

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

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

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

Incident ID	NRM2005839143
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

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

Location of Release Source

Latitude 32.100786 Longitude -103.841961
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Poker Lake Unit 25 BD 901H	Site Type	Production Well
Date Release Discovered	02/11/2020	API# (if applicable)	30-015-45863 Poker Lake Unit 25 BD 901H

Unit Letter	Section	Township	Range	County
L	25	25S	30E	Eddy

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☒ Other (describe) 75% Freshwater/25% recycled water	Volume/Weight Released (provide units) 138.86 barrels	Volume/Weight Recovered (provide units) 70 barrels

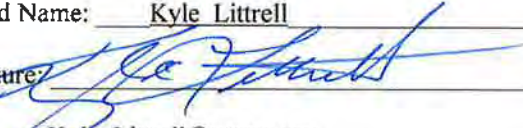
Cause of Release: A lay flat water transfer line parted resulting in a spill of 138.86 barrels of produced water, 70 barrels were recovered by vacuum truck. A third party contractor will be retained to complete remediation activities.

Incident ID	NRM2005839145
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Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? An unauthorized release of a volume of 25 or more barrels.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Yes by Amy Ruth to Mike Bratcher; Rob Hamlet; Victoria Venegas; 'Griswold, Jim, EMNRD'; blm_nm_cfo_spill@blm.gov; Crisha Morgan on Tuesday, February 11, 2020 at 11:44 AM via email.	

Initial Response

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

☒ The source of the release has been stopped.	
☒ The impacted area has been secured to protect human health and the environment.	
☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.	
☒ All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why: N/A	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: <u>Kyle Littrell</u>	Title: <u>SH&E Supervisor</u>
Signature: 	Date: <u>2/26/20</u>
email: <u>Kyle_Littrell@xtoenergy.com</u>	Telephone: _____
OCD Only	
Received by: <u>Ramona Marcus</u>	Date: <u>02/27/2020</u>

NRM2005839143

Location:	PLU 25 Brushy Draw 901H	
Spill Date:	2/11/2020	
Area 1		
Approximate Area =	21553.00	sq. ft.
Average Saturation (or depth) of spill =	1.00	inches
Average Porosity Factor =		
0.03		
VOLUME OF LEAK		
Total Produced Water =	79.60	bbls
Area 2		
Approximate Area =	4991.00	sq. ft.
Average Saturation (or depth) of spill =	4.00	inches
Average Porosity Factor =		
0.20		
VOLUME OF LEAK		
Total Produced Water =	59.26	bbls
TOTAL VOLUME OF LEAK		
Total Produced Water =	138.86	bbls
TOTAL VOLUME RECOVERED		
Total Produced Water =	70.00	bbls

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Site Assessment/Characterization

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

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

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

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

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

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

State of New Mexico
Oil Conservation Division

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: _____ Date: _____

email: Kyle_Littrell@xtoenergy.com Telephone: (432)-221-7331

OCD Only

Received by: Cristina Eads Date: 10/15/2020

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Closure

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

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

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

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: _____ Date: _____

email: Kyle_Littrell@xtoenergy.com Telephone: 432-221-7331

OCD Only

Received by: Cristina Eads Date: 08/12/2020

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

Closure Approved by: D E N I E D Date: 10/15/2020

Printed Name: Cristina Eads Title: Environmental Specialist



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

August 11, 2020

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

RE: Closure Request
Poker Lake Unit 25 BD 901H
Incident Number NRM2005839143
Eddy County, New Mexico

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following Closure Request detailing site assessment and soil sampling activities at the Poker Lake Unit 25 BD 901H (Site) located in Unit L, Section 25, Township 25 South, Range 30 East, in Eddy County, New Mexico (Figure 1) in response to a 138.86-bbl freshwater - recycled water mixture release on February 11, 2020.

Following an initial site assessment, approximately 1,564 cubic yards of soil were excavated to a depth ranging from 3 feet to 5 feet below ground surface (bgs) and properly disposed of at a permitted disposal facility. Confirmation soil samples were collected from the excavation extent and laboratory analytical results indicate concentrations of benzene, toluene, ethylbenzene, and total xylenes (BTEX), total gasoline and diesel range organics (GRO+DRO), total petroleum hydrocarbons (TPH), and chloride were compliant with the site-specific Closure Criteria as specified in Table 1 of 19.15.29 of the New Mexico Administrative Code (NMAC). As a result, XTO respectfully requests Closure and no further action (NFA) for Incident Number NRM2005839143. Please find supplementary details regarding the release, site assessment, remediation, and confirmation sampling in the subsequent form report and attachments.

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

Sincerely,

Jeremy Hill
Staff Environmental Scientist

Ashley L. Ager, P.G.
Senior Geologist

cc:

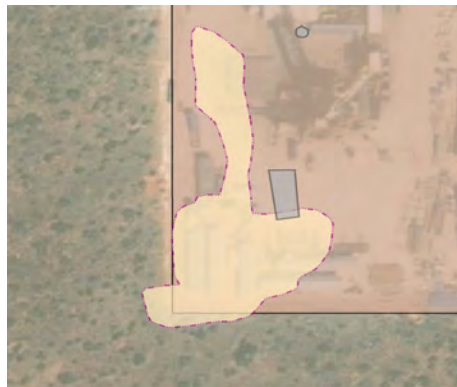
Kyle Littrell, XTO
Bureau of Land Management
Robert Hamlet, NMOCD
Victoria Venegas, NMOCD

Supplemental Information and Attachments:

Figure 1	Site Location and Receptors
Figure 2	Preliminary Soil Sample Locations
Figure 3	Excavation Soil Sample Locations
Table 1	Soil Analytical Results
Attachment 1	Referenced Well Records
Attachment 2	Photographic Log
Attachment 3	Lithologic Soil Sample Logs
Attachment 4	Laboratory Analytical Results

BACKGROUND

The purpose of the site assessment and soil sampling activities was to assess the presence or absence of impacts to soil following a release at the Site. XTO reported the release to NMOCD on a Release Notification and Corrective Action Form C-141 (Form C-141).

Release Date	February 11, 2020	RELEASE EXTENT
Lat / Long	32.100786, -103.841961	
Location	UNIT L SEC 25 T25S R30E / on well pad/pasture	
Surface Owner	Federal	
Cause of Release	Lay flat water line parted	
Volume of Product Released	138.86 bbls	
Volume of Product Recovered	70 bbls	
Material Released	Freshwater and recycled water	
Notification to NMOCD Date	February 26, 2020	

INITIAL PHOTOGRAPHS OF RELEASE

Photo 1: View southwest of disconnected lay flat line



Photo 2: View northwest of disconnected lay flat line and equipment

SITE CHARACTERIZATION

LTE characterized the Site according to Table 1, *Closure Criteria for Soils Impacted by a Release*, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC).

Sensitive Receptor	Distance from Release Extent	Comment(s)	
Depth to Groundwater	NM OSE Well C 03781 POD1 located 8,135 ft North. An additional 3 wells are located South West and also indicate DTW >100'	DTW: 325 feet bgs Date: 01/15	
Closest continuously flowing water or significant watercourse	Unnamed Dry wash 776 ft Northeast	N/A	
Lakebed, sinkhole, or playa lake	>200 ft	N/A	
Occupied Residence, school, hospital, institution, church, wet	>500 ft	N/A	
Freshwater well or spring	>1,000 ft	N/A	
100-year flood plain or overlying subsurface mine	N/A	N/A	
Unstable Geology	N/A	low karst	

CLOSURE CRITERIA

Constituent	Closure Criteria (mg/kg)	Laboratory Analytical Method ¹
Benzene	10	EPA Method 8021B
Total BTEX	50	EPA Method 8021B
TPH-GRO & TPH-DRO	1,000	EPA Method 8015 M/D
TPH	2,500	EPA Method 8015 M/D
Chloride	20,000	EPA Method 300.0
Chloride reclamation requirement for off pad	600	EPA Method 300.0

FIELD ACTIVITIES AND SOIL SCREENING PROTOCOL

The release extent and soil sample locations were mapped utilizing a handheld GPS unit and are depicted on Figure 2. Photographic documentation was conducted before and during excavation activities and is included in Attachment 2.

LTE staff screened soil for volatile aromatic hydrocarbons and chloride utilizing a calibrated PID and Hach® chloride QuanTab® test strips, respectively. The PID was calibrated with a 100-ppm by volume isobutylene. Calibration was conducted daily with bump tests conducted throughout the day. In situations where elevated PID readings were recorded consistently, the PID was re-calibrated with 100 ppm isobutylene.

INITIAL SITE ASSESSMENT AND DELINEATION SAMPLING

Assessment Date(s)	June 11, 2020, and June 18, 2020
Preliminary Soil Samples Collected	SS01 - SS13 at approximately 0.5 bgs, with 2nd depths ranging from 1.5 to 4 feet bgs
Analytical Results	SS12 and SS13 exceeded the Closure Criteria for TPH and/or chloride off pad.
Follow-up Field Activities	Excavation required in off-pad pasture area based on analytical results for preliminary soil samples SS12 and SS13 that exceeded the reclamation criteria for chloride in the top 4 feet. No excavation required on-pad based on samples SS01/SS01A/SS01B through SS11/SS11A that were compliant with the Closure Criteria.
Soil Sampling and Analysis Procedure	The preliminary soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported at or below 4°C under strict COC procedures to Xenco Laboratories (Xenco) in Carlsbad, New Mexico.

ASSESSMENT PHOTOGRAPHS

Photo 3: View south of on-pad release extent

Photo 4: View southeast of SS13 location off-pad

Photo 5: View northwest of SS12 and SS13 locations

EXCAVATION

Excavation Date(s)	Off-Pad Excavation June 29, 2020 to July 16, 2020
Confirmation soil samples collected	Floor samples FS01 - FS41 collected at depths ranging from 3 feet bgs to 5 feet bgs. Sidewall samples SW01-SW12 collected at depths ranging from the surface to 5 feet bgs.
Analytical Results	All final excavation soil samples were compliant with the applicable Closure Criteria and Reclamation Standard in the top 4 feet. SW3 - SW5 are above reclamation standards but are below on pad standards therefore, no further action is required.
Follow-up Field Activities	Based on the analytical results for the confirmation soil samples, no further remediation is required.
Excavation Dimensions	The pasture excavation was 9,762 square feet at ground surface and 8,037 square feet at floor level.
Excavation Volume	1,564 cubic yards excavated in the pasture. 20,700 sq ft on pad did not require excavation due to delineation samples below closure criteria.

Confirmation sampling was conducted on a 200 square foot frequency for floor and sidewall samples. Composite soil samples were collected by depositing five aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing them. The mixture was divided into two bags; one for field screening and the other for potential laboratory analysis. The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported at or below 4°C under strict COC procedures to Xenco.

EXCAVATION PHOTOGRAPHS

Photo 6: View west of excavation off-pad

Photo 7: View southeast of excavation off-pad

BACKFILL PHOTOGRAPHS



View of backfill in pasture completed July 23, 2020. Recontoured and graded to match pasture surface prior to excavation activities.

Notes:

bbl(s) - barrels

bgs - below ground surface

BTEX - benzene, toluene, ethylbenzene, and total xylenes

COC - chain of custody

DRO - diesel range organics

DTW - depth to water

EPA - United States Environmental Protection Agency

GPS - global positioning system

GRO - gasoline range organics

mg/kg - milligrams per kilogram

PID - photoionization detector

ppm - parts per million

N/A - not applicable

NM OSE - New Mexico Office of the State Engineer

NMOCD - New Mexico Oil Conservation Division

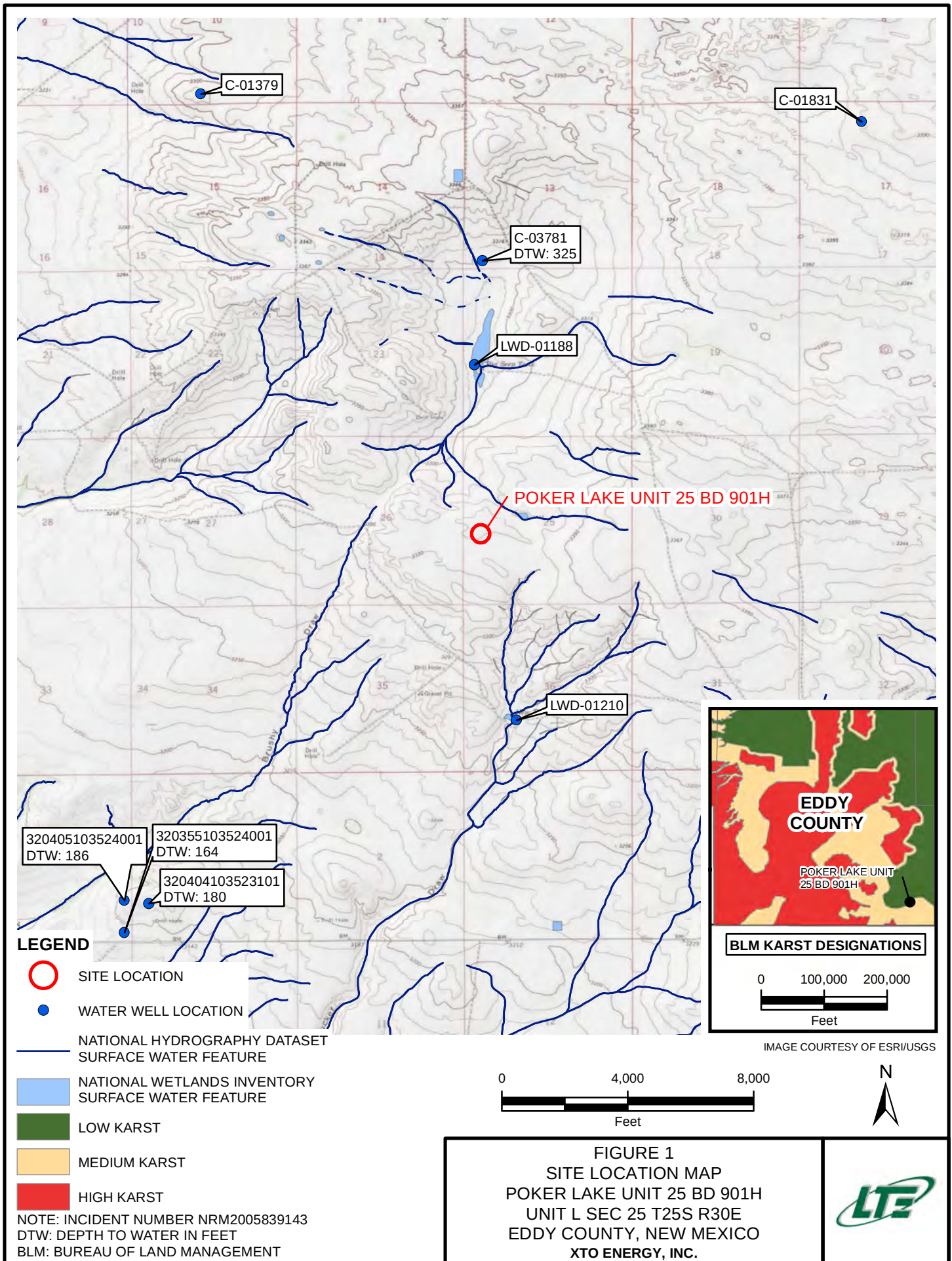
TPH - total petroleum hydrocarbons

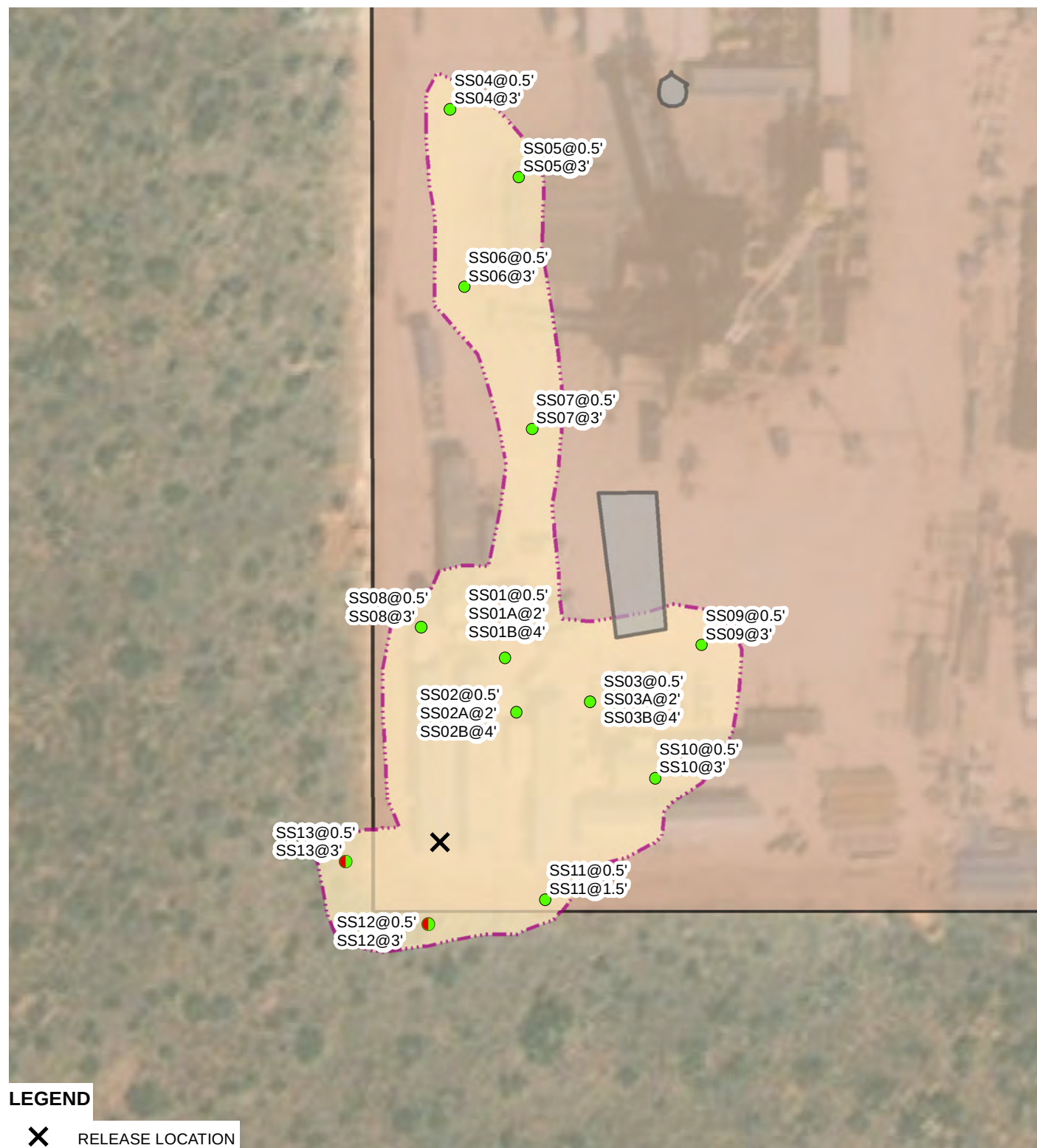
USGS - United States Geological Survey

°C - degrees Celsius

FIGURES







LEGEND



RELEASE LOCATION



PRELIMINARY SOIL SAMPLE WITH CONCENTRATIONS PREVIOUSLY EXCEEDING APPLICABLE CLOSURE CRITERIA



PRELIMINARY SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA



RELEASE EXTENT



INFRASTRUCTURE



WELLPAD EXTENT

NOTE: INCIDENT NUMBER NRM2005839143

SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)

IMAGE COURTESY OF ESRI

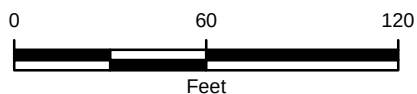
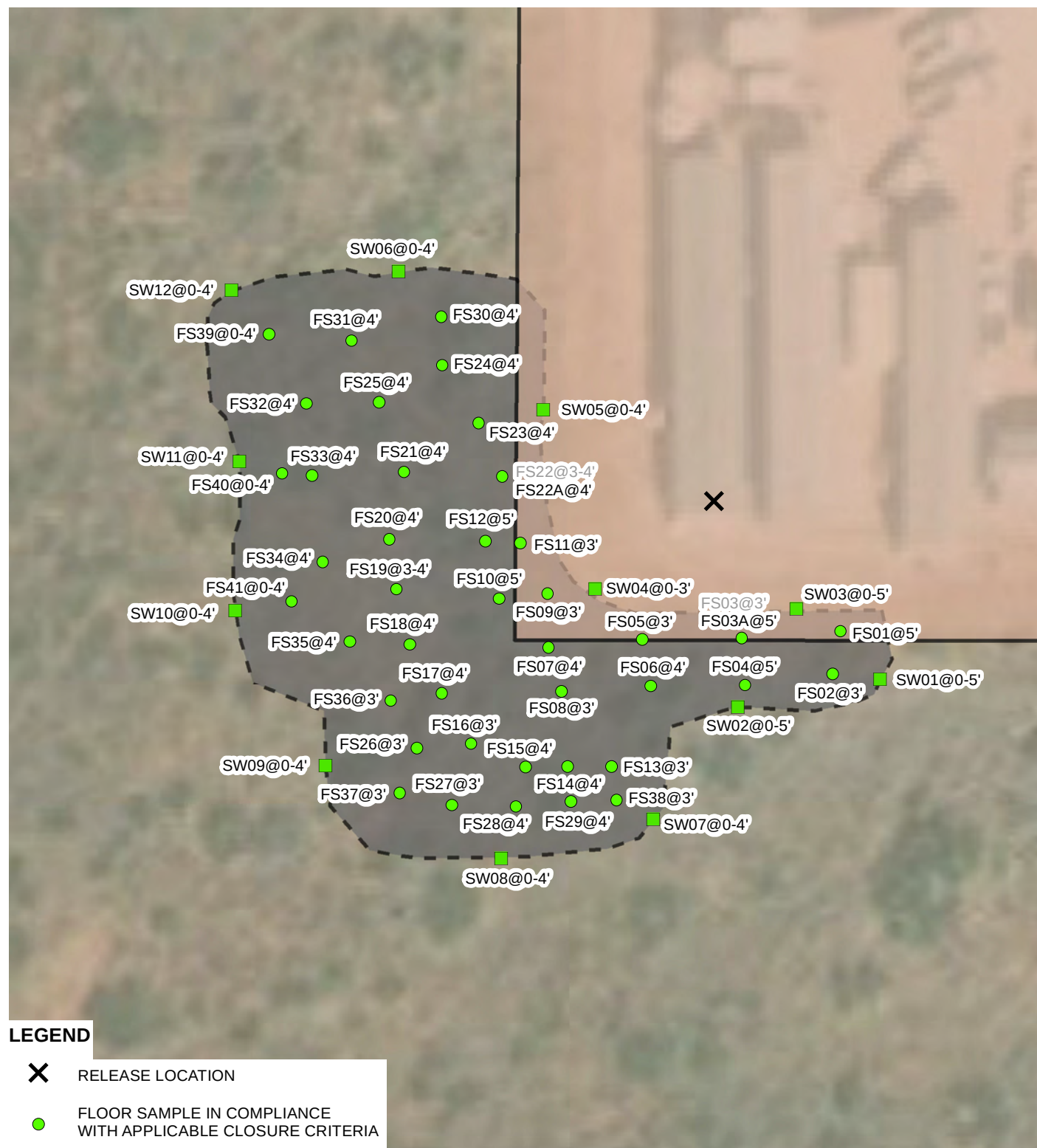


FIGURE 2
PRELIMINARY SOIL SAMPLE LOCATIONS
 POKER LAKE UNIT 25 BD 901H
 UNIT L SEC 25 T25S R30E
 EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.



