluorobenzene	540-36-3	123	%	70-130	07.08.18 05.26		



Certificate of Analytical Results 591031



LT Environmental, Inc., Arvada, CO

PLU 151

Sample Id: **SW01** Matrix: Soil Date Received: 07.02.18 08.10
Lab Sample Id: 591031-004 Date Collected: 06.27.18 10.25 Sample Depth: 2.5 ft
Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
Tech: SCM % Moisture:
Analyst: SCM Date Prep: 07.06.18 12.30 Basis: Wet Weight
Seq Number: 3055732

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	220	4.96	mg/kg	07.06.18 21.33		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: ARM % Moisture:
Analyst: ARM Date Prep: 07.08.18 10.00 Basis: Wet Weight
Seq Number: 3055931

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.08.18 14.14	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.08.18 14.14	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.08.18 14.14	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.08.18 14.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	07.08.18 14.14	
o-Terphenyl	84-15-1	102	%	70-135	07.08.18 14.14	



Certificate of Analytical Results 591031



LT Environmental, Inc., Arvada, CO

PLU 151

Sample Id: **SW01**
Lab Sample Id: 591031-004

Matrix: Soil
Date Collected: 06.27.18 10.25

Date Received: 07.02.18 08.10
Sample Depth: 2.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALJ

Analyst: ALJ

Seq Number: 3055793

Date Prep: 07.07.18 08.15

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.08.18 05.44	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.08.18 05.44	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.08.18 05.44	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.08.18 05.44	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.08.18 05.44	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.08.18 05.44	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.08.18 05.44	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	90	%	70-130	07.08.18 05.44		
1,4-Difluorobenzene	540-36-3	98	%	70-130	07.08.18 05.44		



Certificate of Analytical Results 591031



LT Environmental, Inc., Arvada, CO

PLU 151

Sample Id: **SW02** Matrix: Soil Date Received: 07.02.18 08.10
Lab Sample Id: 591031-005 Date Collected: 06.27.18 10.20 Sample Depth: 1.5 ft
Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
Tech: SCM % Moisture:
Analyst: SCM Date Prep: 07.06.18 12.30 Basis: Wet Weight
Seq Number: 3055732

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	148	4.90	mg/kg	07.06.18 21.39		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: ARM % Moisture:
Analyst: ARM Date Prep: 07.08.18 10.00 Basis: Wet Weight
Seq Number: 3055931

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	07.08.18 14.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	07.08.18 14.34	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	07.08.18 14.34	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	07.08.18 14.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	07.08.18 14.34	
o-Terphenyl	84-15-1	99	%	70-135	07.08.18 14.34	



Certificate of Analytical Results 591031



LT Environmental, Inc., Arvada, CO

PLU 151

Sample Id: **SW02**
Lab Sample Id: 591031-005

Matrix: Soil
Date Collected: 06.27.18 10.20

Date Received: 07.02.18 08.10
Sample Depth: 1.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.07.18 08.15

Basis: Wet Weight

Seq Number: 3055793

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.08.18 06.02	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.08.18 06.02	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.08.18 06.02	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	07.08.18 06.02	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.08.18 06.02	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.08.18 06.02	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.08.18 06.02	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	83	%	70-130	07.08.18 06.02		
1,4-Difluorobenzene	540-36-3	96	%	70-130	07.08.18 06.02		



Certificate of Analytical Results 591031



LT Environmental, Inc., Arvada, CO

PLU 151

Sample Id: **SW03** Matrix: Soil Date Received: 07.02.18 08.10
Lab Sample Id: 591031-006 Date Collected: 06.27.18 10.15 Sample Depth: 1 ft
Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
Tech: SCM % Moisture:
Analyst: SCM Date Prep: 07.06.18 12.30 Basis: Wet Weight
Seq Number: 3055732

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	31.8	4.90	mg/kg	07.06.18 21.44		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: ARM % Moisture:
Analyst: ARM Date Prep: 07.08.18 10.00 Basis: Wet Weight
Seq Number: 3055931

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	07.08.18 14.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	07.08.18 14.54	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	07.08.18 14.54	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	07.08.18 14.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	07.08.18 14.54	
o-Terphenyl	84-15-1	104	%	70-135	07.08.18 14.54	