**LEGEND**

RELEASE LOCATION

FLOOR SAMPLE IN COMPLIANCE
WITH APPLICABLE CLOSURE CRITERIASIDEWALL SAMPLE IN COMPLIANCE
WITH APPLICABLE CLOSURE CRITERIA

WELLPAD EXTENT



EXCAVATION EXTENT



INFRASTRUCTURE

NOTE: INCIDENT NUMBER NRM2005839143
 SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)
 FIGURES ARE PROVIDED ON PAGE 11 OF THE REPORT
 TEXT: INDICATES SOIL REPRESENTED BY SAMPLE
 THAT WAS REMOVED

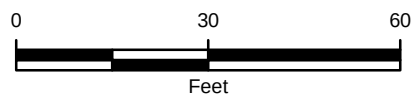


IMAGE COURTESY OF ESRI

FIGURE 3
EXCAVATION SOIL SAMPLE LOCATIONS
 POKER LAKE UNIT 25 BD 901H
 UNIT L SEC 25 T25S R30E
 EDDY COUNTY, NEW MEXICO
 XTO ENERGY, INC.



TABLES



TABLE 1
SOIL ANALYTICAL RESULTS

Poker Lake Unit 25 BD 901H
INCIDENT NUMBER NRM2005839143
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria			10	NE	NE	NE	50	NE	NE	NE	1,000	2,500	20,000
SS01	0.5	4/22/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.2	<50.2	<50.2	<50.2	<50.2	14,100
SS01A	2	04/27/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	1,230
SS01 B	4	04/27/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	241
SS02	0.5	4/22/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.1	<50.1	<50.1	<50.1	<50.1	18,600
SS02 A	2	04/27/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.8	<49.8	<49.8	<49.8	<49.8	861
SS02 B	4	04/27/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.1	<50.1	<50.1	<50.1	<50.1	382
SS03	0.5	4/22/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.9	<49.9	<49.9	<49.9	<49.9	9,640
SS03 B	2	04/27/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.8	<49.8	<49.8	<49.8	<49.8	1,770
SS03 A	4	04/27/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.2	<50.2	<50.2	<50.2	<50.2	450
SS04	0.5	06/18/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	386
SS04A	3	06/18/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<49.8	<49.8	<49.8	<49.8	<49.8	133
SS05	0.5	06/18/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	506
SS05A	3	06/18/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	43.6
SS06	0.5	06/18/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	1,730
SS06A	3	06/18/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.0	<50.0	<50.0	<50.0	<50.0	205
SS07	0.5	06/18/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	119
SS07A	3	06/18/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	70.0
SS08	0.5	06/18/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	424
SS08A	3	06/18/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.2	<50.2	<50.2	<50.2	<50.2	522
SS09	0.5	06/18/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.8	<49.8	<49.8	<49.8	<49.8	138
SS09A	3	06/18/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	108
SS10	0.5	06/18/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.2	<50.2	<50.2	<50.2	<50.2	390
SS10A	3	06/18/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.3	<50.3	<50.3	<50.3	<50.3	57.2

TABLE 1
SOIL ANALYTICAL RESULTS

Poker Lake Unit 25 BD 901H
INCIDENT NUMBER NRM2005839143
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria			10	NE	NE	NE	50	NE	NE	NE	1,000	2,500	20,000
SS11	0.5	06/11/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	35.9
SS11A	1.5	06/11/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.1	<50.1	<50.1	<50.1	<50.1	33.8
SS12	0.5	06/18/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.2	<50.2	<50.2	<50.2	<50.2	734*
SS12A	3	06/18/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.1	<50.1	<50.1	<50.1	<50.1	253
SS13	0.5	06/18/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	2,460*
SS13A	3	06/18/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.3	<50.3	<50.3	<50.3	<50.3	212
SW01	0 - 5	07/01/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.1	<50.1	<50.1	<50.1	<50.1	527*
SW02	0 - 5	07/01/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.1	<50.1	<50.1	<50.1	<50.1	415*
SW03	0 - 5	07/09/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.1	<50.1	<50.1	<50.1	<50.1	2,070**
SW04	0 - 3	07/09/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.1	<50.1	<50.1	<50.1	<50.1	2,510**
SW05	0 - 4	07/09/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.0	<50.0	<50.0	<50.0	<50.0	1,910**
SW06	0 - 4	07/15/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	382*
SW07	0 - 4	07/14/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.3	<50.3	<50.3	<50.3	<50.3	454*
SW08	0 - 4	7/13/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	344*
SW09	0 - 4	07/14/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	165*
SW10	0 - 4	07/15/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.0	<50.0	<50.0	<50.0	<50.0	525*
SW11	0 - 4	07/15/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.0	<50.0	<50.0	<50.0	<50.0	234*
SW12	0 - 4	07/15/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.2	<50.2	<50.2	<50.2	<50.2	292*
FS01	5	07/01/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.2	<50.2	<50.2	<50.2	<50.2	313*
FS02	3	06/29/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	595*
FS03	3	06/29/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.3	<50.3	<50.3	<50.3	<50.3	902*
FS03A	5	07/01/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.3	<50.3	<50.3	<50.3	<50.3	577*
FS04	5	07/01/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.2	<50.2	<50.2	<50.2	<50.2	666*

TABLE 1
SOIL ANALYTICAL RESULTS

Poker Lake Unit 25 BD 901H
INCIDENT NUMBER NRM2005839143
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria			10	NE	NE	NE	50	NE	NE	NE	1,000	2,500	20,000
FS05	3	06/30/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	573*
FS06	4	07/01/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<49.8	<49.8	<49.8	<49.8	<49.8	348*
FS07	4	07/01/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.3	<50.3	<50.3	<50.3	<50.3	306*
FS08	3	06/30/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	340*
FS09	3	06/30/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	294*
FS10	5	07/01/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.3	<50.3	<50.3	<50.3	<50.3	336*
FS11	3	06/30/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	432*
FS12	5	07/01/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.2	<50.2	<50.2	<50.2	<50.2	186*
FS13	3	07/08/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.1	<50.1	<50.1	<50.1	<50.1	217*
FS14	4	07/08/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	57.5*
FS15	4	07/08/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	87.1*
FS16	3	07/08/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.2	<50.2	<50.2	<50.2	<50.2	541*
FS17	4	07/09/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	22.7*
FS18	4	07/09/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	107*
FS19	3 - 4	07/08/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	472*
FS20	4	07/08/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.2	<50.2	<50.2	<50.2	<50.2	183*
FS21	4	07/08/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	66.2*
FS22	3 - 4	07/08/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	788*
FS22A	4	7/13/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.0	<50.0	<50.0	<50.0	<50.0	1,200*
FS23	4	07/09/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.9	<49.9	<49.9	<49.9	<49.9	911*
FS24	4	7/13/2020	<0.00200	0.00349	<0.00200	<0.00200	0.00349	<50.2	<50.2	<50.2	<50.2	<50.2	2190*
FS25	4	7/13/2020	<0.00202	0.00279	<0.00202	<0.00202	0.00279	<50.0	<50.0	<50.0	<50.0	<50.0	183*
FS26	3	7/13/2020	<0.00198	<0.00198	0.00372	<0.00198	0.00372	<50.0	<50.0	<50.0	<50.0	<50.0	55.5*

TABLE 1
SOIL ANALYTICAL RESULTS

Poker Lake Unit 25 BD 901H
INCIDENT NUMBER NRM2005839143
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria			10	NE	NE	NE	50	NE	NE	NE	1,000	2,500	20,000
FS27	3	7/13/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.0	<50.0	<50.0	<50.0	<50.0	66.2*
FS28	4	7/13/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	62.5*
FS29	4	7/13/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	86.7*
FS30	4	7/15/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	183*
FS31	4	07/15/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.1	<50.1	<50.1	<50.1	<50.1	1,320*
FS32	4	07/15/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	142*
FS33	4	07/15/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	75.4*
FS34	4	07/15/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.1	<50.1	<50.1	<50.1	<50.1	46.5*
FS35	4	07/15/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.8	<49.8	<49.8	<49.8	<49.8	1,050*
FS36	3	07/15/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	61.2*
FS37	3	07/15/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.8	<49.8	<49.8	<49.8	<49.8	66.4*
FS38	3	07/15/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.2	<50.2	<50.2	<50.2	<50.2	386*
FS39	4	07/16/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.3	<50.3	<50.3	<50.3	<50.3	47.5*
FS40	4	07/16/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.8	<49.8	<49.8	<49.8	<49.8	34.5*

Notes:

bgs - below ground surface

BTEX - benzene, toluene, ethylbenzene, and total xylenes

DRO - diesel range organics

GRO - gasoline range organics

mg/kg - milligrams per kilogram

ORO - motor oil range organics

NMAC - New Mexico Administrative Code

NMOCD - New Mexico Oil Conservation Division

NE - not established

TPH - total petroleum hydrocarbons

Bold - indicates result exceeds the applicable regulatory standard

< - indicates result is below laboratory reporting limits

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

TEXT - indicates soil that was excavated

* - indicates chloride reclamation requirement for off pad

** - indicates sample collected from facility pad and below Table 1 Closure Criteria.

ATTACHMENT 1: REFERENCED WELL RECORDS





New Mexico Office of the State Engineer

Water Right Summary


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WR File Number: C 03781 **Subbasin:** CUB **Cross Reference:** -
Primary Purpose: EXP EXPLORATION
Primary Status: PMT PERMIT
Total Acres: **Subfile:** - **Header:** -
Total Diversion: 0 **Cause/Case:** -
Agent: ATKINS ENGR ASSOC INC
Contact: CHRIS CORTEZ
Owner: BOPCO, L.P.
Contact: BRIAN PREGGER

Documents on File

	Trn #	Doc	File/Act	Status		Transaction Desc.	From/ To	Acres	Diversion	Consumptive
				1	2					
get images	555114	EXPL	2014-11-14	PMT	LOG	C 03781	T	0	0	

Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Well Tag	Source	Q	64Q16Q4Sec	Tws	Rng	X	Y	Other Location Desc
C 03781 POD1		Artesian	3	3	3	13 25S 30E	609306	3554761	1/3 MILE W. OF BUCK JACKSON RD

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

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WATER RIGHT SUMMARY



New Mexico Office of the State Engineer

Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest)						(NAD83 UTM in meters)	
Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
C	03781 POD1	3	3	3	13	25S	30E	609306	3554761 
Driller License:	331	Driller Company:				SBQ2, LLC DBA STEWART BROTHERS DRILLING CO.			
Driller Name:									
Drill Start Date:	01/08/2015	Drill Finish Date:				01/10/2015		Plug Date:	
Log File Date:	02/19/2015	PCW Rev Date:						Source:	Artesian
Pump Type:		Pipe Discharge Size:				Estimated Yield:			
Casing Size:	8.63	Depth Well:				720 feet		Depth Water:	325 feet

Water Bearing Stratifications:	Top	Bottom	Description
	200	370	Sandstone/Gravel/Conglomerate
	370	390	Sandstone/Gravel/Conglomerate
	390	410	Sandstone/Gravel/Conglomerate
	410	440	Sandstone/Gravel/Conglomerate
	440	460	Shale/Mudstone/Siltstone
	460	470	Shale/Mudstone/Siltstone
	470	490	Shale/Mudstone/Siltstone
	490	500	Shale/Mudstone/Siltstone
	500	510	Sandstone/Gravel/Conglomerate
	510	530	Shale/Mudstone/Siltstone
	530	660	Shale/Mudstone/Siltstone
	660	690	Shale/Mudstone/Siltstone
	690	700	Shale/Mudstone/Siltstone
	700	720	Shale/Mudstone/Siltstone

Casing Perforations:	Top	Bottom
	340	720

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POINT OF DIVERSION SUMMARY



New Mexico Office of the State Engineer

Water Right Summary



WR File Number: C 01379 **Subbasin:** C **Cross Reference:** -
Primary Purpose: STK 72-12-1 LIVESTOCK WATERING
Primary Status: PMT PERMIT
Total Acres: **Subfile:** - **Header:** -
Total Diversion: 3 **Cause/Case:** -
Owner: BUCK JACKSON

Documents on File

	Trn #	Doc	File/Act	Status		Transaction Desc.	From/		Acres	Diversion	Consumptive
				1	2		To				
	463242	72121	1968-01-17	PMT	LOG	C 01379	T			3	

Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Well Tag	Source	Q	64Q16Q4Sec	Tws	Rng	X	Y	Other Location Desc
C 01379			4	4	3	10	25S	30E	606571 3556355*

An () after northing value indicates UTM location was derived from PLSS - see Help

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WATER RIGHT SUMMARY



New Mexico Office of the State Engineer

Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest)						(NAD83 UTM in meters)	
Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
C	01379	4	4	3	10	25S	30E	606571	3556355* 
Driller License:	30	Driller Company:				BARRON, EMMETT			
Driller Name:	BARRON, EMMETT								
Drill Start Date:	01/22/1968	Drill Finish Date:				03/20/1968		Plug Date:	
Log File Date:	04/26/1968	PCW Rcv Date:				Source:			
Pump Type:		Pipe Discharge Size:				Estimated Yield:			
Casing Size:		Depth Well:				400 feet		Depth Water:	

*UTM location was derived from PLSS - see Help

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POINT OF DIVERSION SUMMARY



New Mexico Office of the State Engineer

Water Right Summary


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WR File Number: C 01831 **Subbasin:** C **Cross Reference:** -
Primary Purpose: PRO 72-12-1 PROSPECTING OR DEVELOPMENT OF NATURAL RESOURCE
Primary Status: PMT PERMIT
Total Acres: **Subfile:** - **Header:** -
Total Diversion: 0 **Cause/Case:** -
Owner: OXY PETROLEUM INC

Documents on File

	Trn #	Doc	File/Act	Status		Transaction Desc.	From/		Acres	Diversion	Consumptive
				1	2		To				
 get images	464812	72121	1978-11-14	EXP	EXP	C 01831	T			3	

Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Well Tag	Source	Q	64Q16Q4Sec	Tws	Rng	X	Y	Other Location Desc
C 01831			2	1	17	25S 31E	612972	3556126*	

An () after northing value indicates UTM location was derived from PLSS - see Help

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WATER RIGHT SUMMARY



New Mexico Office of the State Engineer

Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE)				(NAD83 UTM in meters)
		(quarters are smallest to largest)				
Well Tag	POD Number	Q64 Q16 Q4 Sec Tws Rng	X	Y		
	C 01831	2 1 17 25S 31E	612972	3556126*		

Driller License:**Driller Company:****Driller Name:****Drill Start Date:****Drill Finish Date:****Plug Date:****Log File Date:****PCW Rev Date:****Source:****Pump Type:****Pipe Discharge Size:****Estimated Yield:****Casing Size:****Depth Well:****Depth Water:**

*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

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POINT OF DIVERSION SUMMARY



New Mexico Office of the State Engineer
Water Right Summary



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WR File Number:	LWD 01188	Subbasin:	CUB	Cross Reference:	LWD-C-7
Primary Purpose:	PLS NON 72-12-1 LIVESTOCK WATERING				
Primary Status:	DCL DECLARATION				
Total Acres:	34.7	Subfile:	-	Header:	-
Total Diversion:	89.2	Cause/Case:	-		
Owner:	BUCK & LARUE JACKSON TRUST				

Documents on File

			Status		From/				
Trn #	Doc	File/Act	1	2	Transaction Desc.	To	Acres	Diversion	Consumptive
 get images	631014	DCL 1992-03-16	DCL	PRC	LWD-C-7	T	34.7	89.2	

Current Points of Diversion

POD Number	Well Tag	Source	Q						(NAD83 UTM in meters)		Other Location Desc
			64	16	Q4	Sec	Tws	Rng	X	Y	
LWD 01188 POD1			1	1	3	24	25S	30E	609238	3553754*	

An () after northing value indicates UTM location was derived from PLSS - see Help

Priority Summary

Priority	Status	Acres	Diversion	Pod Number
12/31/1906	DCL	34.7	89.2	LWD 01188 POD1

Place of Use

[illegible]

Source

Acres	Diversion	CU	Use	Priority	Source	Description
34.7	89.2		PLS	12/31/1906	SW	

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8/5/20 3:33 PM

WATER RIGHT SUMMARY



New Mexico Office of the State Engineer

Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest)			(NAD83 UTM in meters)	
Well Tag	POD Number	Q64 Q16 Q4 Sec Tws Rng			X Y	
	LWD 01188 POD1	1 1 3 24 25S 30E			609238 3553754*	

Driller License:**Driller Company:****Driller Name:****Drill Start Date:****Drill Finish Date:****Plug Date:****Log File Date:****PCW Rev Date:****Source:****Pump Type:****Pipe Discharge Size:****Estimated Yield:****Casing Size:****Depth Well:****Depth Water:**

*UTM location was derived from PLSS - see Help

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8/5/20 3:36 PM

POINT OF DIVERSION SUMMARY



New Mexico Office of the State Engineer
Water Right Summary



WR File Number:	LWD 01210	Subbasin:	CUB	Cross Reference:	LWD-C-15
Primary Purpose:	PLS NON 72-12-1 LIVESTOCK WATERING				
Primary Status:	DCL DECLARATION				
Total Acres:	1.7	Subfile:	-	Header:	-
Total Diversion:	17	Cause/Case:	-		
Owner:	BUCK & LARUE JACKSON TRUST				

Documents on File

			Status			From/			
Trn #	Doc	File/Act	1	2	Transaction Desc.	To	Acres	Diversion	Consumptive
 get images	631581	DCL 1992-03-16	DCL	PRC	LWD-C-15	T	1.7	17	

Current Points of Diversion

POD Number	Well Tag	Source	Q						X		Y	Other Location Desc
			64	Q1	Q4	Sec	Tws	Rng				
LWD 01210 POD1			3	2	3	36	25S	30E	609665	3550314*		

An () after northing value indicates UTM location was derived from PLSS - see Help

Priority Summary

Priority	Status	Acres	Diversion	Pod Number
12/31/1964	DCL	1.7	17	LWD 01210 POD1

Place of Use

[illegible]

Source

Acres	Diversion	CU	Use	Priority	Source	Description
1.7	17		PLS	12/31/1964	SW	

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WATER RIGHT SUMMARY



New Mexico Office of the State Engineer

Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE)			(quarters are smallest to largest)	(NAD83 UTM in meters)
Well Tag	POD Number	Q64 Q16 Q4	Sec	Tws	Rng	X Y
	LWD 01210 POD1	3 2 3	36	25S	30E	609665 3550314*

Driller License:**Driller Company:****Driller Name:****Drill Start Date:****Drill Finish Date:****Plug Date:****Log File Date:****PCW Rev Date:****Source:****Pump Type:****Pipe Discharge Size:****Estimated Yield:****Casing Size:****Depth Well:****Depth Water:**

*UTM location was derived from PLSS - see Help

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USGS 320404103523101 26S.30E.05.343414

Available data for this site

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GO

Well Site

DESCRIPTION:

Latitude 32°04'04", Longitude 103°52'31" NAD27

Eddy County, New Mexico , Hydrologic Unit 13070001

Well depth: 775 feet

Land surface altitude: 3,173 feet above NAVD88.

Well completed in "Alluvium, Bolson Deposits and Other Surface Deposits" (110AVMB) local aquifer

AVAILABLE DATA:

Data Type	Begin Date	End Date	Count
Field groundwater-level measurements	1958-08-18	1998-01-28	6
Revisions	Unavailable (site:0) (timeseries:0)		

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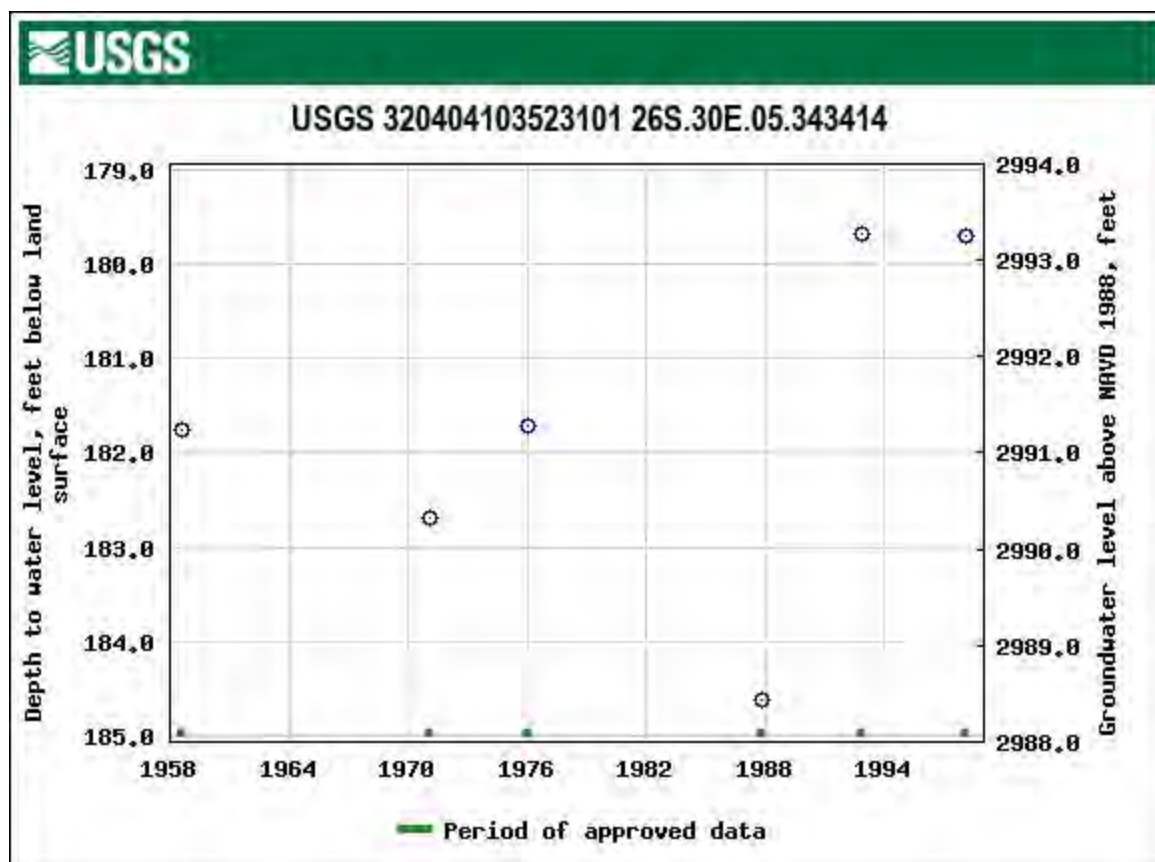
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USGS 320405103524001 26S.30E.05.33441

Available data for this site

SUMMARY OF ALL AVAILABLE DATA ▼

GO

Well Site

DESCRIPTION:

Latitude 32°04'05", Longitude 103°52'40" NAD27

Eddy County, New Mexico , Hydrologic Unit 13070001

Well depth: 770 feet

Land surface altitude: 3,159 feet above NAVD88.

Well completed in "Alluvium, Bolson Deposits and Other Surface Deposits" (110AVMB) local aquifer

AVAILABLE DATA:

Data Type	Begin Date	End Date	Count
Field groundwater-level measurements	1959-02-18	1983-02-15	5
Revisions	Unavailable (site:0) (timeseries:0)		

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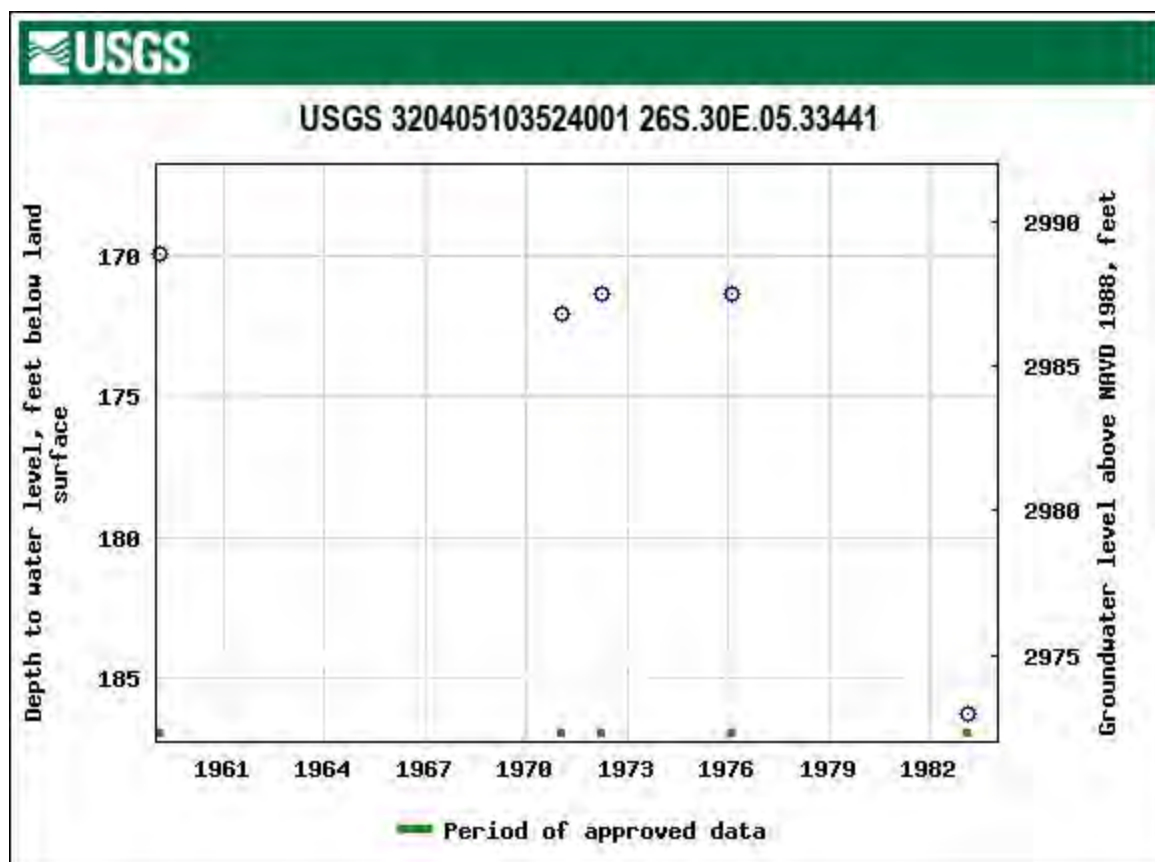
URL: [https://waterdata.usgs.gov/nwis/inventory?](https://waterdata.usgs.gov/nwis/inventory?agency_code=USGS&site_no=320405103524001)

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Available data for this site

SUMMARY OF ALL AVAILABLE DATA

GO

Well Site

DESCRIPTION:

Latitude 32°03'55", Longitude 103°52'40" NAD27
Eddy County, New Mexico , Hydrologic Unit 13070001
Well depth: 200 feet
Land surface altitude: 3,147 feet above NAVD88.
Well completed in "Santa Rosa Sandstone" (231SNRS) local aquifer

AVAILABLE DATA:

Data Type	Begin Date	End Date	Count
Field groundwater-level measurements	1948-12-15	1959-02-18	2
Revisions	Unavailable (site:0) (timeseries:0)		

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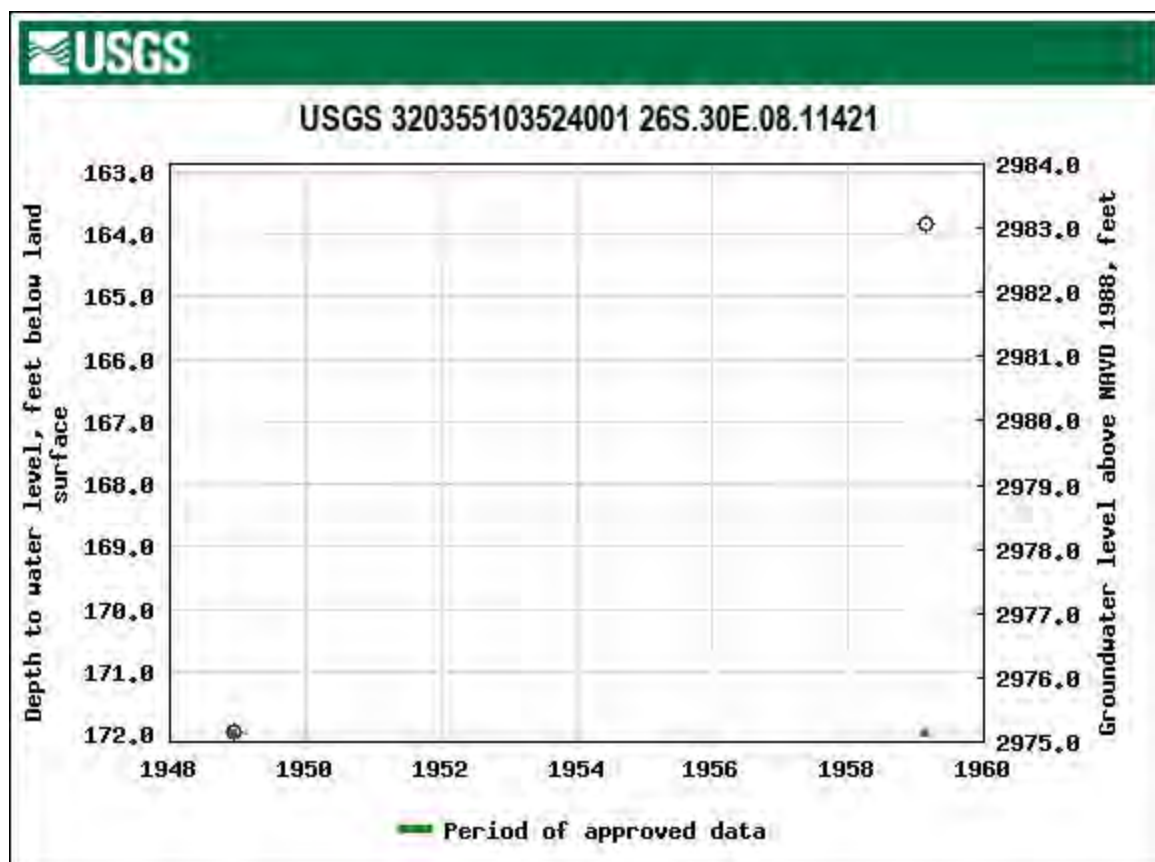
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ATTACHMENT 2: PHOTOGRAPHIC LOG

PHOTOGRAPHIC LOG



Photograph 1: Southwest view of disconnected lay flat line.



Photograph 2: Northwestern view of disconnected lay flat line and equipment.



Photograph 3: Southern view of release extent on pad.



Photograph 4: Southeastern view of SS13 off-pad.

PHOTOGRAPHIC LOG



Photograph 5: Northwest view of SS12 and SS13.



Photograph 6: Western view of excavation off-pad.



Photograph 7: Southeastern view of excavation off-pad.



Photograph 8: Backfilled excavation northern view.

PHOTOGRAPHIC LOG



Photograph 9: Southeastern view of completed backfill off-pad.



Photograph 10: Western view of completed backfill off-pad.

ATTACHMENT 3: LITHOLOGIC SOIL SAMPLE LOGS



 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 A proud member of WSP Compliance · Engineering · Remediation		BH or PH Name:		Date: 4/27/2020				
		SS01						
		Site Name: Poker Lake Unit 25 BD 901H						
		RP or Incident Number: NRM2005839143						
LTE Job Number: 012920030								
LITHOLOGIC / SOIL SAMPLING LOG								
Lat/Long: 32.100786, -103.841961			Field Screening:		Logged By:			
			Hatch chloride strips, PID		Method: Trackhoe			
			Hole Diameter:		Total Depth: 4'			
Comments: All chloride screenings done with a 40% correction factor								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0	SP	SAND, dry, tan-brown, poorly graded, fine-very fine, abundant caliche gravel, tan-off white, no stain, no odor
						1		
D	1,230	0.0	N	SS01A	2'	2	CCHE	CALICHE, dry, tan-off white, poorly consolidated, no stain, no odor
						3		
D	241	0.0	N	SS01B	4'	4		
Total depth 4 feet bgs								

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 A proud member of WSP Compliance · Engineering · Remediation		BH or PH Name:		Date: 4/27/2020				
		SS02						
		Site Name: Poker Lake Unit 25 BD 901H						
		RP or Incident Number: NRM2005839143						
LTE Job Number: 012920030								
LITHOLOGIC / SOIL SAMPLING LOG								
Lat/Long: 32.100786, -103.841961			Field Screening:		Logged By:			
			Hatch chloride strips, PID		Method: Trackhoe			
			Hole Diameter:		Total Depth: 4'			
Comments: All chloride screenings done with a 40% correction factor								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0	SP	SAND, dry, tan-brown, poorly graded, fine-very fine, abundant caliche gravel, tan-off white, no stain, no odor
						1		
D	861	0.0	N	SS02A	2'	2	CCHE	CALICHE, dry, tan-off white, poorly consolidated, no stain, no odor
						3		
D	382	0.0	N	SS02B	4'	4		
Total depth 4 feet bgs								

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 A proud member of WSP Compliance · Engineering · Remediation					BH or PH Name: SS03		Date: 4/27/2020	
					Site Name: Poker Lake Unit 25 BD 901H			
					RP or Incident Number: NRM2005839143			
					LTE Job Number: 012920030			
LITHOLOGIC / SOIL SAMPLING LOG					Logged By:		Method: Trackhoe	
Lat/Long: 32.100786, -103.841961			Field Screening: Hatch chloride strips, PID		Hole Diameter:		Total Depth: 4'	
Comments: All chloride screenings done with a 40% correction factor								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0	SP	SAND, dry, tan-brown, poorly graded, fine-very fine, abundant caliche gravel, tan-off white, no stain, no odor
						1		
D	1,770	0.0	N	SS03A	2'	2	CCHE	CALICHE, dry, tan-off white, poorly consolidated, no stain, no odor
						3		
D	450	0.0	N	SS03B	4'	4		
Total depth 4 feet bgs								

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 A proud member of WSP Compliance · Engineering · Remediation					BH or PH Name: SS04		Date: 6/18/2020	
					Site Name: Poker Lake Unit 25 BD 901H			
					RP or Incident Number: NRM2005839143			
					LTE Job Number: 012920030			
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: JH		Method: Trackhoe	
Lat/Long: 32.100786, -103.841961			Field Screening: Hatch chloride strips, PID		Hole Diameter:		Total Depth: 3'	
Comments: All chloride screenings done with a 40% correction factor								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D	584	0.5	N	SS04	0.5'	0 0.5	SP	SAND, dry, tan-brown, poorly graded, fine-very fine, abundant caliche gravel, tan-off white, no stain, no odor
						1		
						2	CCHE	CALICHE, dry, tan-off white, poorly consolidated, no stain, no odor
D	320	0.0	N	SS04A	3'	3		Total depth 3 feet bgs

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 A proud member of WSP Compliance · Engineering · Remediation					BH or PH Name: SS05		Date: 6/18/2020	
					Site Name: Poker Lake Unit 25 BD 901H			
					RP or Incident Number: NRM2005839143			
					LTE Job Number: 012920030			
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: JH		Method: Trackhoe	
Lat/Long: 32.100786, -103.841961			Field Screening: Hatch chloride strips, PID		Hole Diameter:		Total Depth: 3'	
Comments: All chloride screenings done with a 40% correction factor								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D	584	0.0	N	SS05	0.5'	0 0.5	SP	SAND, dry, tan-brown, poorly graded, fine-very fine, abundant caliche gravel, tan-off white, no stain, no odor
						1		
						2	CCHE	CALICHE, dry, tan-off white, poorly consolidated, no stain, no odor
D	248	0.0	N	SS05A	3'	3		Total depth 3 feet bgs

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 A proud member of WSP Compliance · Engineering · Remediation					BH or PH Name: SS06		Date: 6/18/2020	
					Site Name: Poker Lake Unit 25 BD 901H			
					RP or Incident Number: NRM2005839143			
					LTE Job Number: 012920030			
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: JH		Method: Trackhoe	
Lat/Long: 32.100786, -103.841961			Field Screening: Hatch chloride strips, PID		Hole Diameter:		Total Depth: 3'	
Comments: All chloride screenings done with a 40% correction factor								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D	1,584	0.0	N	SS06	0.5'	0 0.5	SP	SAND, dry, tan-brown, poorly graded, fine-very fine, abundant caliche gravel, tan-off white, no stain, no odor
						1		
						2	CCHE	CALICHE, dry, tan-off white, poorly consolidated, no stain, no odor
D	360	0.0	N	SS06A	3'	3		Total depth 3 feet bgs

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 A proud member of WSP Compliance · Engineering · Remediation					BH or PH Name: SS07		Date: 6/18/2020	
					Site Name: Poker Lake Unit 25 BD 901H			
					RP or Incident Number: NRM2005839143			
					LTE Job Number: 012920030			
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: JH		Method: Trackhoe	
Lat/Long: 32.100786, -103.841961			Field Screening: Hatch chloride strips, PID		Hole Diameter:		Total Depth: 3'	
Comments: All chloride screenings done with a 40% correction factor								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D	320	0.0	N	SS07	0.5'	0 0.5	SP	SAND, dry, tan-brown, poorly graded, fine-very fine, abundant caliche gravel, tan-off white, no stain, no odor
						1		
						2	CCHE	CALICHE, dry, tan-off white, poorly consolidated, no stain, no odor
D	248	0.0	N	SS07A	3'	3		Total depth 3 feet bgs

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 A proud member of WSP Compliance · Engineering · Remediation					BH or PH Name: SS08		Date: 6/18/2020	
					Site Name: Poker Lake Unit 25 BD 901H			
					RP or Incident Number: NRM2005839143			
					LTE Job Number: 012920030			
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: JH		Method: Trackhoe	
Lat/Long: 32.100786, -103.841961			Field Screening: Hatch chloride strips, PID		Hole Diameter:		Total Depth: 3'	
Comments: All chloride screenings done with a 40% correction factor								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D	584	0.2	N	SS08	0.5'	0 0.5	SP	SAND, dry, tan-brown, poorly graded, fine-very fine, abundant caliche gravel, tan-off white, no stain, no odor
						1		
						2	CCHE	CALICHE, dry, tan-off white, poorly consolidated, no stain, no odor
D	636	0.0	N	SS08A	3'	3		Total depth 3 feet bgs

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 A proud member of WSP Compliance · Engineering · Remediation					BH or PH Name: SS09		Date: 6/18/2020	
					Site Name: Poker Lake Unit 25 BD 901H			
					RP or Incident Number: NRM2005839143			
					LTE Job Number: 012920030			
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: JH		Method: Trackhoe	
Lat/Long: 32.100786, -103.841961			Field Screening: Hatch chloride strips, PID		Hole Diameter:		Total Depth: 3'	
Comments: All chloride screenings done with a 40% correction factor								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D	360	0.0	N	SS09	0.5'	0 0.5	SP	SAND, dry, tan-brown, poorly graded, fine-very fine, abundant caliche gravel, tan-off white, no stain, no odor
						1		
						2	CCHE	CALICHE, dry, tan-off white, poorly consolidated, no stain, no odor
D	284	0.0	N	SS09A	3'	3		Total depth 3 feet bgs

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 A proud member of WSP Compliance · Engineering · Remediation					BH or PH Name: SS10		Date: 6/18/2020	
					Site Name: Poker Lake Unit 25 BD 901H			
					RP or Incident Number: NRM2005839143			
					LTE Job Number: 012920030			
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: JH		Method: Trackhoe	
Lat/Long: 32.100786, -103.841961			Field Screening: Hatch chloride strips, PID		Hole Diameter:		Total Depth: 3'	
Comments: All chloride screenings done with a 40% correction factor								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D	536	0.4	N	SS10	0.5'	0 0.5	SP	SAND, dry, tan-brown, poorly graded, fine-very fine, abundant caliche gravel, tan-off white, no stain, no odor
						1		
						2	CCHE	CALICHE, dry, tan-off white, poorly consolidated, no stain, no odor
D	248	0.0	N	SS10A	3'	3		Total depth 3 feet bgs

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 A proud member of WSP Compliance · Engineering · Remediation					BH or PH Name: SS11		Date: 6/18/2020	
					Site Name: Poker Lake Unit 25 BD 901H			
					RP or Incident Number: NRM2005839143			
					LTE Job Number: 012920030			
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: JH		Method: Trackhoe	
Lat/Long: 32.100786, -103.841961			Field Screening: Hatch chloride strips, PID		Hole Diameter:		Total Depth: 3'	
Comments: All chloride screenings done with a 40% correction factor								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D	248	0.0	N	SS11	0.5'	0 0.5	SP	SAND, dry, tan-brown, poorly graded, fine-very fine, abundant caliche gravel, tan-off white, no stain, no odor
						1		
						2	CCHE	CALICHE, dry, tan-off white, poorly consolidated, no stain, no odor
D	282	0.0	N	SS11A	3'	3		Total depth 3 feet bgs

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 A proud member of WSP Compliance · Engineering · Remediation					BH or PH Name: SS12		Date: 6/18/2020	
					Site Name: Poker Lake Unit 25 BD 901H			
					RP or Incident Number: NRM2005839143			
					LTE Job Number: 012920030			
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: JH		Method: Trackhoe	
Lat/Long: 32.100786, -103.841961			Field Screening: Hatch chloride strips, PID		Hole Diameter:		Total Depth: 3'	
Comments: All chloride screenings done with a 40% correction factor								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D	804	0.5	N	SS12	0.5'	0 0.5	SP	SAND, dry, tan-brown, poorly graded, fine-very fine, abundant caliche gravel, tan-off white, no stain, no odor
						1		
						2	CCHE	CALICHE, dry, tan-off white, poorly consolidated, no stain, no odor
D	360	0.0	N	SS12A	3'	3		Total depth 3 feet bgs

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 A proud member of WSP Compliance · Engineering · Remediation					BH or PH Name: SS13		Date: 6/18/2020	
					Site Name: Poker Lake Unit 25 BD 901H			
					RP or Incident Number: NRM2005839143			
					LTE Job Number: 012920030			
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: JH		Method: Trackhoe	
Lat/Long: 32.100786, -103.841961			Field Screening: Hatch chloride strips, PID		Hole Diameter:		Total Depth: 3'	
Comments: All chloride screenings done with a 40% correction factor								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D	2,076	0.0	N	SS13	0.5'	0 0.5	SP	SAND, dry, tan-brown, poorly graded, fine-very fine, abundant caliche gravel, tan-off white, no stain, no odor
						1		
						2	CCHE	CALICHE, dry, tan-off white, poorly consolidated, no stain, no odor
D	360	0.0	N	SS13A	3'	3		Total depth 3 feet bgs

ATTACHMENT 4: LABORATORY ANALYTICAL RESULTS





Analytical Report 659876

for

LT Environmental, Inc.