Certificate of Analytical Results 591031



LT Environmental, Inc., Arvada, CO

PLU 151

Sample Id: **SW03**
Lab Sample Id: 591031-006

Matrix: Soil
Date Collected: 06.27.18 10.15

Date Received: 07.02.18 08.10
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALJ

Analyst: ALJ

Seq Number: 3055798

Date Prep: 07.08.18 08.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00339	0.00339	mg/kg	07.08.18 10.44	U	1
Toluene	108-88-3	<0.00339	0.00339	mg/kg	07.08.18 10.44	U	1
Ethylbenzene	100-41-4	<0.00339	0.00339	mg/kg	07.08.18 10.44	U	1
m,p-Xylenes	179601-23-1	<0.00678	0.00678	mg/kg	07.08.18 10.44	U	1
o-Xylene	95-47-6	<0.00339	0.00339	mg/kg	07.08.18 10.44	U	1
Total Xylenes	1330-20-7	<0.00339	0.00339	mg/kg	07.08.18 10.44	U	1
Total BTEX		<0.00339	0.00339	mg/kg	07.08.18 10.44	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	105	%	70-130	07.08.18 10.44		
1,4-Difluorobenzene	540-36-3	115	%	70-130	07.08.18 10.44		



Certificate of Analytical Results 591031



LT Environmental, Inc., Arvada, CO

PLU 151

Sample Id: **SW04**
Lab Sample Id: 591031-007

Matrix: Soil
Date Collected: 06.27.18 12.00

Date Received: 07.02.18 08.10
Sample Depth: 1.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: SCM

Analyst: SCM

Seq Number: 3055732

Date Prep: 07.06.18 12.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	62.0	5.00	mg/kg	07.06.18 21.49		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3055931

Date Prep: 07.08.18 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.08.18 15.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.08.18 15.13	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.08.18 15.13	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.08.18 15.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	07.08.18 15.13	
o-Terphenyl	84-15-1	103	%	70-135	07.08.18 15.13	



Certificate of Analytical Results 591031



LT Environmental, Inc., Arvada, CO

PLU 151

Sample Id: **SW04**
Lab Sample Id: 591031-007

Matrix: Soil
Date Collected: 06.27.18 12.00

Date Received: 07.02.18 08.10
Sample Depth: 1.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALJ

Analyst: ALJ

Seq Number: 3055798

Date Prep: 07.08.18 08.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00332	0.00332	mg/kg	07.08.18 11.02	U	1
Toluene	108-88-3	<0.00332	0.00332	mg/kg	07.08.18 11.02	U	1
Ethylbenzene	100-41-4	<0.00332	0.00332	mg/kg	07.08.18 11.02	U	1
m,p-Xylenes	179601-23-1	<0.00664	0.00664	mg/kg	07.08.18 11.02	U	1
o-Xylene	95-47-6	<0.00332	0.00332	mg/kg	07.08.18 11.02	U	1
Total Xylenes	1330-20-7	<0.00332	0.00332	mg/kg	07.08.18 11.02	U	1
Total BTEX		<0.00332	0.00332	mg/kg	07.08.18 11.02	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	111	%	70-130	07.08.18 11.02		
4-Bromofluorobenzene	460-00-4	100	%	70-130	07.08.18 11.02		



Certificate of Analytical Results 591031



LT Environmental, Inc., Arvada, CO

PLU 151

Sample Id: **SW05** Matrix: Soil Date Received: 07.02.18 08.10
Lab Sample Id: 591031-008 Date Collected: 06.27.18 12.05 Sample Depth: 1.5 ft
Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
Tech: SCM % Moisture:
Analyst: SCM Date Prep: 07.06.18 12.30 Basis: Wet Weight
Seq Number: 3055732

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	86.3	4.96	mg/kg	07.06.18 21.17		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: ARM % Moisture:
Analyst: ARM Date Prep: 07.08.18 10.00 Basis: Wet Weight
Seq Number: 3055931

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.08.18 15.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.08.18 15.33	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.08.18 15.33	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.08.18 15.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	07.08.18 15.33	
o-Terphenyl	84-15-1	100	%	70-135	07.08.18 15.33	



Certificate of Analytical Results 591031



LT Environmental, Inc., Arvada, CO

PLU 151

Sample Id: **SW05**
Lab Sample Id: 591031-008

Matrix: Soil
Date Collected: 06.27.18 12.05

Date Received: 07.02.18 08.10
Sample Depth: 1.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALJ

Analyst: ALJ

Seq Number: 3055793

Date Prep: 07.07.18 08.15

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.08.18 06.55	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.08.18 06.55	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.08.18 06.55	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.08.18 06.55	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.08.18 06.55	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.08.18 06.55	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.08.18 06.55	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	91	%	70-130	07.08.18 06.55		
1,4-Difluorobenzene	540-36-3	116	%	70-130	07.08.18 06.55		



Certificate of Analytical Results 591031



LT Environmental, Inc., Arvada, CO

PLU 151

Sample Id: **SW06** Matrix: Soil Date Received: 07.02.18 08.10
Lab Sample Id: 591031-009 Date Collected: 06.27.18 15.45 Sample Depth: 2 ft
Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
Tech: SCM % Moisture:
Analyst: SCM Date Prep: 07.06.18 12.30 Basis: Wet Weight
Seq Number: 3055732

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	335	4.96	mg/kg	07.06.18 22.06		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: ARM % Moisture:
Analyst: ARM Date Prep: 07.08.18 10.00 Basis: Wet Weight
Seq Number: 3055931

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.08.18 15.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.08.18 15.53	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.08.18 15.53	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.08.18 15.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	07.08.18 15.53	
o-Terphenyl	84-15-1	100	%	70-135	07.08.18 15.53	



Certificate of Analytical Results 591031



LT Environmental, Inc., Arvada, CO

PLU 151

Sample Id: **SW06**
Lab Sample Id: 591031-009

Matrix: Soil
Date Collected: 06.27.18 15.45

Date Received: 07.02.18 08.10
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALJ

Analyst: ALJ

Seq Number: 3055793

Date Prep: 07.07.18 08.15

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.08.18 07.12	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.08.18 07.12	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.08.18 07.12	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.08.18 07.12	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.08.18 07.12	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.08.18 07.12	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.08.18 07.12	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	103	%	70-130	07.08.18 07.12		
1,4-Difluorobenzene	540-36-3	119	%	70-130	07.08.18 07.12		



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LT Environmental, Inc., Arvada, CO

PLU 151

Sample Id: **SW07**
Lab Sample Id: 591031-010

Matrix: Soil
Date Collected: 06.27.18 16.40

Date Received: 07.02.18 08.10
Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: SCM

Analyst: SCM

Seq Number: 3055732

Date Prep: 07.06.18 12.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	21.9	4.98	mg/kg	07.06.18 22.11		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3055931

Date Prep: 07.08.18 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.08.18 16.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.08.18 16.12	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.08.18 16.12	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.08.18 16.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	07.08.18 16.12	
o-Terphenyl	84-15-1	101	%	70-135	07.08.18 16.12	



Certificate of Analytical Results 591031



LT Environmental, Inc., Arvada, CO

PLU 151

Sample Id: **SW07**
Lab Sample Id: 591031-010

Matrix: Soil
Date Collected: 06.27.18 16.40

Date Received: 07.02.18 08.10
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALJ

Analyst: ALJ

Seq Number: 3055793

Date Prep: 07.07.18 08.15

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	07.08.18 07.29	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.08.18 07.29	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.08.18 07.29	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.08.18 07.29	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.08.18 07.29	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.08.18 07.29	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.08.18 07.29	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	92	%	70-130	07.08.18 07.29		
4-Bromofluorobenzene	460-00-4	94	%	70-130	07.08.18 07.29		



Certificate of Analytical Results 591031



LT Environmental, Inc., Arvada, CO

PLU 151

Sample Id: **SW08**
Lab Sample Id: 591031-011

Matrix: Soil
Date Collected: 06.27.18 10.20

Date Received: 07.02.18 08.10
Sample Depth: 2 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: SCM

Analyst: SCM

Seq Number: 3055732

Date Prep: 07.06.18 12.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	322	4.97	mg/kg	07.06.18 22.16		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3055931

Date Prep: 07.08.18 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.08.18 17.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.08.18 17.11	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.08.18 17.11	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.08.18 17.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	07.08.18 17.11	
o-Terphenyl	84-15-1	100	%	70-135	07.08.18 17.11	



Certificate of Analytical Results 591031



LT Environmental, Inc., Arvada, CO

PLU 151

Sample Id: **SW08**
Lab Sample Id: 591031-011

Matrix: Soil
Date Collected: 06.27.18 10.20

Date Received: 07.02.18 08.10
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.08.18 08.00