Project Manager: Tacoma Morrissey

PLU 25 BD

012920069

05.01.2020

Collected By: Client

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

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

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

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



05.01.2020

Project Manager: **Tacoma Morrissey**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **659876**

PLU 25 BD

Project Address:

Tacoma Morrissey:

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) 659876. 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. 659876 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

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

Jessica Kramer

Project Manager

A Small Business and Minority Company

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

**Sample Cross Reference 659876****LT Environmental, Inc., Arvada, CO**

PLU 25 BD

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01 A	S	04.27.2020 11:31	2 ft	659876-001
SS01 B	S	04.27.2020 11:39	4 ft	659876-002
SS02 A	S	04.27.2020 11:48	2 ft	659876-003
SS02 B	S	04.27.2020 12:04	4 ft	659876-004
SS03 B	S	04.27.2020 12:07	2 ft	659876-005
SS03 A	S	04.27.2020 12:11	4 ft	659876-006



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *PLU 25 BD*

Project ID: 012920069
Work Order Number(s): 659876

Report Date: 05.01.2020
Date Received: 04.27.2020

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None



Certificate of Analysis Summary 659876

LT Environmental, Inc., Arvada, CO

Project Name: PLU 25 BD

Project Id: 012920069
Contact: Tacoma Morrissey
Project Location:

Date Received in Lab: Mon 04.27.2020 15:00
Report Date: 05.01.2020 15:13
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	659876-001	659876-002	659876-003	659876-004	659876-005	659876-006
	<i>Field Id:</i>	SS01 A	SS01 B	SS02 A	SS02 B	SS03 B	SS03 A
	<i>Depth:</i>	2- ft	4- ft	2- ft	4- ft	2- ft	4- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	04.27.2020 11:31	04.27.2020 11:39	04.27.2020 11:48	04.27.2020 12:04	04.27.2020 12:07	04.27.2020 12:11
BTEX by EPA 8021B	<i>Extracted:</i>	04.27.2020 16:00	04.27.2020 16:00	04.27.2020 16:00	04.27.2020 16:00	04.27.2020 16:00	04.27.2020 16:00
	<i>Analyzed:</i>	04.27.2020 18:28	04.27.2020 18:49	04.27.2020 19:11	04.27.2020 19:32	04.27.2020 19:53	04.27.2020 20:15
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199	<0.00201 0.00201	<0.00199 0.00199
Toluene		<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199	<0.00201 0.00201	<0.00199 0.00199
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199	<0.00201 0.00201	<0.00199 0.00199
m,p-Xylenes		<0.00399 0.00399	<0.00399 0.00399	<0.00396 0.00396	<0.00398 0.00398	<0.00402 0.00402	<0.00398 0.00398
o-Xylene		<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199	<0.00201 0.00201	<0.00199 0.00199
Total Xylenes		<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199	<0.00201 0.00201	<0.00199 0.00199
Total BTEX		<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199	<0.00201 0.00201	<0.00199 0.00199
Chloride by EPA 300	<i>Extracted:</i>	04.27.2020 16:00	04.27.2020 16:00	04.27.2020 16:00	04.27.2020 16:00	04.27.2020 16:00	04.27.2020 16:00
	<i>Analyzed:</i>	04.27.2020 16:37	04.27.2020 16:54	04.27.2020 16:59	04.27.2020 17:05	04.27.2020 17:10	04.27.2020 17:27
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		1230 99.4	241 10.0	861 9.98	382 9.98	450 101	1770 99.6
TPH by SW8015 Mod	<i>Extracted:</i>	04.27.2020 17:00	04.27.2020 17:00	04.27.2020 17:00	04.27.2020 17:00	04.27.2020 17:00	04.27.2020 17:00
	<i>Analyzed:</i>	04.27.2020 17:42	04.27.2020 18:03	04.27.2020 18:43	04.27.2020 17:42	04.27.2020 18:03	04.27.2020 18:43
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<49.8 49.8	<49.8 49.8	<50.1 50.1	<50.2 50.2	<49.8 49.8
Diesel Range Organics (DRO)		<50.0 50.0	<49.8 49.8	<49.8 49.8	<50.1 50.1	<50.2 50.2	<49.8 49.8
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<49.8 49.8	<49.8 49.8	<50.1 50.1	<50.2 50.2	<49.8 49.8
Total GRO-DRO		<50.0 50.0	<49.8 49.8	<49.8 49.8	<50.1 50.1	<50.2 50.2	<49.8 49.8
Total TPH		<50.0 50.0	<49.8 49.8	<49.8 49.8	<50.1 50.1	<50.2 50.2	<49.8 49.8

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

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

Jessica Kramer
Project Manager



Certificate of Analytical Results 659876

LT Environmental, Inc., Arvada, CO

PLU 25 BD

Sample Id: **SS01 A** Matrix: Soil Date Received: 04.27.2020 15:00
 Lab Sample Id: 659876-001 Date Collected: 04.27.2020 11:31 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 04.27.2020 16:00 Basis: Wet Weight
 Seq Number: 3124306

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1230	99.4	mg/kg	04.27.2020 16:37		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 04.27.2020 17:00 Basis: Wet Weight
 Seq Number: 3124321

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	04.27.2020 17:42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	04.27.2020 17:42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	04.27.2020 17:42	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	04.27.2020 17:42	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	04.27.2020 17:42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	04.27.2020 17:42	
o-Terphenyl	84-15-1	104	%	70-135	04.27.2020 17:42	



Certificate of Analytical Results 659876

LT Environmental, Inc., Arvada, CO

PLU 25 BD

Sample Id: **SS01 A**
Lab Sample Id: 659876-001

Matrix: Soil
Date Collected: 04.27.2020 11:31

Date Received: 04.27.2020 15:00
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.27.2020 16:00

Basis: Wet Weight

Seq Number: 3124300

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.27.2020 18:28	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.27.2020 18:28	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.27.2020 18:28	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	04.27.2020 18:28	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.27.2020 18:28	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.27.2020 18:28	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.27.2020 18:28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	70-130	04.27.2020 18:28	
1,4-Difluorobenzene	540-36-3	116	%	70-130	04.27.2020 18:28	



Certificate of Analytical Results 659876

LT Environmental, Inc., Arvada, CO

PLU 25 BD

Sample Id: **SS01 B** Matrix: Soil Date Received: 04.27.2020 15:00
 Lab Sample Id: 659876-002 Date Collected: 04.27.2020 11:39 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 04.27.2020 16:00 Basis: Wet Weight
 Seq Number: 3124306

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	241	10.0	mg/kg	04.27.2020 16:54		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 04.27.2020 17:00 Basis: Wet Weight
 Seq Number: 3124321

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	04.27.2020 18:03	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	04.27.2020 18:03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	04.27.2020 18:03	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	04.27.2020 18:03	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	04.27.2020 18:03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	04.27.2020 18:03	
o-Terphenyl	84-15-1	101	%	70-135	04.27.2020 18:03	



Certificate of Analytical Results 659876

LT Environmental, Inc., Arvada, CO

PLU 25 BD

Sample Id: **SS01 B**
Lab Sample Id: 659876-002

Matrix: Soil
Date Collected: 04.27.2020 11:39

Date Received: 04.27.2020 15:00
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3124300

Prep Method: SW5035A

% Moisture:

Date Prep: 04.27.2020 16:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.27.2020 18:49	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.27.2020 18:49	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.27.2020 18:49	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	04.27.2020 18:49	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.27.2020 18:49	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.27.2020 18:49	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.27.2020 18:49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	115	%	70-130	04.27.2020 18:49	
4-Bromofluorobenzene	460-00-4	108	%	70-130	04.27.2020 18:49	



Certificate of Analytical Results 659876

LT Environmental, Inc., Arvada, CO

PLU 25 BD

Sample Id: **SS02 A**
Lab Sample Id: 659876-003

Matrix: Soil
Date Collected: 04.27.2020 11:48

Date Received: 04.27.2020 15:00
Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3124306

Date Prep: 04.27.2020 16:00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	861	9.98	mg/kg	04.27.2020 16:59		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3124321

Date Prep: 04.27.2020 17:00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	04.27.2020 18:43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	04.27.2020 18:43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	04.27.2020 18:43	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	04.27.2020 18:43	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	04.27.2020 18:43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	04.27.2020 18:43	
o-Terphenyl	84-15-1	101	%	70-135	04.27.2020 18:43	



Certificate of Analytical Results 659876

LT Environmental, Inc., Arvada, CO

PLU 25 BD

Sample Id: **SS02 A**
Lab Sample Id: 659876-003

Matrix: Soil
Date Collected: 04.27.2020 11:48

Date Received: 04.27.2020 15:00
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.27.2020 16:00

Basis: Wet Weight

Seq Number: 3124300

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	04.27.2020 19:11	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	04.27.2020 19:11	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	04.27.2020 19:11	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	04.27.2020 19:11	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	04.27.2020 19:11	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	04.27.2020 19:11	U	1
Total BTEX		<0.00198	0.00198	mg/kg	04.27.2020 19:11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	116	%	70-130	04.27.2020 19:11	
4-Bromofluorobenzene	460-00-4	108	%	70-130	04.27.2020 19:11	



Certificate of Analytical Results 659876

LT Environmental, Inc., Arvada, CO

PLU 25 BD

Sample Id: **SS02 B** Matrix: Soil Date Received: 04.27.2020 15:00
 Lab Sample Id: 659876-004 Date Collected: 04.27.2020 12:04 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 04.27.2020 16:00 Basis: Wet Weight
 Seq Number: 3124306

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	382	9.98	mg/kg	04.27.2020 17:05		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 04.27.2020 17:00 Basis: Wet Weight
 Seq Number: 3124331

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	04.27.2020 17:42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	04.27.2020 17:42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	04.27.2020 17:42	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	04.27.2020 17:42	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	04.27.2020 17:42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	04.27.2020 17:42	
o-Terphenyl	84-15-1	101	%	70-135	04.27.2020 17:42	



Certificate of Analytical Results 659876

LT Environmental, Inc., Arvada, CO

PLU 25 BD

Sample Id: **SS02 B**
Lab Sample Id: 659876-004

Matrix: Soil
Date Collected: 04.27.2020 12:04

Date Received: 04.27.2020 15:00
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.27.2020 16:00

Basis: Wet Weight

Seq Number: 3124300

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.27.2020 19:32	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.27.2020 19:32	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.27.2020 19:32	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.27.2020 19:32	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.27.2020 19:32	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.27.2020 19:32	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.27.2020 19:32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	113	%	70-130	04.27.2020 19:32	
4-Bromofluorobenzene	460-00-4	105	%	70-130	04.27.2020 19:32	



Certificate of Analytical Results 659876

LT Environmental, Inc., Arvada, CO

PLU 25 BD

Sample Id: **SS03 B** Matrix: Soil Date Received: 04.27.2020 15:00
 Lab Sample Id: 659876-005 Date Collected: 04.27.2020 12:07 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 04.27.2020 16:00 Basis: Wet Weight
 Seq Number: 3124306

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	450	101	mg/kg	04.27.2020 17:10		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 04.27.2020 17:00 Basis: Wet Weight
 Seq Number: 3124331

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	04.27.2020 18:03	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	04.27.2020 18:03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	04.27.2020 18:03	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	04.27.2020 18:03	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	04.27.2020 18:03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	04.27.2020 18:03	
o-Terphenyl	84-15-1	109	%	70-135	04.27.2020 18:03	



Certificate of Analytical Results 659876

LT Environmental, Inc., Arvada, CO

PLU 25 BD

Sample Id: **SS03 B**
Lab Sample Id: 659876-005

Matrix: Soil
Date Collected: 04.27.2020 12:07

Date Received: 04.27.2020 15:00
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3124300

Prep Method: SW5035A

% Moisture:

Date Prep: 04.27.2020 16:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.27.2020 19:53	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.27.2020 19:53	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.27.2020 19:53	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.27.2020 19:53	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.27.2020 19:53	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.27.2020 19:53	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.27.2020 19:53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	109	%	70-130	04.27.2020 19:53	
4-Bromofluorobenzene	460-00-4	106	%	70-130	04.27.2020 19:53	



Certificate of Analytical Results 659876

LT Environmental, Inc., Arvada, CO

PLU 25 BD

Sample Id: **SS03 A** Matrix: Soil Date Received: 04.27.2020 15:00
 Lab Sample Id: 659876-006 Date Collected: 04.27.2020 12:11 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 04.27.2020 16:00 Basis: Wet Weight
 Seq Number: 3124306

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1770	99.6	mg/kg	04.27.2020 17:27		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 04.27.2020 17:00 Basis: Wet Weight
 Seq Number: 3124331

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	04.27.2020 18:43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	04.27.2020 18:43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	04.27.2020 18:43	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	04.27.2020 18:43	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	04.27.2020 18:43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	04.27.2020 18:43	
o-Terphenyl	84-15-1	115	%	70-135	04.27.2020 18:43	



Certificate of Analytical Results 659876

LT Environmental, Inc., Arvada, CO

PLU 25 BD

Sample Id: **SS03 A**
Lab Sample Id: 659876-006

Matrix: Soil
Date Collected: 04.27.2020 12:11

Date Received: 04.27.2020 15:00
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.27.2020 16:00

Basis: Wet Weight

Seq Number: 3124300

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.27.2020 20:15	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.27.2020 20:15	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.27.2020 20:15	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.27.2020 20:15	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.27.2020 20:15	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.27.2020 20:15	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.27.2020 20:15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	115	%	70-130	04.27.2020 20:15	
4-Bromofluorobenzene	460-00-4	107	%	70-130	04.27.2020 20:15	



Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



LT Environmental, Inc.

PLU 25 BD

Analytical Method: Chloride by EPA 300

Seq Number: 3124306

MB Sample Id: 7702149-1-BLK

Matrix: Solid

LCS Sample Id: 7702149-1-BKS

Prep Method: E300P

Date Prep: 04.27.2020

LCSD Sample Id: 7702149-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	250	100	250	100	90-110	0	20	mg/kg	04.27.2020 16:26	

Analytical Method: Chloride by EPA 300

Seq Number: 3124306

Parent Sample Id: 659876-001

Matrix: Soil

MS Sample Id: 659876-001 S

Prep Method: E300P

Date Prep: 04.27.2020

MSD Sample Id: 659876-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1230	201	1410	90	1420	95	90-110	1	20	mg/kg	04.27.2020 16:43	

Analytical Method: Chloride by EPA 300

Seq Number: 3124306

Parent Sample Id: 659890-002

Matrix: Soil

MS Sample Id: 659890-002 S

Prep Method: E300P

Date Prep: 04.27.2020

MSD Sample Id: 659890-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	330	199	548	110	548	110	90-110	0	20	mg/kg	04.27.2020 17:59	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3124321

MB Sample Id: 7702167-1-BLK

Matrix: Solid

LCS Sample Id: 7702167-1-BKS

Prep Method: SW8015P

Date Prep: 04.27.2020

LCSD Sample Id: 7702167-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	858	86	967	97	70-135	12	35	mg/kg	04.27.2020 13:00	
Diesel Range Organics (DRO)	<50.0	1000	958	96	1090	109	70-135	13	35	mg/kg	04.27.2020 13:00	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	121		127		132		70-135	%	04.27.2020 13:00
o-Terphenyl	131		127		122		70-135	%	04.27.2020 13:00

Analytical Method: TPH by SW8015 Mod

Seq Number: 3124331

MB Sample Id: 7702173-1-BLK

Matrix: Solid

LCS Sample Id: 7702173-1-BKS

Prep Method: SW8015P

Date Prep: 04.27.2020

LCSD Sample Id: 7702173-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	914	91	898	90	70-135	2	35	mg/kg	04.27.2020 14:22	
Diesel Range Organics (DRO)	<50.0	1000	1020	102	998	100	70-135	2	35	mg/kg	04.27.2020 14:22	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	86		130		131		70-135	%	04.27.2020 14:22
o-Terphenyl	91		116		132		70-135	%	04.27.2020 14:22

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

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

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

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



LT Environmental, Inc.

PLU 25 BD

Analytical Method: TPH by SW8015 Mod

Seq Number: 3124321

Matrix: Solid

Prep Method: SW8015P

Date Prep: 04.27.2020

MB Sample Id: 7702167-1-BLK

Parameter

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	04.27.2020 12:40	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3124331

Matrix: Solid

Prep Method: SW8015P

Date Prep: 04.27.2020

MB Sample Id: 7702173-1-BLK

Parameter

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	04.27.2020 12:40	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3124321

Matrix: Soil

Prep Method: SW8015P

Date Prep: 04.27.2020

Parent Sample Id: 659819-001

MS Sample Id: 659819-001 S

MSD Sample Id: 659819-001 SD

Parameter

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.3	1010	935	93	935	94	70-135	0	35	mg/kg	04.27.2020 14:01	
Diesel Range Organics (DRO)	<50.3	1010	1060	105	1060	106	70-135	0	35	mg/kg	04.27.2020 14:01	

Surrogate

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	118		114		70-135	%	04.27.2020 14:01
o-Terphenyl	115		114		70-135	%	04.27.2020 14:01

Analytical Method: TPH by SW8015 Mod

Seq Number: 3124331

Matrix: Soil

Prep Method: SW8015P

Date Prep: 04.27.2020

Parent Sample Id: 659819-002

MS Sample Id: 659819-002 S

MSD Sample Id: 659819-002 SD

Parameter

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.3	1010	812	80	864	86	70-135	6	35	mg/kg	04.27.2020 14:01	
Diesel Range Organics (DRO)	<50.3	1010	877	87	971	97	70-135	10	35	mg/kg	04.27.2020 14:01	

Surrogate

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	115		105		70-135	%	04.27.2020 14:01
o-Terphenyl	102		109		70-135	%	04.27.2020 14:01

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

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

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

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



LT Environmental, Inc.

PLU 25 BD

Analytical Method: BTEX by EPA 8021B

Seq Number: 3124300

MB Sample Id: 7702088-1-BLK

Matrix: Solid

LCS Sample Id: 7702088-1-BKS

Prep Method: SW5035A

Date Prep: 04.27.2020

LCSD Sample Id: 7702088-1-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	0.123	123	0.124	124	70-130	1	35	mg/kg	04.27.2020 10:59	
Toluene	<0.00200	0.100	0.109	109	0.110	110	70-130	1	35	mg/kg	04.27.2020 10:59	
Ethylbenzene	<0.00200	0.100	0.101	101	0.102	102	71-129	1	35	mg/kg	04.27.2020 10:59	
m,p-Xylenes	<0.00400	0.200	0.196	98	0.196	98	70-135	0	35	mg/kg	04.27.2020 10:59	
o-Xylene	<0.00200	0.100	0.102	102	0.103	103	71-133	1	35	mg/kg	04.27.2020 10:59	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	114		108		111		70-130	%	04.27.2020 10:59
4-Bromofluorobenzene	102		97		98		70-130	%	04.27.2020 10:59

Analytical Method: BTEX by EPA 8021B

Seq Number: 3124300

Parent Sample Id: 659819-001

Matrix: Soil

MS Sample Id: 659819-001 S

Prep Method: SW5035A

Date Prep: 04.27.2020

MSD Sample Id: 659819-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00198	0.0990	0.121	122	0.112	113	70-130	8	35	mg/kg	04.27.2020 11:41	
Toluene	<0.00198	0.0990	0.118	119	0.0994	100	70-130	17	35	mg/kg	04.27.2020 11:41	
Ethylbenzene	<0.00198	0.0990	0.112	113	0.0914	92	71-129	20	35	mg/kg	04.27.2020 11:41	
m,p-Xylenes	<0.00396	0.198	0.218	110	0.177	89	70-135	21	35	mg/kg	04.27.2020 11:41	
o-Xylene	<0.00198	0.0990	0.110	111	0.0922	93	71-133	18	35	mg/kg	04.27.2020 11:41	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		108		70-130	%	04.27.2020 11:41
4-Bromofluorobenzene	99		95		70-130	%	04.27.2020 11:41

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



Chain of Custody

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334
 Midland, TX (432-704-5440) EL Paso, TX (915)585-3443 Lubbock, TX (806)794-1236

Work Order No: 10598910

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

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Page 1 of 1

Project Manager:	Tacomma Morrissey	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A St. Bldg 1, Unit 222	Address:	3104 E Greene St.
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM
Phone:	(432) 704-5178	Email:	tmorrissey@ltenv.com tcasey@ltenv.com ab

Program: ☒ UST/PST ☐ BPP ☐ Brownfields ☐ RC ☐ Superfund State of Project: NM	
Reporting Level: ☐ I ☐ Level III ☐ ST/UST ☐ RRP ☐ Level IV ☐	
Deliverables: EDD ☐ ADAPT ☐ Other:	

Project Name:	PLU 25 BD	Turn Around	☐ Routine ☐
Project Number:	012920069	Rush:	24hr
P.O. Number:	215/20 spill date	Due Date:	7-28-20
Sampler's Name:	Travis Casey		

SAMPLE RECEIPT		Temp Blank:	Yes ☒ No ☐	Wet Ice:	Yes ☒ No ☐
Temperature (°C):	21.2	Thermometer ID	T-NM-004		
Received Intact:	Yes ☒ No ☐	Correction Factor:	-0.2		
Cooler Custody Seals:	Yes ☒ No ☐	Total Containers:	10		
Sample Custody Seals:	Yes ☒ No ☐				

Sample Identification				Matrix	Date Sampled	Time Sampled	Depth	Number	TPH (EPA)	BTEX (EPA)	Chloride	lab, if received by 4:30pm																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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Total 200.7 / 6010 200.8 / 6020:

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

8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn
 TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U

1631 / 245.1 / 7470 / 7471 : Hg

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions 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 Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$6 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	4/27/20 15:00			

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 04.27.2020 03.00.00 PM

Work Order #: 659876

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	2.2
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	No
#18 Water VOC samples have zero headspace?	N/A

Samples received in bulk containers.