Basis: Wet Weight

Seq Number: 3055798

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.08.18 10.08	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.08.18 10.08	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.08.18 10.08	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.08.18 10.08	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.08.18 10.08	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.08.18 10.08	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.08.18 10.08	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	96	%	70-130	07.08.18 10.08		
4-Bromofluorobenzene	460-00-4	106	%	70-130	07.08.18 10.08		

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit

SDL Sample Detection Limit

LOD Limit of Detection

PQL Practical Quantitation Limit

MQL Method Quantitation Limit

LOQ Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample

BLK

Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample

BKSD/LCSD

Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate

MS

Matrix Spike

MSD: Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

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



QC Summary 591031

LT Environmental, Inc.

PLU 151

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3055726

MB Sample Id: 7657951-1-BLK

Matrix: Solid

LCS Sample Id: 7657951-1-BKS

Prep Method: E300P

Date Prep: 07.06.18

LCSD Sample Id: 7657951-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	267	107	271	108	90-110	1	20	mg/kg	07.06.18 18:08	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3055732

MB Sample Id: 7657952-1-BLK

Matrix: Solid

LCS Sample Id: 7657952-1-BKS

Prep Method: E300P

Date Prep: 07.06.18

LCSD Sample Id: 7657952-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	263	105	265	106	90-110	1	20	mg/kg	07.06.18 21:06	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3055726

Parent Sample Id: 591023-002

Matrix: Soil

MS Sample Id: 591023-002 S

Prep Method: E300P

Date Prep: 07.06.18

MSD Sample Id: 591023-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.95	248	273	110	275	111	90-110	1	20	mg/kg	07.06.18 18:24	X

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3055726

Parent Sample Id: 591023-003

Matrix: Soil

MS Sample Id: 591023-003 S

Prep Method: E300P

Date Prep: 07.06.18

MSD Sample Id: 591023-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	256	102	256	102	90-110	0	20	mg/kg	07.06.18 19:40	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3055732

Parent Sample Id: 591031-008

Matrix: Soil

MS Sample Id: 591031-008 S

Prep Method: E300P

Date Prep: 07.06.18

MSD Sample Id: 591031-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	86.3	248	353	108	356	109	90-110	1	20	mg/kg	07.06.18 21:22	

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

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

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

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



QC Summary 591031

LT Environmental, Inc.

PLU 151

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3055732

Parent Sample Id: 591054-002

Matrix: Soil

MS Sample Id: 591054-002 S

Prep Method: E300P

Date Prep: 07.06.18

MSD Sample Id: 591054-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1220	248	1440	89	1440	89	90-110	0	20	mg/kg	07.06.18 22:38	X

Analytical Method: TPH by SW8015 Mod

Seq Number: 3055931

MB Sample Id: 7658088-1-BLK

Matrix: Solid

LCS Sample Id: 7658088-1-BKS

Prep Method: TX1005P

Date Prep: 07.08.18

LCSD Sample Id: 7658088-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	937	94	1000	100	70-135	7	20	mg/kg	07.08.18 11:56	
Diesel Range Organics (DRO)	<15.0	1000	978	98	1040	104	70-135	6	20	mg/kg	07.08.18 11:56	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	98		122		118		70-135	%	07.08.18 11:56
o-Terphenyl	105		111		108		70-135	%	07.08.18 11:56

Analytical Method: TPH by SW8015 Mod

Seq Number: 3055931

Parent Sample Id: 591031-001

Matrix: Soil

MS Sample Id: 591031-001 S

Prep Method: TX1005P

Date Prep: 07.08.18

MSD Sample Id: 591031-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	999	1010	101	989	99	70-135	2	20	mg/kg	07.08.18 12:55	
Diesel Range Organics (DRO)	<15.0	999	1050	105	1020	102	70-135	3	20	mg/kg	07.08.18 12:55	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	118		118		70-135	%	07.08.18 12:55
o-Terphenyl	107		102		70-135	%	07.08.18 12:55

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

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

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

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



QC Summary 591031

LT Environmental, Inc.

PLU 151

Analytical Method: BTEX by EPA 8021B

Seq Number: 3055793

MB Sample Id: 7657998-1-BLK

Matrix: Solid

LCS Sample Id: 7657998-1-BKS

Prep Method: SW5030B

Date Prep: 07.07.18

LCSD Sample Id: 7657998-1-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	0.0980	98	0.0755	75	70-130	26	35	mg/kg	07.07.18 23:46	
Toluene	<0.00200	0.100	0.0971	97	0.0739	73	70-130	27	35	mg/kg	07.07.18 23:46	
Ethylbenzene	<0.00200	0.100	0.0900	90	0.0759	75	70-130	17	35	mg/kg	07.07.18 23:46	
m,p-Xylenes	<0.00401	0.200	0.185	93	0.153	76	70-130	19	35	mg/kg	07.07.18 23:46	
o-Xylene	<0.00200	0.100	0.0912	91	0.0721	71	70-130	23	35	mg/kg	07.07.18 23:46	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date	Flag		
1,4-Difluorobenzene	111		88		74		70-130	%	07.07.18 23:46			
4-Bromofluorobenzene	81		77		70		70-130	%	07.07.18 23:46			

Analytical Method: BTEX by EPA 8021B

Seq Number: 3055798

MB Sample Id: 7658000-1-BLK

Matrix: Solid

LCS Sample Id: 7658000-1-BKS

Prep Method: SW5030B

Date Prep: 07.08.18

LCSD Sample Id: 7658000-1-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	0.104	104	0.0859	85	70-130	19	35	mg/kg	07.08.18 08:22	
Toluene	<0.00200	0.100	0.107	107	0.0893	88	70-130	18	35	mg/kg	07.08.18 08:22	
Ethylbenzene	<0.00200	0.100	0.108	108	0.0885	88	70-130	20	35	mg/kg	07.08.18 08:22	
m,p-Xylenes	<0.00401	0.200	0.221	111	0.181	90	70-130	20	35	mg/kg	07.08.18 08:22	
o-Xylene	<0.00200	0.100	0.104	104	0.0863	85	70-130	19	35	mg/kg	07.08.18 08:22	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date	Flag		
1,4-Difluorobenzene	107		91		93		70-130	%	07.08.18 08:22			
4-Bromofluorobenzene	73		85		82		70-130	%	07.08.18 08:22			

Analytical Method: BTEX by EPA 8021B

Seq Number: 3055793

Parent Sample Id: 591118-002

Matrix: Soil

MS Sample Id: 591118-002 S

Prep Method: SW5030B

Date Prep: 07.07.18

MSD Sample Id: 591118-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.0888	89	0.0720	72	70-130	21	35	mg/kg	07.08.18 00:21	
Toluene	<0.00201	0.100	0.0758	76	0.0642	64	70-130	17	35	mg/kg	07.08.18 00:21	X
Ethylbenzene	<0.00201	0.100	0.0475	48	0.0346	35	70-130	31	35	mg/kg	07.08.18 00:21	X
m,p-Xylenes	<0.00402	0.201	0.117	58	0.0843	42	70-130	32	35	mg/kg	07.08.18 00:21	X
o-Xylene	<0.00201	0.100	0.0658	66	0.0563	57	70-130	16	35	mg/kg	07.08.18 00:21	X
Surrogate			MS %Rec	MS Flag		MSD %Rec	MSD Flag	Limits		Units	Analysis Date	
1,4-Difluorobenzene			124			78		70-130		%	07.08.18 00:21	
4-Bromofluorobenzene			101			78		70-130		%	07.08.18 00:21	

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

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

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

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



QC Summary 591031

LT Environmental, Inc. PLU 151

Analytical Method: BTEX by EPA 8021B

Seq Number: 3055798

Parent Sample Id: 591031-011

Matrix: Soil

MS Sample Id: 591031-011 S

Prep Method: SW5030B

Date Prep: 07.08.18

MSD Sample Id: 591031-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0980	97	0.0845	85	70-130	15	35	mg/kg	07.08.18 08:58	
Toluene	<0.00202	0.101	0.0955	95	0.0816	82	70-130	16	35	mg/kg	07.08.18 08:58	
Ethylbenzene	<0.00202	0.101	0.0927	92	0.0836	84	70-130	10	35	mg/kg	07.08.18 08:58	
m,p-Xylenes	<0.00403	0.202	0.192	95	0.171	85	70-130	12	35	mg/kg	07.08.18 08:58	
o-Xylene	<0.00202	0.101	0.0887	88	0.0788	79	70-130	12	35	mg/kg	07.08.18 08:58	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		126		70-130	%	07.08.18 08:58
4-Bromofluorobenzene	90		104		70-130	%	07.08.18 08:58

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

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

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

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

Page 1 Of 2

Phoenix, Arizona (480-355-0900)

51051

Final 1.000

CHAIN OF CUSTODY . . .