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

Analyst:

PH Device/Lot#:

Checklist completed by:



Elizabeth McClellan

Date: 04.27.2020

Checklist reviewed by:



Jessica Kramer

Date: 04.28.2020



Certificate of Analysis Summary 664286

LT Environmental, Inc., Arvada, CO

Project Name: PLU 25 BD 901H

Project Id: 012920030

Contact: Dan Moir

Project Location:

Date Received in Lab: Thu 06.11.2020 14:20

Report Date: 06.15.2020 11:32

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	664286-001	664286-002				
	Field Id:	SS11	SS11A				
	Depth:	0.5- ft	1.5- ft				
	Matrix:	SOIL	SOIL				
	Sampled:	06.11.2020 00:00	06.11.2020 00:00				
BTEX by EPA 8021B	Extracted:	06.12.2020 12:01	06.12.2020 12:01				
	Analyzed:	06.12.2020 17:57	06.12.2020 15:55				
	Units/RL:	mg/kg RL	mg/kg RL				
	Benzene	<0.00200 0.00200	<0.00202 0.00202				
	Toluene	<0.00200 0.00200	<0.00202 0.00202				
	Ethylbenzene	<0.00200 0.00200	<0.00202 0.00202				
	m,p-Xylenes	<0.00401 0.00401	<0.00403 0.00403				
	o-Xylene	<0.00200 0.00200	<0.00202 0.00202				
	Total Xylenes	<0.00200 0.00200	<0.00202 0.00202				
Chloride by EPA 300	Extracted:	06.12.2020 16:00	06.12.2020 16:00				
	Analyzed:	06.12.2020 17:28	06.12.2020 17:46				
	Units/RL:	mg/kg RL	mg/kg RL				
Chloride		35.9 9.98	33.8 9.94				
TPH by SW8015 Mod	Extracted:	06.12.2020 12:00	06.12.2020 12:00				
	Analyzed:	06.12.2020 14:24	06.12.2020 14:45				
	Units/RL:	mg/kg RL	mg/kg RL				
	Gasoline Range Hydrocarbons (GRO)	<49.8 49.8	<50.1 50.1				
	Diesel Range Organics (DRO)	<49.8 49.8	<50.1 50.1				
	Motor Oil Range Hydrocarbons (MRO)	<49.8 49.8	<50.1 50.1				
	Total GRO-DRO	<49.8 49.8	<50.1 50.1				
	Total TPH	<49.8 49.8	<50.1 50.1				

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

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

Jessica Kramer
Project Manager



Analytical Report 664286

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU 25 BD 901H

012920030

06.15.2020

Collected By: Client

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

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-32), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-23), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-17)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-20-7)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



06.15.2020

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **664286**

PLU 25 BD 901H

Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 664286. 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. 664286 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads 'Jessica Kramer'. The signature is written in a cursive, flowing style.

Jessica Kramer

Project Manager

A Small Business and Minority Company

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



Sample Cross Reference 664286

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS11	S	06.11.2020 00:00	0.5 ft	664286-001
SS11A	S	06.11.2020 00:00	1.5 ft	664286-002



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *PLU 25 BD 901H*

Project ID: 012920030
Work Order Number(s): 664286

Report Date: 06.15.2020
Date Received: 06.11.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 664286

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SS11** Matrix: Soil Date Received: 06.11.2020 14:20
 Lab Sample Id: 664286-001 Date Collected: 06.11.2020 00:00 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 06.12.2020 16:00 Basis: Wet Weight
 Seq Number: 3128910

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	35.9	9.98	mg/kg	06.12.2020 17:28		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 06.12.2020 12:00 Basis: Wet Weight
 Seq Number: 3128905

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	06.12.2020 14:24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	06.12.2020 14:24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	06.12.2020 14:24	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	06.12.2020 14:24	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	06.12.2020 14:24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	06.12.2020 14:24	
o-Terphenyl	84-15-1	95	%	70-135	06.12.2020 14:24	



Certificate of Analytical Results 664286

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SS11**
Lab Sample Id: 664286-001

Matrix: Soil
Date Collected: 06.11.2020 00:00

Date Received: 06.11.2020 14:20
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3128788

Prep Method: SW5035A

% Moisture:

Date Prep: 06.12.2020 12:01

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.12.2020 17:57	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.12.2020 17:57	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.12.2020 17:57	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	06.12.2020 17:57	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.12.2020 17:57	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.12.2020 17:57	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.12.2020 17:57	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	109	%	70-130	06.12.2020 17:57		
4-Bromofluorobenzene	460-00-4	98	%	70-130	06.12.2020 17:57		



Certificate of Analytical Results 664286

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SS11A** Matrix: Soil Date Received: 06.11.2020 14:20
 Lab Sample Id: 664286-002 Date Collected: 06.11.2020 00:00 Sample Depth: 1.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 06.12.2020 16:00 Basis: Wet Weight
 Seq Number: 3128910

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	33.8	9.94	mg/kg	06.12.2020 17:46		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 06.12.2020 12:00 Basis: Wet Weight
 Seq Number: 3128905

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	06.12.2020 14:45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	06.12.2020 14:45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	06.12.2020 14:45	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	06.12.2020 14:45	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	06.12.2020 14:45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	06.12.2020 14:45	
o-Terphenyl	84-15-1	96	%	70-135	06.12.2020 14:45	



Certificate of Analytical Results 664286

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SS11A**
Lab Sample Id: 664286-002

Matrix: Soil
Date Collected: 06.11.2020 00:00

Date Received: 06.11.2020 14:20
Sample Depth: 1.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 06.12.2020 12:01

Basis: Wet Weight

Seq Number: 3128788

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	06.12.2020 15:55	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	06.12.2020 15:55	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	06.12.2020 15:55	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	06.12.2020 15:55	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	06.12.2020 15:55	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	06.12.2020 15:55	U	1
Total BTEX		<0.00202	0.00202	mg/kg	06.12.2020 15:55	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	98	%	70-130	06.12.2020 15:55		
1,4-Difluorobenzene	540-36-3	111	%	70-130	06.12.2020 15:55		



Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



LT Environmental, Inc.

PLU 25 BD 901H

Analytical Method: Chloride by EPA 300

Seq Number: 3128910

MB Sample Id: 7705387-1-BLK

Matrix: Solid

LCS Sample Id: 7705387-1-BKS

Prep Method: E300P

Date Prep: 06.12.2020

LCSD Sample Id: 7705387-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	243	97	249	100	90-110	2	20	mg/kg	06.12.2020 16:41	

Analytical Method: Chloride by EPA 300

Seq Number: 3128910

Parent Sample Id: 664285-001

Matrix: Soil

MS Sample Id: 664285-001 S

Prep Method: E300P

Date Prep: 06.12.2020

MSD Sample Id: 664285-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	374	200	562	94	564	95	90-110	0	20	mg/kg	06.12.2020 16:58	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3128905

MB Sample Id: 7705382-1-BLK

Matrix: Solid

LCS Sample Id: 7705382-1-BKS

Prep Method: SW8015P

Date Prep: 06.12.2020

LCSD Sample Id: 7705382-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1120	112	1090	109	70-135	3	35	mg/kg	06.12.2020 12:43	
Diesel Range Organics (DRO)	<50.0	1000	1170	117	1150	115	70-135	2	35	mg/kg	06.12.2020 12:43	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	106		126		122		70-135	%	06.12.2020 12:43
o-Terphenyl	96		104		100		70-135	%	06.12.2020 12:43

Analytical Method: TPH by SW8015 Mod

Seq Number: 3128905

Matrix: Solid

MB Sample Id: 7705382-1-BLK

Prep Method: SW8015P

Date Prep: 06.12.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	06.12.2020 12:23	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3128905

Matrix: Soil

Parent Sample Id: 664285-002

MS Sample Id: 664285-002 S

Prep Method: SW8015P

Date Prep: 06.12.2020

MSD Sample Id: 664285-002 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)	<50.2	1000	1090	109	1150	115	70-135	5	35	mg/kg	06.12.2020 13:44	
Diesel Range Organics (DRO)	<50.2	1000	1160	116	1070	107	70-135	8	35	mg/kg	06.12.2020 13:44	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	127		131		70-135	%	06.12.2020 13:44
o-Terphenyl	105		108		70-135	%	06.12.2020 13:44

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

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

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

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



LT Environmental, Inc.

PLU 25 BD 901H

Analytical Method: BTEX by EPA 8021B

Seq Number: 3128788

MB Sample Id: 7705312-1-BLK

Matrix: Solid

LCS Sample Id: 7705312-1-BKS

Prep Method: SW5035A

Date Prep: 06.12.2020

LCSD Sample Id: 7705312-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.105	105	0.109	109	70-130	4	35	mg/kg	06.12.2020 10:08	
Toluene	<0.00200	0.100	0.0998	100	0.104	104	70-130	4	35	mg/kg	06.12.2020 10:08	
Ethylbenzene	<0.00200	0.100	0.0920	92	0.0972	97	71-129	5	35	mg/kg	06.12.2020 10:08	
m,p-Xylenes	<0.00400	0.200	0.189	95	0.197	99	70-135	4	35	mg/kg	06.12.2020 10:08	
o-Xylene	<0.00200	0.100	0.0969	97	0.101	101	71-133	4	35	mg/kg	06.12.2020 10:08	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	110		107		109		70-130	%	06.12.2020 10:08
4-Bromofluorobenzene	96		93		92		70-130	%	06.12.2020 10:08

Analytical Method: BTEX by EPA 8021B

Seq Number: 3128788

Parent Sample Id: 664229-004

Matrix: Soil

MS Sample Id: 664229-004 S

Prep Method: SW5035A

Date Prep: 06.12.2020

MSD Sample Id: 664229-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.101	101	0.0996	99	70-130	1	35	mg/kg	06.12.2020 10:49	
Toluene	<0.00199	0.0996	0.0962	97	0.0950	94	70-130	1	35	mg/kg	06.12.2020 10:49	
Ethylbenzene	<0.00199	0.0996	0.0905	91	0.0887	88	71-129	2	35	mg/kg	06.12.2020 10:49	
m,p-Xylenes	<0.00398	0.199	0.184	92	0.181	90	70-135	2	35	mg/kg	06.12.2020 10:49	
o-Xylene	<0.00199	0.0996	0.0928	93	0.0910	90	71-133	2	35	mg/kg	06.12.2020 10:49	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		107		70-130	%	06.12.2020 10:49
4-Bromofluorobenzene	95		90		70-130	%	06.12.2020 10:49

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

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

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

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

Work Order No: 101042810

Page 1 of 1

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	522 W. Mermod St.
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	jhlill@ltenv.com, dmoir@ltenv.com

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

ANALYSIS REQUEST										Work Order Notes	
Project Name:	PLU 25 BD 2014					Turn Around					
Project Number:	010920030					Routine	☒				
P.O. Number:	2/11/20 sp11 dkt					Rush:					
Sampler's Name:	Jeremy Hill					Due Date:					
SAMPLE RECEIPT						Temp Blank:	☒ Yes	☐ No	Wet Ice:	☒ Yes	☐ No
Temperature (°C):	3.0/2.2					Thermometer ID	+NM007				
Received Intact:	☒ Yes ☐ No										
Cooler Custody Seals:	☒ Yes ☐ No					Correction Factor:	-0.2				
Sample Custody Seals:	☐ Yes ☒ No					Total Containers:	2				
Number of Containers											
EPA 8015)											
EPA 0=8021)											
E (EPA 300.0)											
TAT starts the day received by the lab, if received by 4:30pm											

[illegible]

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

Total	200.7 / 6010	200.8 / 6020:	8RCRA	13PPM	Texas	11	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	SiO ₂	Na	Sr	Tl	Sn	U	V	Zn
<i>Circle Method(s) and Metal(s) to be analyzed</i>							TCLP / SPLP		6010:		8RCRA	Sb	As	Ba	Be	Cd	Cr	Co	Cu	Pb	Mn	Mo	Ni	Se	Ag	Tl	U							
			1631 / 245.1 / 7470 / 7471 : Hg																															
Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions 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 Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.																																		
Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time																													
		6/11/20 15:20																																
					2																													
					4																													
					6																													

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 06.11.2020 02.20.00 PM

Work Order #: 664286

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

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

Samples received in bulk containers.

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

Analyst:

PH Device/Lot#:

Checklist completed by:



Elizabeth McClellan

Date: 06.11.2020

Checklist reviewed by:



Jessica Kramer

Date: 06.15.2020



Certificate of Analysis Summary 664908

LT Environmental, Inc., Arvada, CO

Project Name: PLU 25 BD 901H

Project Id: 012920030

Contact: Dan Moir

Project Location:

Date Received in Lab: Fri 06.19.2020 08:30

Report Date: 06.23.2020 08:01

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	664908-001	664908-002	664908-003	664908-004	664908-005	664908-006
	<i>Field Id:</i>	SS04	SS04A	SS05	SS05A	SS06	SS06A
	<i>Depth:</i>	0.5- ft	3.0- ft	0.5- ft	3.0- ft	0.5- ft	3.0- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	06.18.2020 09:16	06.18.2020 09:22	06.18.2020 09:36	06.18.2020 09:42	06.18.2020 09:52	06.18.2020 09:58
BTEX by EPA 8021B	<i>Extracted:</i>	06.19.2020 10:39	06.19.2020 10:39	06.19.2020 10:39	06.19.2020 10:39	06.19.2020 10:39	06.19.2020 10:39
	<i>Analyzed:</i>	06.19.2020 17:09	06.19.2020 17:29	06.19.2020 18:45	06.19.2020 19:05	06.19.2020 19:26	06.19.2020 19:46
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202
Toluene		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202
Ethylbenzene		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202
m,p-Xylenes		<0.00399 0.00399	<0.00402 0.00402	<0.00399 0.00399	<0.00401 0.00401	<0.00401 0.00401	<0.00403 0.00403
o-Xylene		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202
Total Xylenes		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202
Total BTEX		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202
Chloride by EPA 300	<i>Extracted:</i>	06.19.2020 12:43	06.19.2020 12:43	06.19.2020 12:43	06.19.2020 12:43	06.19.2020 12:43	06.19.2020 12:43
	<i>Analyzed:</i>	06.19.2020 16:31	06.19.2020 16:37	06.19.2020 16:42	06.19.2020 16:48	06.19.2020 16:54	06.19.2020 17:00
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		386 9.96	133 9.94	506 10.0	43.6 9.92	1730 10.1	205 9.88
TPH by SW8015 Mod	<i>Extracted:</i>	06.19.2020 13:30	06.19.2020 13:30	06.19.2020 13:30	06.19.2020 13:30	06.19.2020 13:30	06.19.2020 13:30
	<i>Analyzed:</i>	06.19.2020 17:15	06.19.2020 17:36	06.19.2020 18:21	06.19.2020 18:42	06.19.2020 19:02	06.19.2020 19:23
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<49.8 49.8	<49.8 49.8	<49.8 49.8	<49.8 49.8	<49.9 49.9	<50.0 50.0
Diesel Range Organics (DRO)		<49.8 49.8	<49.8 49.8	<49.8 49.8	<49.8 49.8	<49.9 49.9	<50.0 50.0
Motor Oil Range Hydrocarbons (MRO)		<49.8 49.8	<49.8 49.8	<49.8 49.8	<49.8 49.8	<49.9 49.9	<50.0 50.0
Total GRO-DRO		<49.8 49.8	<49.8 49.8	<49.8 49.8	<49.8 49.8	<49.9 49.9	<50.0 50.0
Total TPH		<49.8 49.8	<49.8 49.8	<49.8 49.8	<49.8 49.8	<49.9 49.9	<50.0 50.0

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

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Jessica Kramer
Project Manager



Certificate of Analysis Summary 664908

LT Environmental, Inc., Arvada, CO

Project Name: PLU 25 BD 901H

Project Id: 012920030

Contact: Dan Moir

Project Location:

Date Received in Lab: Fri 06.19.2020 08:30

Report Date: 06.23.2020 08:01

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	664908-007	664908-008	664908-009	664908-010	664908-011	664908-012
	<i>Field Id:</i>	SS07	SS07A	SS08	SS08A	SS09	SS09A
	<i>Depth:</i>	0.5- ft	3.0- ft	0.5- ft	3.0- ft	0.5- ft	3.0- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	06.18.2020 10:08	06.18.2020 10:14	06.18.2020 10:29	06.18.2020 10:36	06.18.2020 10:51	06.18.2020 10:55
BTEX by EPA 8021B	<i>Extracted:</i>	06.19.2020 10:39	06.19.2020 10:39	06.19.2020 10:39	06.19.2020 10:39	06.19.2020 10:39	06.19.2020 10:39
	<i>Analyzed:</i>	06.19.2020 20:07	06.19.2020 20:27	06.19.2020 20:47	06.19.2020 21:08	06.19.2020 21:28	06.19.2020 21:49
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200
Toluene		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200
Ethylbenzene		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200
m,p-Xylenes		<0.00398 0.00398	<0.00399 0.00399	<0.00401 0.00401	<0.00398 0.00398	<0.00398 0.00398	<0.00399 0.00399
o-Xylene		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200
Total Xylenes		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200
Total BTEX		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200
Chloride by EPA 300	<i>Extracted:</i>	06.19.2020 12:43	*** ** *	*** ** *	*** ** *	*** ** *	*** ** *
	<i>Analyzed:</i>	06.19.2020 17:06	06.19.2020 17:41	06.19.2020 17:59	06.19.2020 18:05	06.19.2020 18:11	06.19.2020 18:17
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		119 9.90	70.0 9.94	424 9.88	522 10.1	138 9.88	108 9.94
TPH by SW8015 Mod	<i>Extracted:</i>	06.19.2020 13:30	06.19.2020 13:30	06.19.2020 13:30	06.19.2020 13:30	06.19.2020 13:30	06.19.2020 13:30
	<i>Analyzed:</i>	06.19.2020 19:44	06.19.2020 20:04	06.19.2020 20:25	06.19.2020 20:45	06.19.2020 21:06	06.19.2020 21:26
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<50.1 50.1	<49.8 49.8	<50.2 50.2	<49.8 49.8	<49.8 49.8
Diesel Range Organics (DRO)		<50.0 50.0	<50.1 50.1	<49.8 49.8	<50.2 50.2	<49.8 49.8	<49.8 49.8
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<50.1 50.1	<49.8 49.8	<50.2 50.2	<49.8 49.8	<49.8 49.8
Total GRO-DRO		<50.0 50.0	<50.1 50.1	<49.8 49.8	<50.2 50.2	<49.8 49.8	<49.8 49.8
Total TPH		<50.0 50.0	<50.1 50.1	<49.8 49.8	<50.2 50.2	<49.8 49.8	<49.8 49.8

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Jessica Kramer
Project Manager



Certificate of Analysis Summary 664908

LT Environmental, Inc., Arvada, CO

Project Name: PLU 25 BD 901H

Project Id: 012920030

Contact: Dan Moir

Project Location:

Date Received in Lab: Fri 06.19.2020 08:30

Report Date: 06.23.2020 08:01

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	664908-013	664908-014	664908-015	664908-016	664908-017	664908-018
	<i>Field Id:</i>	SS10	SS10A	SS12	SS12A	SS13	SS13A
	<i>Depth:</i>	0.5- ft	3.0- ft	0.5- ft	3.0- ft	0.5- ft	3.0- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	06.18.2020 12:10	06.18.2020 12:14	06.18.2020 12:26	06.18.2020 12:34	06.18.2020 12:44	06.18.2020 12:56
BTEX by EPA 8021B	<i>Extracted:</i>	06.19.2020 14:00	06.19.2020 14:00	06.19.2020 14:00	06.19.2020 14:00	06.19.2020 14:00	06.19.2020 14:00
	<i>Analyzed:</i>	06.19.2020 20:31	06.19.2020 20:52	06.19.2020 21:14	06.19.2020 21:35	06.19.2020 21:57	06.19.2020 22:18
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202	<0.00202 0.00202	<0.00199 0.00199	<0.00202 0.00202
Toluene		<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202	<0.00202 0.00202	<0.00199 0.00199	<0.00202 0.00202
Ethylbenzene		<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202	<0.00202 0.00202	<0.00199 0.00199	<0.00202 0.00202
m,p-Xylenes		<0.00397 0.00397	<0.00401 0.00401	<0.00403 0.00403	<0.00403 0.00403	<0.00398 0.00398	<0.00404 0.00404
o-Xylene		<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202	<0.00202 0.00202	<0.00199 0.00199	<0.00202 0.00202
Total Xylenes		<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202	<0.00202 0.00202	<0.00199 0.00199	<0.00202 0.00202
Total BTEX		<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202	<0.00202 0.00202	<0.00199 0.00199	<0.00202 0.00202
Chloride by EPA 300	<i>Extracted:</i>	*** ** *	*** ** *	*** ** *	*** ** *	*** ** *	*** ** *
	<i>Analyzed:</i>	06.19.2020 18:34	06.19.2020 18:40	06.19.2020 18:46	06.19.2020 18:52	06.19.2020 18:58	06.19.2020 19:04
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		390 9.98	57.2 9.96	734 10.0	253 10.1	2460 10.1	212 10.0
TPH by SW8015 Mod	<i>Extracted:</i>	06.19.2020 13:30	06.19.2020 13:30	06.19.2020 13:30	06.19.2020 13:30	06.19.2020 13:30	06.19.2020 13:30
	<i>Analyzed:</i>	06.19.2020 13:49	06.19.2020 14:50	06.19.2020 15:11	06.19.2020 15:32	06.19.2020 15:52	06.19.2020 16:13
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.2 50.2	<50.3 50.3	<50.2 50.2	<50.1 50.1	<49.9 49.9	<50.3 50.3
Diesel Range Organics (DRO)		<50.2 50.2	<50.3 50.3	<50.2 50.2	<50.1 50.1	<49.9 49.9	<50.3 50.3
Motor Oil Range Hydrocarbons (MRO)		<50.2 50.2	<50.3 50.3	<50.2 50.2	<50.1 50.1	<49.9 49.9	<50.3 50.3
Total GRO-DRO		<50.2 50.2	<50.3 50.3	<50.2 50.2	<50.1 50.1	<49.9 49.9	<50.3 50.3
Total TPH		<50.2 50.2	<50.3 50.3	<50.2 50.2	<50.1 50.1	<49.9 49.9	<50.3 50.3

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

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Jessica Kramer
Project Manager



Analytical Report 664908

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU 25 BD 901H

012920030

06.23.2020

Collected By: Client

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

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-34), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-25), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-17)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-20-7)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



06.23.2020

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **664908**

PLU 25 BD 901H

Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 664908. 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. 664908 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads 'Jessica Kramer'. The signature is written in a cursive, flowing style.

Jessica Kramer

Project Manager

A Small Business and Minority Company

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

**Sample Cross Reference 664908****LT Environmental, Inc., Arvada, CO**

PLU 25 BD 901H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS04	S	06.18.2020 09:16	0.5 ft	664908-001
SS04A	S	06.18.2020 09:22	3.0 ft	664908-002
SS05	S	06.18.2020 09:36	0.5 ft	664908-003
SS05A	S	06.18.2020 09:42	3.0 ft	664908-004
SS06	S	06.18.2020 09:52	0.5 ft	664908-005
SS06A	S	06.18.2020 09:58	3.0 ft	664908-006
SS07	S	06.18.2020 10:08	0.5 ft	664908-007
SS07A	S	06.18.2020 10:14	3.0 ft	664908-008
SS08	S	06.18.2020 10:29	0.5 ft	664908-009
SS08A	S	06.18.2020 10:36	3.0 ft	664908-010
SS09	S	06.18.2020 10:51	0.5 ft	664908-011
SS09A	S	06.18.2020 10:55	3.0 ft	664908-012
SS10	S	06.18.2020 12:10	0.5 ft	664908-013
SS10A	S	06.18.2020 12:14	3.0 ft	664908-014
SS12	S	06.18.2020 12:26	0.5 ft	664908-015
SS12A	S	06.18.2020 12:34	3.0 ft	664908-016
SS13	S	06.18.2020 12:44	0.5 ft	664908-017
SS13A	S	06.18.2020 12:56	3.0 ft	664908-018



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *PLU 25 BD 901H*

Project ID: 012920030
Work Order Number(s): 664908

Report Date: 06.23.2020
Date Received: 06.19.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 664908

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SS04** Matrix: Soil Date Received: 06.19.2020 08:30
 Lab Sample Id: 664908-001 Date Collected: 06.18.2020 09:16 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 06.19.2020 12:43 Basis: Wet Weight
 Seq Number: 3129569

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	386	9.96	mg/kg	06.19.2020 16:31		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 06.19.2020 13:30 Basis: Wet Weight
 Seq Number: 3129581

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	06.19.2020 17:15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	06.19.2020 17:15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	06.19.2020 17:15	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	06.19.2020 17:15	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	06.19.2020 17:15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	06.19.2020 17:15	
o-Terphenyl	84-15-1	109	%	70-135	06.19.2020 17:15	



Certificate of Analytical Results 664908

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SS04**
Lab Sample Id: 664908-001

Matrix: Soil
Date Collected: 06.18.2020 09:16

Date Received: 06.19.2020 08:30
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 06.19.2020 10:39

Basis: Wet Weight

Seq Number: 3129552

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.19.2020 17:09	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.19.2020 17:09	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.19.2020 17:09	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	06.19.2020 17:09	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.19.2020 17:09	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.19.2020 17:09	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.19.2020 17:09	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	105	%	70-130	06.19.2020 17:09		
1,4-Difluorobenzene	540-36-3	102	%	70-130	06.19.2020 17:09		



Certificate of Analytical Results 664908

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SS04A** Matrix: Soil Date Received: 06.19.2020 08:30
 Lab Sample Id: 664908-002 Date Collected: 06.18.2020 09:22 Sample Depth: 3.0 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 06.19.2020 12:43 Basis: Wet Weight
 Seq Number: 3129569

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	133	9.94	mg/kg	06.19.2020 16:37		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 06.19.2020 13:30 Basis: Wet Weight
 Seq Number: 3129581

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	06.19.2020 17:36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	06.19.2020 17:36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	06.19.2020 17:36	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	06.19.2020 17:36	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	06.19.2020 17:36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	06.19.2020 17:36	
o-Terphenyl	84-15-1	110	%	70-135	06.19.2020 17:36	



Certificate of Analytical Results 664908

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SS04A**
Lab Sample Id: 664908-002

Matrix: Soil
Date Collected: 06.18.2020 09:22

Date Received: 06.19.2020 08:30
Sample Depth: 3.0 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3129552

Prep Method: SW5035A

% Moisture:

Date Prep: 06.19.2020 10:39

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	06.19.2020 17:29	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	06.19.2020 17:29	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	06.19.2020 17:29	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	06.19.2020 17:29	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	06.19.2020 17:29	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	06.19.2020 17:29	U	1
Total BTEX		<0.00201	0.00201	mg/kg	06.19.2020 17:29	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	102	%	70-130	06.19.2020 17:29		
4-Bromofluorobenzene	460-00-4	103	%	70-130	06.19.2020 17:29		



Certificate of Analytical Results 664908

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SS05** Matrix: Soil Date Received: 06.19.2020 08:30
 Lab Sample Id: 664908-003 Date Collected: 06.18.2020 09:36 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 06.19.2020 12:43 Basis: Wet Weight
 Seq Number: 3129569

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	506	10.0	mg/kg	06.19.2020 16:42		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 06.19.2020 13:30 Basis: Wet Weight
 Seq Number: 3129581

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	06.19.2020 18:21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	06.19.2020 18:21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	06.19.2020 18:21	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	06.19.2020 18:21	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	06.19.2020 18:21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	06.19.2020 18:21	
o-Terphenyl	84-15-1	110	%	70-135	06.19.2020 18:21	



Certificate of Analytical Results 664908

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SS05**
Lab Sample Id: 664908-003

Matrix: Soil
Date Collected: 06.18.2020 09:36

Date Received: 06.19.2020 08:30
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3129552

Prep Method: SW5035A

% Moisture:

Date Prep: 06.19.2020 10:39

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.19.2020 18:45	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.19.2020 18:45	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.19.2020 18:45	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	06.19.2020 18:45	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.19.2020 18:45	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.19.2020 18:45	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.19.2020 18:45	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	102	%	70-130	06.19.2020 18:45		
1,4-Difluorobenzene	540-36-3	100	%	70-130	06.19.2020 18:45		



Certificate of Analytical Results 664908

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SS05A**
Lab Sample Id: 664908-004

Matrix: Soil
Date Collected: 06.18.2020 09:42

Date Received: 06.19.2020 08:30
Sample Depth: 3.0 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3129569

Date Prep: 06.19.2020 12:43

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	43.6	9.92	mg/kg	06.19.2020 16:48		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3129581

Date Prep: 06.19.2020 13:30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	06.19.2020 18:42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	06.19.2020 18:42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	06.19.2020 18:42	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	06.19.2020 18:42	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	06.19.2020 18:42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	06.19.2020 18:42	
o-Terphenyl	84-15-1	108	%	70-135	06.19.2020 18:42	



Certificate of Analytical Results 664908

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SS05A**
Lab Sample Id: 664908-004

Matrix: Soil
Date Collected: 06.18.2020 09:42

Date Received: 06.19.2020 08:30
Sample Depth: 3.0 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 06.19.2020 10:39

Basis: Wet Weight

Seq Number: 3129552

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.19.2020 19:05	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.19.2020 19:05	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.19.2020 19:05	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	06.19.2020 19:05	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.19.2020 19:05	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.19.2020 19:05	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.19.2020 19:05	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	103	%	70-130	06.19.2020 19:05		
4-Bromofluorobenzene	460-00-4	104	%	70-130	06.19.2020 19:05		



Certificate of Analytical Results 664908

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SS06**
Lab Sample Id: 664908-005

Matrix: Soil
Date Collected: 06.18.2020 09:52

Date Received: 06.19.2020 08:30
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3129569

Date Prep: 06.19.2020 12:43

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1730	10.1	mg/kg	06.19.2020 16:54		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3129581

Date Prep: 06.19.2020 13:30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	06.19.2020 19:02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	06.19.2020 19:02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	06.19.2020 19:02	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	06.19.2020 19:02	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	06.19.2020 19:02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	06.19.2020 19:02	
o-Terphenyl	84-15-1	110	%	70-135	06.19.2020 19:02	



Certificate of Analytical Results 664908

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SS06**
Lab Sample Id: 664908-005

Matrix: Soil
Date Collected: 06.18.2020 09:52

Date Received: 06.19.2020 08:30
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 06.19.2020 10:39

Basis: Wet Weight

Seq Number: 3129552

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.19.2020 19:26	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.19.2020 19:26	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.19.2020 19:26	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	06.19.2020 19:26	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.19.2020 19:26	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.19.2020 19:26	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.19.2020 19:26	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	102	%	70-130	06.19.2020 19:26		
4-Bromofluorobenzene	460-00-4	105	%	70-130	06.19.2020 19:26		



Certificate of Analytical Results 664908

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SS06A**
Lab Sample Id: 664908-006

Matrix: Soil
Date Collected: 06.18.2020 09:58

Date Received: 06.19.2020 08:30
Sample Depth: 3.0 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3129569

Date Prep: 06.19.2020 12:43

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	205	9.88	mg/kg	06.19.2020 17:00		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3129581

Date Prep: 06.19.2020 13:30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	06.19.2020 19:23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	06.19.2020 19:23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	06.19.2020 19:23	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	06.19.2020 19:23	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	06.19.2020 19:23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	06.19.2020 19:23	
o-Terphenyl	84-15-1	108	%	70-135	06.19.2020 19:23	



Certificate of Analytical Results 664908

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SS06A**
Lab Sample Id: 664908-006

Matrix: Soil
Date Collected: 06.18.2020 09:58

Date Received: 06.19.2020 08:30
Sample Depth: 3.0 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3129552

Prep Method: SW5035A

% Moisture:

Date Prep: 06.19.2020 10:39

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	06.19.2020 19:46	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	06.19.2020 19:46	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	06.19.2020 19:46	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	06.19.2020 19:46	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	06.19.2020 19:46	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	06.19.2020 19:46	U	1
Total BTEX		<0.00202	0.00202	mg/kg	06.19.2020 19:46	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	06.19.2020 19:46		
4-Bromofluorobenzene	460-00-4	109	%	70-130	06.19.2020 19:46		



Certificate of Analytical Results 664908

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: SS07
Lab Sample Id: 664908-007

Matrix: Soil
Date Collected: 06.18.2020 10:08

Date Received: 06.19.2020 08:30
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3129569

Date Prep: 06.19.2020 12:43

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	119	9.90	mg/kg	06.19.2020 17:06		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3129581

Date Prep: 06.19.2020 13:30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	06.19.2020 19:44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	06.19.2020 19:44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	06.19.2020 19:44	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	06.19.2020 19:44	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	06.19.2020 19:44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	06.19.2020 19:44	
o-Terphenyl	84-15-1	112	%	70-135	06.19.2020 19:44	



Certificate of Analytical Results 664908

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SS07**
Lab Sample Id: 664908-007

Matrix: Soil
Date Collected: 06.18.2020 10:08

Date Received: 06.19.2020 08:30
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3129552

Prep Method: SW5035A

% Moisture:

Date Prep: 06.19.2020 10:39

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	06.19.2020 20:07	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	06.19.2020 20:07	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	06.19.2020 20:07	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	06.19.2020 20:07	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	06.19.2020 20:07	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	06.19.2020 20:07	U	1
Total BTEX		<0.00199	0.00199	mg/kg	06.19.2020 20:07	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	105	%	70-130	06.19.2020 20:07		
1,4-Difluorobenzene	540-36-3	102	%	70-130	06.19.2020 20:07		



Certificate of Analytical Results 664908

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SS07A**
Lab Sample Id: 664908-008

Matrix: Soil
Date Collected: 06.18.2020 10:14

Date Received: 06.19.2020 08:30
Sample Depth: 3.0 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3129571

Date Prep: 06.18.2020 14:46

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	70.0	9.94	mg/kg	06.19.2020 17:41		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3129581

Date Prep: 06.19.2020 13:30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	06.19.2020 20:04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	06.19.2020 20:04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	06.19.2020 20:04	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	06.19.2020 20:04	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	06.19.2020 20:04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	06.19.2020 20:04	
o-Terphenyl	84-15-1	107	%	70-135	06.19.2020 20:04	



Certificate of Analytical Results 664908

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SS07A**
Lab Sample Id: 664908-008

Matrix: Soil
Date Collected: 06.18.2020 10:14

Date Received: 06.19.2020 08:30
Sample Depth: 3.0 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3129552

Prep Method: SW5035A

% Moisture:

Date Prep: 06.19.2020 10:39

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.19.2020 20:27	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.19.2020 20:27	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.19.2020 20:27	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	06.19.2020 20:27	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.19.2020 20:27	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.19.2020 20:27	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.19.2020 20:27	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	104	%	70-130	06.19.2020 20:27		
1,4-Difluorobenzene	540-36-3	100	%	70-130	06.19.2020 20:27		



Certificate of Analytical Results 664908

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SS08** Matrix: Soil Date Received: 06.19.2020 08:30
 Lab Sample Id: 664908-009 Date Collected: 06.18.2020 10:29 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 06.18.2020 14:46 Basis: Wet Weight
 Seq Number: 3129571

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	424	9.88	mg/kg	06.19.2020 17:59		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 06.19.2020 13:30 Basis: Wet Weight
 Seq Number: 3129581

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	06.19.2020 20:25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	06.19.2020 20:25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	06.19.2020 20:25	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	06.19.2020 20:25	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	06.19.2020 20:25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	06.19.2020 20:25	
o-Terphenyl	84-15-1	108	%	70-135	06.19.2020 20:25	



Certificate of Analytical Results 664908

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SS08**
Lab Sample Id: 664908-009

Matrix: Soil
Date Collected: 06.18.2020 10:29

Date Received: 06.19.2020 08:30
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 06.19.2020 10:39

Basis: Wet Weight

Seq Number: 3129552

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.19.2020 20:47	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.19.2020 20:47	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.19.2020 20:47	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	06.19.2020 20:47	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.19.2020 20:47	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.19.2020 20:47	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.19.2020 20:47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	06.19.2020 20:47	
1,4-Difluorobenzene	540-36-3	101	%	70-130	06.19.2020 20:47	



Certificate of Analytical Results 664908

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SS08A** Matrix: Soil Date Received: 06.19.2020 08:30
 Lab Sample Id: 664908-010 Date Collected: 06.18.2020 10:36 Sample Depth: 3.0 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 06.18.2020 14:46 Basis: Wet Weight
 Seq Number: 3129571

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	522	10.1	mg/kg	06.19.2020 18:05		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 06.19.2020 13:30 Basis: Wet Weight
 Seq Number: 3129581

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	06.19.2020 20:45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	06.19.2020 20:45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	06.19.2020 20:45	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	06.19.2020 20:45	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	06.19.2020 20:45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	06.19.2020 20:45	
o-Terphenyl	84-15-1	110	%	70-135	06.19.2020 20:45	



Certificate of Analytical Results 664908

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SS08A**
Lab Sample Id: 664908-010

Matrix: Soil
Date Collected: 06.18.2020 10:36

Date Received: 06.19.2020 08:30
Sample Depth: 3.0 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3129552

Prep Method: SW5035A

% Moisture:

Date Prep: 06.19.2020 10:39

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	06.19.2020 21:08	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	06.19.2020 21:08	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	06.19.2020 21:08	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	06.19.2020 21:08	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	06.19.2020 21:08	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	06.19.2020 21:08	U	1
Total BTEX		<0.00199	0.00199	mg/kg	06.19.2020 21:08	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	102	%	70-130	06.19.2020 21:08		
4-Bromofluorobenzene	460-00-4	106	%	70-130	06.19.2020 21:08		



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LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: SS09	Matrix: Soil	Date Received: 06.19.2020 08:30
Lab Sample Id: 664908-011	Date Collected: 06.18.2020 10:51	Sample Depth: 0.5 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 06.18.2020 14:46	Basis: Wet Weight
Seq Number: 3129571		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	138	9.88	mg/kg	06.19.2020 18:11		1

Analytical Method: TPH by SW8015 Mod	Prep Method: SW8015P
Tech: DTH	% Moisture:
Analyst: DTH	Date Prep: 06.19.2020 13:30
Seq Number: 3129581	Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	06.19.2020 21:06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	06.19.2020 21:06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	06.19.2020 21:06	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	06.19.2020 21:06	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	06.19.2020 21:06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	06.19.2020 21:06	
o-Terphenyl	84-15-1	112	%	70-135	06.19.2020 21:06	



Certificate of Analytical Results 664908

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SS09**
Lab Sample Id: 664908-011

Matrix: Soil
Date Collected: 06.18.2020 10:51

Date Received: 06.19.2020 08:30
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3129552

Prep Method: SW5035A

% Moisture:

Date Prep: 06.19.2020 10:39

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	06.19.2020 21:28	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	06.19.2020 21:28	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	06.19.2020 21:28	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	06.19.2020 21:28	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	06.19.2020 21:28	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	06.19.2020 21:28	U	1
Total BTEX		<0.00199	0.00199	mg/kg	06.19.2020 21:28	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	99	%	70-130	06.19.2020 21:28		
4-Bromofluorobenzene	460-00-4	101	%	70-130	06.19.2020 21:28		



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LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SS09A** Matrix: Soil Date Received: 06.19.2020 08:30
 Lab Sample Id: 664908-012 Date Collected: 06.18.2020 10:55 Sample Depth: 3.0 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 06.18.2020 14:46 Basis: Wet Weight
 Seq Number: 3129571

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	108	9.94	mg/kg	06.19.2020 18:17		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 06.19.2020 13:30 Basis: Wet Weight
 Seq Number: 3129581

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	06.19.2020 21:26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	06.19.2020 21:26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	06.19.2020 21:26	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	06.19.2020 21:26	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	06.19.2020 21:26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	06.19.2020 21:26	
o-Terphenyl	84-15-1	111	%	70-135	06.19.2020 21:26	



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LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SS09A**
Lab Sample Id: 664908-012

Matrix: Soil
Date Collected: 06.18.2020 10:55

Date Received: 06.19.2020 08:30
Sample Depth: 3.0 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3129552

Prep Method: SW5035A

% Moisture:

Date Prep: 06.19.2020 10:39

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.19.2020 21:49	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.19.2020 21:49	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.19.2020 21:49	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	06.19.2020 21:49	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.19.2020 21:49	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.19.2020 21:49	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.19.2020 21:49	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	108	%	70-130	06.19.2020 21:49		
1,4-Difluorobenzene	540-36-3	104	%	70-130	06.19.2020 21:49		



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LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SS10**
Lab Sample Id: 664908-013

Matrix: Soil
Date Collected: 06.18.2020 12:10

Date Received: 06.19.2020 08:30
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3129571

Date Prep: 06.18.2020 14:46

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	390	9.98	mg/kg	06.19.2020 18:34		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3129595

Date Prep: 06.19.2020 13:30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	06.19.2020 13:49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	06.19.2020 13:49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	06.19.2020 13:49	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	06.19.2020 13:49	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	06.19.2020 13:49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	06.19.2020 13:49	
o-Terphenyl	84-15-1	107	%	70-135	06.19.2020 13:49	



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LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SS10**
Lab Sample Id: 664908-013

Matrix: Soil
Date Collected: 06.18.2020 12:10

Date Received: 06.19.2020 08:30
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 06.19.2020 14:00

Basis: Wet Weight

Seq Number: 3129616

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	06.19.2020 20:31	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	06.19.2020 20:31	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	06.19.2020 20:31	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	06.19.2020 20:31	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	06.19.2020 20:31	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	06.19.2020 20:31	U	1
Total BTEX		<0.00198	0.00198	mg/kg	06.19.2020 20:31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	06.19.2020 20:31	
4-Bromofluorobenzene	460-00-4	96	%	70-130	06.19.2020 20:31	



Certificate of Analytical Results 664908

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SS10A** Matrix: Soil Date Received: 06.19.2020 08:30
 Lab Sample Id: 664908-014 Date Collected: 06.18.2020 12:14 Sample Depth: 3.0 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 06.18.2020 14:46 Basis: Wet Weight
 Seq Number: 3129571

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	57.2	9.96	mg/kg	06.19.2020 18:40		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 06.19.2020 13:30 Basis: Wet Weight
 Seq Number: 3129595

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	06.19.2020 14:50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	06.19.2020 14:50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	06.19.2020 14:50	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	06.19.2020 14:50	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	06.19.2020 14:50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	06.19.2020 14:50	
o-Terphenyl	84-15-1	110	%	70-135	06.19.2020 14:50	



Certificate of Analytical Results 664908

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SS10A**
Lab Sample Id: 664908-014

Matrix: Soil
Date Collected: 06.18.2020 12:14

Date Received: 06.19.2020 08:30
Sample Depth: 3.0 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3129616

Prep Method: SW5035A

% Moisture:

Date Prep: 06.19.2020 14:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.19.2020 20:52	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.19.2020 20:52	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.19.2020 20:52	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	06.19.2020 20:52	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.19.2020 20:52	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.19.2020 20:52	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.19.2020 20:52	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	99	%	70-130	06.19.2020 20:52		
1,4-Difluorobenzene	540-36-3	100	%	70-130	06.19.2020 20:52		



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LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SS12** Matrix: Soil Date Received: 06.19.2020 08:30
 Lab Sample Id: 664908-015 Date Collected: 06.18.2020 12:26 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 06.18.2020 14:46 Basis: Wet Weight
 Seq Number: 3129571

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	734	10.0	mg/kg	06.19.2020 18:46		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 06.19.2020 13:30 Basis: Wet Weight
 Seq Number: 3129595

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	06.19.2020 15:11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	06.19.2020 15:11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	06.19.2020 15:11	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	06.19.2020 15:11	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	06.19.2020 15:11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	06.19.2020 15:11	
o-Terphenyl	84-15-1	104	%	70-135	06.19.2020 15:11	



Certificate of Analytical Results 664908

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SS12**
Lab Sample Id: 664908-015

Matrix: Soil
Date Collected: 06.18.2020 12:26

Date Received: 06.19.2020 08:30
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3129616

Prep Method: SW5035A

% Moisture:

Date Prep: 06.19.2020 14:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	06.19.2020 21:14	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	06.19.2020 21:14	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	06.19.2020 21:14	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	06.19.2020 21:14	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	06.19.2020 21:14	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	06.19.2020 21:14	U	1
Total BTEX		<0.00202	0.00202	mg/kg	06.19.2020 21:14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	70-130	06.19.2020 21:14	
1,4-Difluorobenzene	540-36-3	102	%	70-130	06.19.2020 21:14	



Certificate of Analytical Results 664908

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SS12A**
Lab Sample Id: 664908-016

Matrix: Soil
Date Collected: 06.18.2020 12:34

Date Received: 06.19.2020 08:30
Sample Depth: 3.0 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3129571