Page 2 Of 2

Setting the Standard since 1930
Stafford, Texas (281-240-4200)
Dallas Texas (214-902-0300)

San Antonio, Texas (210-509-3334)
Midland, Texas (432-704-5251)

Phoenix, Arizona (480-355-0900)

www.xenco.com

Client / Reporting Information				Project Information				Analytical Information				Matrix Codes			
Company Name / Branch: LT Environmental, Inc. - Permian Office				Project Name/Number: PLU 151											
Company Address: 3300 North "A" Street, Building 1, Unit #103, Midland, TX 79705				Project Location: Mn											
Email: ADRIAN@LTENV.COM Phone No: (432) 704-5178				Invoice To: XTO Energy - Kyle Litrell											
Project Contact: Adrian Baker				XTO Energy - Kyle Litrell											
Sample's Name Grade Leachback				PO Number: 288 3439											
No.		Field ID / Point of Collection		Collection		Number of preserved bottles									
				Sample Depth	Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MeOH
1		SW08		2'	6/27/18	12:20	S	1							
2															
3															
4															
5															
6															
7															
8															
9															
10															
Turnaround Time (Business days)				Data Deliverable Information				Notes:							
☐ Same Day TAT				☐ 5 Day TAT				☐ Level II Std QC				☐ Level IV (Full Data Plg /raw data)			
☐ Next Day EMERGENCY				☐ 7 Day TAT				☐ Level III Std QC+ Forms				☐ TRRP Level IV			
☐ 2 Day EMERGENCY				☒ Contract TAT				☐ Level 3 (CLP Forms)				☐ UST / RG -411			
☐ 3 Day EMERGENCY								☐ TRRP Checklist							
TAT Starts Day received by Lab, if received by 5:00 pm															
Relinquished by Sample:				SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY				FED-EX / UPS: Tracking #							
Date Time: 6/27/18 12:20				Received By: [Signature]				Date Time: 7/2/18 8:10				Received By: [Signature]			
Date Time: 6/27/18 12:20				Relinquished By: [Signature]				Date Time: 7/2/18 8:10				Relinquished By: [Signature]			
Date Time: 6/27/18 12:20				Received By: [Signature]				Date Time: 7/2/18 8:10				Received By: [Signature]			
Date Time: 6/27/18 12:20				Relinquished By: [Signature]				Date Time: 7/2/18 8:10				Relinquished By: [Signature]			
Date Time: 6/27/18 12:20				Received By: [Signature]				Date Time: 7/2/18 8:10				Received By: [Signature]			
Date Time: 6/27/18 12:20				Relinquished By: [Signature]				Date Time: 7/2/18 8:10				Relinquished By: [Signature]			
Date Time: 6/27/18 12:20				Received By: [Signature]				Date Time: 7/2/18 8:10				Received By: [Signature]			
Date Time: 6/27/18 12:20				Relinquished By: [Signature]				Date Time: 7/2/18 8:10				Relinquished By: [Signature]			
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Date Time: 6/27/18 12:20				Relinquished By: [Signature]				Date Time: 7/2/18 8:10				Relinquished By: [Signature]			
Date Time: 6/27/18 12:20				Received By: [Signature]				Date Time: 7/2/18 8:10				Received By: [Signature]			
Date Time: 6/27/18 12:20				Relinquished By: [Signature]				Date Time: 7/2/18 8:10				Relinquished By: [Signature]			
Date Time: 6/27/18 12:20				Received By: [Signature]				Date Time: 7/2/18 8:10				Received By: [Signature]			
Date Time: 6/27/18 12:20				Relinquished By: [Signature]				Date Time: 7/2/18 8:10				Relinquished By: [Signature]			
Date Time: 6/27/18 12:20				Received By: [Signature]											



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

Date/ Time Received: 07/02/2018 08:10:00 AM

Work Order #: 591031

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	2.3
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#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)?	N/A
#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:

Brianna Teel

Brianna Teel

Date: 07/02/2018

Checklist reviewed by:

Jessica Kramer

Jessica Kramer

Date: 07/05/2018