Date Prep: 06.18.2020 14:46

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	253	10.1	mg/kg	06.19.2020 18:52		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3129595

Date Prep: 06.19.2020 13:30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	06.19.2020 15:32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	06.19.2020 15:32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	06.19.2020 15:32	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	06.19.2020 15:32	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	06.19.2020 15:32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	06.19.2020 15:32	
o-Terphenyl	84-15-1	106	%	70-135	06.19.2020 15:32	



Certificate of Analytical Results 664908

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SS12A**
Lab Sample Id: 664908-016

Matrix: Soil
Date Collected: 06.18.2020 12:34

Date Received: 06.19.2020 08:30
Sample Depth: 3.0 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3129616

Prep Method: SW5035A

% Moisture:

Date Prep: 06.19.2020 14:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	06.19.2020 21:35	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	06.19.2020 21:35	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	06.19.2020 21:35	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	06.19.2020 21:35	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	06.19.2020 21:35	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	06.19.2020 21:35	U	1
Total BTEX		<0.00202	0.00202	mg/kg	06.19.2020 21:35	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	102	%	70-130	06.19.2020 21:35		
4-Bromofluorobenzene	460-00-4	106	%	70-130	06.19.2020 21:35		



Certificate of Analytical Results 664908

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SS13** Matrix: Soil Date Received: 06.19.2020 08:30
 Lab Sample Id: 664908-017 Date Collected: 06.18.2020 12:44 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 06.18.2020 14:46 Basis: Wet Weight
 Seq Number: 3129571

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2460	10.1	mg/kg	06.19.2020 18:58		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 06.19.2020 13:30 Basis: Wet Weight
 Seq Number: 3129595

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	06.19.2020 15:52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	06.19.2020 15:52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	06.19.2020 15:52	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	06.19.2020 15:52	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	06.19.2020 15:52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	06.19.2020 15:52	
o-Terphenyl	84-15-1	103	%	70-135	06.19.2020 15:52	



Certificate of Analytical Results 664908

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SS13**
Lab Sample Id: 664908-017

Matrix: Soil
Date Collected: 06.18.2020 12:44

Date Received: 06.19.2020 08:30
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 06.19.2020 14:00

Basis: Wet Weight

Seq Number: 3129616

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	06.19.2020 21:57	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	06.19.2020 21:57	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	06.19.2020 21:57	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	06.19.2020 21:57	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	06.19.2020 21:57	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	06.19.2020 21:57	U	1
Total BTEX		<0.00199	0.00199	mg/kg	06.19.2020 21:57	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	105	%	70-130	06.19.2020 21:57		
1,4-Difluorobenzene	540-36-3	102	%	70-130	06.19.2020 21:57		



Certificate of Analytical Results 664908

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SS13A** Matrix: Soil Date Received: 06.19.2020 08:30
 Lab Sample Id: 664908-018 Date Collected: 06.18.2020 12:56 Sample Depth: 3.0 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 06.18.2020 14:46 Basis: Wet Weight
 Seq Number: 3129571

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	212	10.0	mg/kg	06.19.2020 19:04		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 06.19.2020 13:30 Basis: Wet Weight
 Seq Number: 3129595

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	06.19.2020 16:13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	06.19.2020 16:13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	06.19.2020 16:13	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	06.19.2020 16:13	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	06.19.2020 16:13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	06.19.2020 16:13	
o-Terphenyl	84-15-1	104	%	70-135	06.19.2020 16:13	



Certificate of Analytical Results 664908

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SS13A**
Lab Sample Id: 664908-018

Matrix: Soil
Date Collected: 06.18.2020 12:56

Date Received: 06.19.2020 08:30
Sample Depth: 3.0 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3129616

Prep Method: SW5035A

% Moisture:

Date Prep: 06.19.2020 14:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	06.19.2020 22:18	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	06.19.2020 22:18	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	06.19.2020 22:18	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	06.19.2020 22:18	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	06.19.2020 22:18	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	06.19.2020 22:18	U	1
Total BTEX		<0.00202	0.00202	mg/kg	06.19.2020 22:18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	06.19.2020 22:18	
4-Bromofluorobenzene	460-00-4	106	%	70-130	06.19.2020 22:18	



Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



LT Environmental, Inc.

PLU 25 BD 901H

Analytical Method: Chloride by EPA 300

Seq Number: 3129571

MB Sample Id: 7705816-1-BLK

Matrix: Solid

LCS Sample Id: 7705816-1-BKS

Prep Method: E300P

Date Prep: 06.18.2020

LCSD Sample Id: 7705816-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	253	101	263	105	90-110	4	20	mg/kg	06.19.2020 17:29	

Analytical Method: Chloride by EPA 300

Seq Number: 3129569

MB Sample Id: 7705814-1-BLK

Matrix: Solid

LCS Sample Id: 7705814-1-BKS

Prep Method: E300P

Date Prep: 06.19.2020

LCSD Sample Id: 7705814-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	253	101	263	105	90-110	4	20	mg/kg	06.19.2020 14:15	

Analytical Method: Chloride by EPA 300

Seq Number: 3129571

Parent Sample Id: 664908-008

Matrix: Soil

MS Sample Id: 664908-008 S

Prep Method: E300P

Date Prep: 06.18.2020

MSD Sample Id: 664908-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	70.0	200	261	96	259	95	90-110	1	20	mg/kg	06.19.2020 17:47	

Analytical Method: Chloride by EPA 300

Seq Number: 3129571

Parent Sample Id: 664908-018

Matrix: Soil

MS Sample Id: 664908-018 S

Prep Method: E300P

Date Prep: 06.18.2020

MSD Sample Id: 664908-018 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	212	201	405	96	403	95	90-110	0	20	mg/kg	06.19.2020 19:10	

Analytical Method: Chloride by EPA 300

Seq Number: 3129569

Parent Sample Id: 664898-001

Matrix: Soil

MS Sample Id: 664898-001 S

Prep Method: E300P

Date Prep: 06.19.2020

MSD Sample Id: 664898-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	10.1	200	198	94	199	94	90-110	1	20	mg/kg	06.19.2020 14:33	

Analytical Method: Chloride by EPA 300

Seq Number: 3129569

Parent Sample Id: 664903-004

Matrix: Soil

MS Sample Id: 664903-004 S

Prep Method: E300P

Date Prep: 06.19.2020

MSD Sample Id: 664903-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	18.6	200	208	95	210	96	90-110	1	20	mg/kg	06.19.2020 15:55	

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

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

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

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



LT Environmental, Inc.

PLU 25 BD 901H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3129581

MB Sample Id: 7705889-1-BLK

Matrix: Solid

LCS Sample Id: 7705889-1-BKS

Prep Method: SW8015P

Date Prep: 06.19.2020

LCSD Sample Id: 7705889-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	974	97	974	97	70-135	0	35	mg/kg	06.19.2020 13:08	
Diesel Range Organics (DRO)	<50.0	1000	1020	102	1000	100	70-135	2	35	mg/kg	06.19.2020 13:08	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	104		91		90		70-135	%	06.19.2020 13:08
o-Terphenyl	101		80		77		70-135	%	06.19.2020 13:08

Analytical Method: TPH by SW8015 Mod

Seq Number: 3129595

MB Sample Id: 7705892-1-BLK

Matrix: Solid

LCS Sample Id: 7705892-1-BKS

Prep Method: SW8015P

Date Prep: 06.19.2020

LCSD Sample Id: 7705892-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1100	110	1070	107	70-135	3	35	mg/kg	06.19.2020 13:08	
Diesel Range Organics (DRO)	<50.0	1000	1170	117	1120	112	70-135	4	35	mg/kg	06.19.2020 13:08	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	99		123		118		70-135	%	06.19.2020 13:08
o-Terphenyl	102		102		97		70-135	%	06.19.2020 13:08

Analytical Method: TPH by SW8015 Mod

Seq Number: 3129581

Matrix: Solid

MB Sample Id: 7705889-1-BLK

Prep Method: SW8015P

Date Prep: 06.19.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	06.19.2020 12:47	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3129595

Matrix: Solid

MB Sample Id: 7705892-1-BLK

Prep Method: SW8015P

Date Prep: 06.19.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	06.19.2020 12:47	

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

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

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

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



LT Environmental, Inc.

PLU 25 BD 901H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3129581

Parent Sample Id: 664900-001

Matrix: Soil

MS Sample Id: 664900-001 S

Prep Method: SW8015P

Date Prep: 06.19.2020

MSD Sample Id: 664900-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.2	1000	1140	114	1150	115	70-135	1	35	mg/kg	06.19.2020 14:09	
Diesel Range Organics (DRO)	120	1000	1300	118	1230	111	70-135	6	35	mg/kg	06.19.2020 14:09	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	110		126		70-135	%	06.19.2020 14:09
o-Terphenyl	95		95		70-135	%	06.19.2020 14:09

Analytical Method: TPH by SW8015 Mod

Seq Number: 3129595

Parent Sample Id: 664908-013

Matrix: Soil

MS Sample Id: 664908-013 S

Prep Method: SW8015P

Date Prep: 06.19.2020

MSD Sample Id: 664908-013 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.2	1000	1060	106	1080	108	70-135	2	35	mg/kg	06.19.2020 14:09	
Diesel Range Organics (DRO)	<50.2	1000	920	92	975	98	70-135	6	35	mg/kg	06.19.2020 14:09	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	118		102		70-135	%	06.19.2020 14:09
o-Terphenyl	86		86		70-135	%	06.19.2020 14:09

Analytical Method: BTEX by EPA 8021B

Seq Number: 3129552

MB Sample Id: 7705817-1-BLK

Matrix: Solid

LCS Sample Id: 7705817-1-BKS

Prep Method: SW5035A

Date Prep: 06.19.2020

LCSD Sample Id: 7705817-1-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	0.0878	88	0.0981	98	70-130	11	35	mg/kg	06.19.2020 12:29	
Toluene	<0.00200	0.100	0.0887	89	0.0983	98	70-130	10	35	mg/kg	06.19.2020 12:29	
Ethylbenzene	<0.00200	0.100	0.0950	95	0.105	105	71-129	10	35	mg/kg	06.19.2020 12:29	
m,p-Xylenes	<0.00400	0.200	0.195	98	0.216	108	70-135	10	35	mg/kg	06.19.2020 12:29	
o-Xylene	<0.00200	0.100	0.0953	95	0.106	106	71-133	11	35	mg/kg	06.19.2020 12:29	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		98		98		70-130	%	06.19.2020 12:29
4-Bromofluorobenzene	108		102		98		70-130	%	06.19.2020 12:29

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

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

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

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



LT Environmental, Inc.

PLU 25 BD 901H

Analytical Method: BTEX by EPA 8021B

Seq Number: 3129616

Matrix: Solid

Prep Method: SW5035A

Date Prep: 06.19.2020

MB Sample Id: 7705818-1-BLK

LCS Sample Id: 7705818-1-BKS

LCSD Sample Id: 7705818-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.107	107	0.108	108	70-130	1	35	mg/kg	06.19.2020 18:32	
Toluene	<0.00200	0.100	0.0998	100	0.107	107	70-130	7	35	mg/kg	06.19.2020 18:32	
Ethylbenzene	<0.00200	0.100	0.0929	93	0.102	102	71-129	9	35	mg/kg	06.19.2020 18:32	
m,p-Xylenes	<0.00400	0.200	0.189	95	0.208	104	70-135	10	35	mg/kg	06.19.2020 18:32	
o-Xylene	<0.00200	0.100	0.0941	94	0.103	103	71-133	9	35	mg/kg	06.19.2020 18:32	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		100		101		70-130	%	06.19.2020 18:32
4-Bromofluorobenzene	95		103		100		70-130	%	06.19.2020 18:32

Analytical Method: BTEX by EPA 8021B

Seq Number: 3129552

Matrix: Soil

Prep Method: SW5035A

Date Prep: 06.19.2020

Parent Sample Id: 664900-001

MS Sample Id: 664900-001 S

MSD Sample Id: 664900-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.105	105	0.0990	98	70-130	6	35	mg/kg	06.19.2020 13:10	
Toluene	<0.00200	0.100	0.105	105	0.0989	98	70-130	6	35	mg/kg	06.19.2020 13:10	
Ethylbenzene	<0.00200	0.100	0.111	111	0.103	102	71-129	7	35	mg/kg	06.19.2020 13:10	
m,p-Xylenes	<0.00401	0.200	0.224	112	0.207	102	70-135	8	35	mg/kg	06.19.2020 13:10	
o-Xylene	<0.00200	0.100	0.109	109	0.0990	98	71-133	10	35	mg/kg	06.19.2020 13:10	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		99		70-130	%	06.19.2020 13:10
4-Bromofluorobenzene	101		101		70-130	%	06.19.2020 13:10

Analytical Method: BTEX by EPA 8021B

Seq Number: 3129616

Matrix: Soil

Prep Method: SW5035A

Date Prep: 06.19.2020

Parent Sample Id: 664908-013

MS Sample Id: 664908-013 S

MSD Sample Id: 664908-013 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.116	117	0.111	111	70-130	4	35	mg/kg	06.19.2020 19:15	
Toluene	<0.00199	0.0994	0.114	115	0.109	109	70-130	4	35	mg/kg	06.19.2020 19:15	
Ethylbenzene	<0.00199	0.0994	0.110	111	0.106	106	71-129	4	35	mg/kg	06.19.2020 19:15	
m,p-Xylenes	<0.00398	0.199	0.226	114	0.216	108	70-135	5	35	mg/kg	06.19.2020 19:15	
o-Xylene	<0.00199	0.0994	0.111	112	0.106	106	71-133	5	35	mg/kg	06.19.2020 19:15	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		100		70-130	%	06.19.2020 19:15
4-Bromofluorobenzene	105		104		70-130	%	06.19.2020 19:15

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

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

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

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



Chain of Custody

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

Work Order No: 16164108

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Page 1 of 2

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littlell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	522 W. Mermod St.
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	jhlili@xenv.com, dmoir@xenv.com

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

Project Name:	PLU 25 BD 901A	Turn Around	
Project Number:	012920030	Routine	☒
P.O. Number:	Sp.11 date 2/11/20	Rush:	
Sampler's Name:	Jeremy Hill	Due Date:	

SAMPLE RECEIPT		Temp Blank:	Yes	No	Wet Ice:	Yes	No
Temperature (°C):	21.1.9	Thermometer ID	TMM007				
Received Intact:	Yes	Correction Factor:	-0.2				
Cooler Custody Seals:	Yes	Total Containers:	18				
Sample Custody Seals:	Yes						

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	ANALYSIS REQUEST																Work Order Notes
SS041	S	6/18/20	0916	0.5	TPH (EPA 8015)	X	BTEX (EPA 0=8021)	X	Chloride (EPA 300.0)	X											TAT starts the day received by the lab, if received by 4:30pm
SS04A				3.0																	discrete
SS05				0.5																	
SS05A				0.5																	
SS06				0.5																	
SS06A				0.5																	
SS07				0.5																	
SS07A				0.5																	
SS08				0.5																	
SS08A				0.5																	
SS09A				0.5																	

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U 1631 / 245.1 / 7470 / 7471 : Hg

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		6/19/20 08:30			



Chain of Custody

Work Order No: 1604908

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334
 Midland, TX (432) 704-5440 EL Paso, TX (915) 565-3443 Lubbock, TX (806) 794-1296
 Hobbs, NM (575) 392-7550 Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000

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Page 2 of 2

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littlell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	522 W. Mermod St.
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carsbad, NM 88220
Phone:	(432) 236-3849	Email:	jhill@xenco.com, dmoir@xenco.com

Project Name:	PLU 2560 9014	Turn Around	
Project Number:	018920030	Routine	☒
P.O. Number:	Spill date 8/11/20	Rush:	
Sampler's Name:	Jeremy Hill	Due Date:	

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

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

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 06.19.2020 08.30.00 AM

Work Order #: 664908

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.9
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	No
#18 Water VOC samples have zero headspace?	N/A

Samples recieved in bulk containers.

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

Analyst:

PH Device/Lot#:

Checklist completed by:



Elizabeth McClellan

Date: 06.19.2020

Checklist reviewed by:



Jessica Kramer

Date: 06.19.2020



Certificate of Analysis Summary 665881

LT Environmental, Inc., Arvada, CO

Project Name: PLU 25 BD 901H

Project Id: 012920030

Contact: Dan Moir

Project Location:

Date Received in Lab: Mon 06.29.2020 16:48

Report Date: 06.30.2020 12:06

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	665881-001	665881-002				
	Field Id:	FS02	FS03				
	Depth:	3.0- ft	3.0- ft				
	Matrix:	SOIL	SOIL				
	Sampled:	06.29.2020 14:01	06.29.2020 14:32				
BTEX by EPA 8021B	Extracted:	06.29.2020 17:27	06.29.2020 17:27				
	Analyzed:	06.29.2020 19:05	06.29.2020 19:26				
	Units/RL:	mg/kg RL	mg/kg RL				
	Benzene	<0.00200 0.00200	<0.00200 0.00200				
	Toluene	<0.00200 0.00200	<0.00200 0.00200				
	Ethylbenzene	<0.00200 0.00200	<0.00200 0.00200				
	m,p-Xylenes	<0.00399 0.00399	<0.00399 0.00399				
	o-Xylene	<0.00200 0.00200	<0.00200 0.00200				
	Total Xylenes	<0.00200 0.00200	<0.00200 0.00200				
	Total BTEX	<0.00200 0.00200	<0.00200 0.00200				
Chloride by EPA 300	Extracted:	06.30.2020 07:20	06.30.2020 07:20				
	Analyzed:	06.30.2020 09:01	06.30.2020 09:19				
	Units/RL:	mg/kg RL	mg/kg RL				
	Chloride	595 9.98	902 10.1				
TPH by SW8015 Mod	Extracted:	06.29.2020 17:30	06.29.2020 17:30				
	Analyzed:	06.29.2020 19:36	06.29.2020 20:37				
	Units/RL:	mg/kg RL	mg/kg RL				
	Gasoline Range Hydrocarbons (GRO)	<50.2 50.2	<50.3 50.3				
	Diesel Range Organics (DRO)	<50.2 50.2	<50.3 50.3				
	Motor Oil Range Hydrocarbons (MRO)	<50.2 50.2	<50.3 50.3				
	Total GRO-DRO	<50.2 50.2	<50.3 50.3				
	Total TPH	<50.2 50.2	<50.3 50.3				

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

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

Jessica Kramer
Project Manager



Analytical Report 665881

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU 25 BD 901H

012920030

06.30.2020

Collected By: Client

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

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-36), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-25), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-17)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-20-7)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



06.30.2020

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **665881**

PLU 25 BD 901H

Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 665881. 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. 665881 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads 'Jessica Kramer'. The signature is written in a cursive, flowing style.

Jessica Kramer

Project Manager

A Small Business and Minority Company

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



Sample Cross Reference 665881

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS02	S	06.29.2020 14:01	3.0 ft	665881-001
FS03	S	06.29.2020 14:32	3.0 ft	665881-002



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *PLU 25 BD 901H*

Project ID: 012920030
Work Order Number(s): 665881

Report Date: 06.30.2020
Date Received: 06.29.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 665881

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS02**
Lab Sample Id: 665881-001

Matrix: Soil
Date Collected: 06.29.2020 14:01

Date Received: 06.29.2020 16:48
Sample Depth: 3.0 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3130314

Date Prep: 06.30.2020 07:20

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	595	9.98	mg/kg	06.30.2020 09:01		1

Analytical Method: TPH by SW8015 Mod

Tech: MAB

Analyst: MAB

Seq Number: 3130303

Date Prep: 06.29.2020 17:30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	06.29.2020 19:36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	06.29.2020 19:36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	06.29.2020 19:36	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	06.29.2020 19:36	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	06.29.2020 19:36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	06.29.2020 19:36	
o-Terphenyl	84-15-1	122	%	70-135	06.29.2020 19:36	



Certificate of Analytical Results 665881

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS02**
Lab Sample Id: 665881-001

Matrix: Soil
Date Collected: 06.29.2020 14:01

Date Received: 06.29.2020 16:48
Sample Depth: 3.0 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 06.29.2020 17:27

Basis: Wet Weight

Seq Number: 3130305

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.29.2020 19:05	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.29.2020 19:05	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.29.2020 19:05	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	06.29.2020 19:05	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.29.2020 19:05	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.29.2020 19:05	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.29.2020 19:05	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	102	%	70-130	06.29.2020 19:05		
1,4-Difluorobenzene	540-36-3	101	%	70-130	06.29.2020 19:05		



Certificate of Analytical Results 665881

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS03** Matrix: Soil Date Received: 06.29.2020 16:48
 Lab Sample Id: 665881-002 Date Collected: 06.29.2020 14:32 Sample Depth: 3.0 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 06.30.2020 07:20 Basis: Wet Weight
 Seq Number: 3130314

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	902	10.1	mg/kg	06.30.2020 09:19		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 06.29.2020 17:30 Basis: Wet Weight
 Seq Number: 3130303

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	06.29.2020 20:37	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	06.29.2020 20:37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	06.29.2020 20:37	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	06.29.2020 20:37	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	06.29.2020 20:37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	06.29.2020 20:37	
o-Terphenyl	84-15-1	98	%	70-135	06.29.2020 20:37	



Certificate of Analytical Results 665881

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS03**
Lab Sample Id: 665881-002

Matrix: Soil
Date Collected: 06.29.2020 14:32

Date Received: 06.29.2020 16:48
Sample Depth: 3.0 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3130305

Prep Method: SW5035A

% Moisture:

Date Prep: 06.29.2020 17:27

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.29.2020 19:26	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.29.2020 19:26	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.29.2020 19:26	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	06.29.2020 19:26	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.29.2020 19:26	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.29.2020 19:26	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.29.2020 19:26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	06.29.2020 19:26	
1,4-Difluorobenzene	540-36-3	104	%	70-130	06.29.2020 19:26	



Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



LT Environmental, Inc.

PLU 25 BD 901H

Analytical Method: Chloride by EPA 300

Seq Number: 3130314

MB Sample Id: 7706410-1-BLK

Matrix: Solid

LCS Sample Id: 7706410-1-BKS

Prep Method: E300P

Date Prep: 06.30.2020

LCSD Sample Id: 7706410-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	256	102	263	105	90-110	3	20	mg/kg	06.30.2020 08:31	

Analytical Method: Chloride by EPA 300

Seq Number: 3130314

Parent Sample Id: 665881-001

Matrix: Soil

MS Sample Id: 665881-001 S

Prep Method: E300P

Date Prep: 06.30.2020

MSD Sample Id: 665881-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	595	200	782	94	783	94	90-110	0	20	mg/kg	06.30.2020 09:07	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3130303

MB Sample Id: 7706411-1-BLK

Matrix: Solid

LCS Sample Id: 7706411-1-BKS

Prep Method: SW8015P

Date Prep: 06.29.2020

LCSD Sample Id: 7706411-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1000	100	966	97	70-135	3	35	mg/kg	06.29.2020 18:34	
Diesel Range Organics (DRO)	<50.0	1000	1190	119	1130	113	70-135	5	35	mg/kg	06.29.2020 18:34	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	102		124		127		70-135	%	06.29.2020 18:34
o-Terphenyl	109		119		131		70-135	%	06.29.2020 18:34

Analytical Method: TPH by SW8015 Mod

Seq Number: 3130303

Matrix: Solid

MB Sample Id: 7706411-1-BLK

Prep Method: SW8015P

Date Prep: 06.29.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	06.29.2020 18:14	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3130303

Parent Sample Id: 665881-001

Matrix: Soil

MS Sample Id: 665881-001 S

Prep Method: SW8015P

Date Prep: 06.29.2020

MSD Sample Id: 665881-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.3	1010	950	94	928	93	70-135	2	35	mg/kg	06.29.2020 19:56	
Diesel Range Organics (DRO)	<50.3	1010	1130	112	1110	111	70-135	2	35	mg/kg	06.29.2020 19:56	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	110		111		70-135	%	06.29.2020 19:56
o-Terphenyl	106		109		70-135	%	06.29.2020 19:56

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

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

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

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



LT Environmental, Inc.

PLU 25 BD 901H

Analytical Method: BTEX by EPA 8021B

Seq Number: 3130305

MB Sample Id: 7706338-1-BLK

Matrix: Solid

LCS Sample Id: 7706338-1-BKS

Prep Method: SW5035A

Date Prep: 06.29.2020

LCSD Sample Id: 7706338-1-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	0.0943	94	0.0939	94	70-130	0	35	mg/kg	06.29.2020 12:49	
Toluene	<0.00200	0.100	0.0935	94	0.0934	93	70-130	0	35	mg/kg	06.29.2020 12:49	
Ethylbenzene	<0.00200	0.100	0.0990	99	0.100	100	71-129	1	35	mg/kg	06.29.2020 12:49	
m,p-Xylenes	<0.00400	0.200	0.204	102	0.204	102	70-135	0	35	mg/kg	06.29.2020 12:49	
o-Xylene	<0.00200	0.100	0.0992	99	0.100	100	71-133	1	35	mg/kg	06.29.2020 12:49	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		99		101		70-130	%	06.29.2020 12:49
4-Bromofluorobenzene	102		100		99		70-130	%	06.29.2020 12:49

Analytical Method: BTEX by EPA 8021B

Seq Number: 3130305

Parent Sample Id: 665605-017

Matrix: Soil

MS Sample Id: 665605-017 S

Prep Method: SW5035A

Date Prep: 06.29.2020

MSD Sample Id: 665605-017 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	0.109	109	0.107	107	70-130	2	35	mg/kg	06.29.2020 13:30	
Toluene	<0.00200	0.100	0.104	104	0.100	100	70-130	4	35	mg/kg	06.29.2020 13:30	
Ethylbenzene	<0.00200	0.100	0.108	108	0.103	103	71-129	5	35	mg/kg	06.29.2020 13:30	
m,p-Xylenes	<0.00401	0.200	0.224	112	0.210	104	70-135	6	35	mg/kg	06.29.2020 13:30	
o-Xylene	<0.00200	0.100	0.110	110	0.103	103	71-133	7	35	mg/kg	06.29.2020 13:30	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		100		70-130	%	06.29.2020 13:30
4-Bromofluorobenzene	100		99		70-130	%	06.29.2020 13:30

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

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

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

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

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3333
Midland, TX (432-704-5440) El Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296
Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813) 281-1111
Hobbs, NM (575-392-7550)

Work Order No: 005701

www.xenco.com Page 1 of 1

Chain of Custody

Project Manager:		Den Moir	Bill to: (if different)	Kyle Littlell
Company Name:		LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:		3300 North A Street	Address:	522 W. Memrod St.
City, State ZIP:		Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:		(432) 236-3849	Email:	jhlill@ltenv.com, dmoir@ltenv.com

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

[illegible]

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

[illegible]

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 06.29.2020 04.48.00 PM

Work Order #: 665881

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

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

Samples recieved in bulk containers.

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

Analyst:

PH Device/Lot#:

Checklist completed by:



Elizabeth McClellan

Date: 06.29.2020

Checklist reviewed by:



Jessica Kramer

Date: 06.30.2020

Certificate of Analysis Summary 665991



LT Environmental, Inc., Arvada, CO

Project Name: PLU 25 BD901H

Project Id: 012920030

Contact: Dan Moir

Project Location:

Date Received in Lab: Tue 06.30.2020 16:31

Report Date: 07.01.2020 14:59

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	665991-001	665991-002	665991-003	665991-004		
	<i>Field Id:</i>	FS05	FS08	FS09	FS11		
	<i>Depth:</i>	3- ft	3- ft	3- ft	3- ft		
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	06.30.2020 10:31	06.30.2020 11:28	06.30.2020 13:37	06.30.2020 13:48		
BTEX by EPA 8021B	<i>Extracted:</i>	06.30.2020 17:07	06.30.2020 17:07	06.30.2020 17:07	06.30.2020 17:07		
	<i>Analyzed:</i>	06.30.2020 20:36	06.30.2020 20:56	06.30.2020 21:17	06.30.2020 21:37		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Benzene		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200		
Toluene		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200		
Ethylbenzene		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200		
m,p-Xylenes		<0.00399 0.00399	<0.00398 0.00398	<0.00399 0.00399	<0.00399 0.00399		
o-Xylene		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200		
Total Xylenes		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200		
Total BTEX		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200		
Chloride by EPA 300	<i>Extracted:</i>	07.01.2020 08:04	07.01.2020 08:04	07.01.2020 08:04	07.01.2020 08:04		
	<i>Analyzed:</i>	07.01.2020 11:02	07.01.2020 09:46	07.01.2020 09:52	07.01.2020 09:58		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		573 9.94	340 9.92	294 9.98	432 9.96		
TPH by SW8015 Mod	<i>Extracted:</i>	06.30.2020 17:30	06.30.2020 17:30	06.30.2020 17:30	06.30.2020 17:30		
	<i>Analyzed:</i>	06.30.2020 19:20	06.30.2020 20:21	06.30.2020 20:42	06.30.2020 21:02		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Gasoline Range Hydrocarbons (GRO)		<49.9 49.9	<49.9 49.9	<50.1 50.1	<50.1 50.1		
Diesel Range Organics (DRO)		<49.9 49.9	<49.9 49.9	<50.1 50.1	<50.1 50.1		
Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9	<49.9 49.9	<50.1 50.1	<50.1 50.1		
Total GRO-DRO		<49.9 49.9	<49.9 49.9	<50.1 50.1	<50.1 50.1		
Total TPH		<49.9 49.9	<49.9 49.9	<50.1 50.1	<50.1 50.1		

BRL - Below Reporting Limit

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



Xenco

Analytical Report 665991

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU 25 BD901H

012920030

07.01.2020

Collected By: Client

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

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-36), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-25), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-17)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-20-7)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



07.01.2020

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: Eurofins Xenco, LLC Report No(s): **665991**

PLU 25 BD901H

Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 665991. 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 Eurofins Xenco, LLC. 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. 665991 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 Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink that reads "Holly Taylor".

Holly Taylor
Project Manager

A Small Business and Minority Company

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

**Sample Cross Reference 665991****LT Environmental, Inc., Arvada, CO**

PLU 25 BD901H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS05	S	06.30.2020 10:31	3 ft	665991-001
FS08	S	06.30.2020 11:28	3 ft	665991-002
FS09	S	06.30.2020 13:37	3 ft	665991-003
FS11	S	06.30.2020 13:48	3 ft	665991-004



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 25 BD901H

Project ID: 012920030
Work Order Number(s): 665991

Report Date: 07.01.2020
Date Received: 06.30.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 665991

LT Environmental, Inc., Arvada, CO

PLU 25 BD901H

Sample Id: **FS05** Matrix: Soil Date Received: 06.30.2020 16:31
 Lab Sample Id: 665991-001 Date Collected: 06.30.2020 10:31 Sample Depth: 3 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.01.2020 08:04 Basis: Wet Weight
 Seq Number: 3130458

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	573	9.94	mg/kg	07.01.2020 11:02		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 06.30.2020 17:30 Basis: Wet Weight
 Seq Number: 3130427

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	06.30.2020 19:20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	06.30.2020 19:20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	06.30.2020 19:20	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	06.30.2020 19:20	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	06.30.2020 19:20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	06.30.2020 19:20	
o-Terphenyl	84-15-1	112	%	70-135	06.30.2020 19:20	



Certificate of Analytical Results 665991

LT Environmental, Inc., Arvada, CO

PLU 25 BD901H

Sample Id: **FS05**
Lab Sample Id: 665991-001

Matrix: Soil
Date Collected: 06.30.2020 10:31

Date Received: 06.30.2020 16:31
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 06.30.2020 17:07

Basis: Wet Weight

Seq Number: 3130415

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.30.2020 20:36	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.30.2020 20:36	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.30.2020 20:36	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	06.30.2020 20:36	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.30.2020 20:36	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.30.2020 20:36	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.30.2020 20:36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	70-130	06.30.2020 20:36	
1,4-Difluorobenzene	540-36-3	99	%	70-130	06.30.2020 20:36	



Certificate of Analytical Results 665991

LT Environmental, Inc., Arvada, CO

PLU 25 BD901H

Sample Id: **FS08** Matrix: Soil Date Received: 06.30.2020 16:31
 Lab Sample Id: 665991-002 Date Collected: 06.30.2020 11:28 Sample Depth: 3 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.01.2020 08:04 Basis: Wet Weight
 Seq Number: 3130458

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	340	9.92	mg/kg	07.01.2020 09:46		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 06.30.2020 17:30 Basis: Wet Weight
 Seq Number: 3130427

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	06.30.2020 20:21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	06.30.2020 20:21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	06.30.2020 20:21	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	06.30.2020 20:21	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	06.30.2020 20:21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	06.30.2020 20:21	
o-Terphenyl	84-15-1	103	%	70-135	06.30.2020 20:21	



Certificate of Analytical Results 665991

LT Environmental, Inc., Arvada, CO

PLU 25 BD901H

Sample Id: **FS08**
Lab Sample Id: 665991-002

Matrix: Soil
Date Collected: 06.30.2020 11:28

Date Received: 06.30.2020 16:31
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 06.30.2020 17:07

Basis: Wet Weight

Seq Number: 3130415

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	06.30.2020 20:56	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	06.30.2020 20:56	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	06.30.2020 20:56	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	06.30.2020 20:56	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	06.30.2020 20:56	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	06.30.2020 20:56	U	1
Total BTEX		<0.00199	0.00199	mg/kg	06.30.2020 20:56	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	102	%	70-130	06.30.2020 20:56		
1,4-Difluorobenzene	540-36-3	101	%	70-130	06.30.2020 20:56		



Certificate of Analytical Results 665991

LT Environmental, Inc., Arvada, CO

PLU 25 BD901H

Sample Id: **FS09** Matrix: Soil Date Received: 06.30.2020 16:31
 Lab Sample Id: 665991-003 Date Collected: 06.30.2020 13:37 Sample Depth: 3 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.01.2020 08:04 Basis: Wet Weight
 Seq Number: 3130458

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	294	9.98	mg/kg	07.01.2020 09:52		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 06.30.2020 17:30 Basis: Wet Weight
 Seq Number: 3130427

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	06.30.2020 20:42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	06.30.2020 20:42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	06.30.2020 20:42	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	06.30.2020 20:42	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	06.30.2020 20:42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	06.30.2020 20:42	
o-Terphenyl	84-15-1	107	%	70-135	06.30.2020 20:42	



Certificate of Analytical Results 665991

LT Environmental, Inc., Arvada, CO

PLU 25 BD901H

Sample Id: **FS09**
Lab Sample Id: 665991-003

Matrix: Soil
Date Collected: 06.30.2020 13:37

Date Received: 06.30.2020 16:31
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 06.30.2020 17:07

Basis: Wet Weight

Seq Number: 3130415

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.30.2020 21:17	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.30.2020 21:17	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.30.2020 21:17	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	06.30.2020 21:17	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.30.2020 21:17	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.30.2020 21:17	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.30.2020 21:17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	06.30.2020 21:17	
1,4-Difluorobenzene	540-36-3	103	%	70-130	06.30.2020 21:17	



Certificate of Analytical Results 665991

LT Environmental, Inc., Arvada, CO

PLU 25 BD901H

Sample Id: **FS11** Matrix: Soil Date Received: 06.30.2020 16:31
 Lab Sample Id: 665991-004 Date Collected: 06.30.2020 13:48 Sample Depth: 3 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.01.2020 08:04 Basis: Wet Weight
 Seq Number: 3130458

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	432	9.96	mg/kg	07.01.2020 09:58		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 06.30.2020 17:30 Basis: Wet Weight
 Seq Number: 3130427

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	06.30.2020 21:02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	06.30.2020 21:02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	06.30.2020 21:02	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	06.30.2020 21:02	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	06.30.2020 21:02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	06.30.2020 21:02	
o-Terphenyl	84-15-1	105	%	70-135	06.30.2020 21:02	



Certificate of Analytical Results 665991

LT Environmental, Inc., Arvada, CO

PLU 25 BD901H

Sample Id: **FS11**
Lab Sample Id: 665991-004

Matrix: Soil
Date Collected: 06.30.2020 13:48

Date Received: 06.30.2020 16:31
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 06.30.2020 17:07

Basis: Wet Weight

Seq Number: 3130415

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.30.2020 21:37	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.30.2020 21:37	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.30.2020 21:37	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	06.30.2020 21:37	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.30.2020 21:37	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.30.2020 21:37	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.30.2020 21:37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	06.30.2020 21:37	
4-Bromofluorobenzene	460-00-4	105	%	70-130	06.30.2020 21:37	

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

LT Environmental, Inc.

PLU 25 BD901H

Analytical Method: Chloride by EPA 300

Seq Number: 3130458

MB Sample Id: 7706510-1-BLK

Matrix: Solid

LCS Sample Id: 7706510-1-BKS

Prep Method: E300P

Date Prep: 07.01.2020

LCSD Sample Id: 7706510-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	258	103	265	106	90-110	3	20	mg/kg	07.01.2020 09:16	

Analytical Method: Chloride by EPA 300

Seq Number: 3130458

Parent Sample Id: 665991-001

Matrix: Soil

MS Sample Id: 665991-001 S

Prep Method: E300P

Date Prep: 07.01.2020

MSD Sample Id: 665991-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	573	199	756	92	759	93	90-110	0	20	mg/kg	07.01.2020 11:08	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3130427

MB Sample Id: 7706501-1-BLK

Matrix: Solid

LCS Sample Id: 7706501-1-BKS

Prep Method: SW8015P

Date Prep: 06.30.2020

LCSD Sample Id: 7706501-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	996	100	1030	103	70-135	3	35	mg/kg	06.30.2020 18:18	
Diesel Range Organics (DRO)	<50.0	1000	1160	116	1180	118	70-135	2	35	mg/kg	06.30.2020 18:18	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	104		135		129		70-135	%	06.30.2020 18:18
o-Terphenyl	110		117		133		70-135	%	06.30.2020 18:18

Analytical Method: TPH by SW8015 Mod

Seq Number: 3130427

Matrix: Solid

MB Sample Id: 7706501-1-BLK

Prep Method: SW8015P

Date Prep: 06.30.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	06.30.2020 17:57	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3130427

Matrix: Soil

Parent Sample Id: 665991-001

MS Sample Id: 665991-001 S

Prep Method: SW8015P

Date Prep: 06.30.2020

MSD Sample Id: 665991-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	999	945	95	935	94	70-135	1	35	mg/kg	06.30.2020 19:40	
Diesel Range Organics (DRO)	<50.0	999	1110	111	1100	110	70-135	1	35	mg/kg	06.30.2020 19:40	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	112		108		70-135	%	06.30.2020 19:40
o-Terphenyl	104		102		70-135	%	06.30.2020 19:40

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

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

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

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

LT Environmental, Inc.

PLU 25 BD901H

Analytical Method: BTEX by EPA 8021B

Seq Number: 3130415

MB Sample Id: 7706494-1-BLK

Matrix: Solid

LCS Sample Id: 7706494-1-BKS

Prep Method: SW5035A

Date Prep: 06.30.2020

LCSD Sample Id: 7706494-1-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	0.0939	94	0.0929	93	70-130	1	35	mg/kg	06.30.2020 18:39	
Toluene	<0.00200	0.100	0.0916	92	0.0902	90	70-130	2	35	mg/kg	06.30.2020 18:39	
Ethylbenzene	<0.00200	0.100	0.0950	95	0.0943	94	71-129	1	35	mg/kg	06.30.2020 18:39	
m,p-Xylenes	<0.00400	0.200	0.193	97	0.191	96	70-135	1	35	mg/kg	06.30.2020 18:39	
o-Xylene	<0.00200	0.100	0.0969	97	0.0960	96	71-133	1	35	mg/kg	06.30.2020 18:39	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		99		98		70-130	%	06.30.2020 18:39
4-Bromofluorobenzene	103		99		95		70-130	%	06.30.2020 18:39

Analytical Method: BTEX by EPA 8021B

Seq Number: 3130415

Parent Sample Id: 665991-001

Matrix: Soil

MS Sample Id: 665991-001 S

Prep Method: SW5035A

Date Prep: 06.30.2020

MSD Sample Id: 665991-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.108	109	0.114	114	70-130	5	35	mg/kg	06.30.2020 19:20	
Toluene	<0.00199	0.0994	0.103	104	0.108	108	70-130	5	35	mg/kg	06.30.2020 19:20	
Ethylbenzene	<0.00199	0.0994	0.108	109	0.112	112	71-129	4	35	mg/kg	06.30.2020 19:20	
m,p-Xylenes	<0.00398	0.199	0.221	111	0.231	115	70-135	4	35	mg/kg	06.30.2020 19:20	
o-Xylene	<0.00199	0.0994	0.108	109	0.114	114	71-133	5	35	mg/kg	06.30.2020 19:20	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		97		70-130	%	06.30.2020 19:20
4-Bromofluorobenzene	100		99		70-130	%	06.30.2020 19:20

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

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

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

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



Chain of Custody

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334
 Midland, TX (432-704-5440) EL Paso, TX (915)585-3443 Lubbock, TX (806)794-1296
 Hobbs, NM (575-392-7550) Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813-620-2000)

Work Order No: 665991

www.xenco.com Page 1 of 1

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Litrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	522 W. Mermod St.
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	jhlitl@xenco.com, dmoir@xenco.com

Program: UST/PST	☐ RP	☐ Groundfields	☐ RC	☐ \$pertund
State of Project:				
Reporting Level II	☐ Level III	☐ ST/UST	☐ RP	☐ Level IV
Deliverables: EDD	☐ ADAPT	Other:		

Project Name:	PLU 35 AD 901H	Turn Around	
Project Number:	01920630	Routine	☐
P.O. Number:	Sp11 dsk 2/11/10	Rush:	24 hr
Sampler's Name:	Jeremy Hill	Due Date:	7/1/10

SAMPLE RECEIPT	Temp Blank:	☒ Yes	☐ No	Wet Ice:	☒ Yes	☐ No
	Temperature (°C):	3.8/3.6	Thermometer ID			
	Received Intact:	☒ Yes	☐ No	Correction Factor: -0.2		
	Cooler Custody Seals:	☒ Yes	☐ No	Total Containers:		
	Sample Custody Seals:	☒ Yes	☐ No	4		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers			ANALYSIS REQUEST										Work Order Notes
					TPH (EPA 8015)	BTEX (EPA 0-8021)	Chloride (EPA 300.0)											
F505	5	6/30/0	1031	3'	X	X	X											
F508	1		1138															
F509	1		1337															
F511	1		1348															

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	6/30/20 16:31			

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 06.30.2020 04.31.00 PM

Work Order #: 665991

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T NM 007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	3.6
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	N/A
#18 Water VOC samples have zero headspace?	N/A

Samples received in bulk containers

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

Analyst:

PH Device/Lot#:

Checklist completed by:



Martha Castro

Date: 06.30.2020

Checklist reviewed by:



Jessica Kramer

Date: 06.30.2020

Certificate of Analysis Summary 666160



LT Environmental, Inc., Arvada, CO

Project Name: PLU 25 BD 901H

Project Id: 012920030

Contact: Dan Moir

Project Location:

Date Received in Lab: Wed 07.01.2020 16:20

Report Date: 07.02.2020 17:29

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	666160-001	666160-002	666160-003	666160-004	666160-005	666160-006
	<i>Field Id:</i>	FS0	FS03A	FS04	FS06	FS07	Sw01
	<i>Depth:</i>	5.0- ft	5.0- ft	5.0- ft	4.0- ft	4.0- ft	0-5 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	07.01.2020 09:15	07.01.2020 09:19	07.01.2020 09:22	07.01.2020 09:26	07.01.2020 09:30	07.01.2020 11:32
BTEX by EPA 8021B	<i>Extracted:</i>	07.01.2020 17:02	07.01.2020 17:02	07.01.2020 17:02	07.01.2020 17:02	07.01.2020 17:02	07.01.2020 17:02
	<i>Analyzed:</i>	07.01.2020 23:12	07.01.2020 23:32	07.01.2020 23:53	07.02.2020 00:13	07.02.2020 00:33	07.02.2020 00:54
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201	<0.00201 0.00201	<0.00201 0.00201	<0.00202 0.00202
Toluene		<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201	<0.00201 0.00201	<0.00201 0.00201	<0.00202 0.00202
Ethylbenzene		<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201	<0.00201 0.00201	<0.00201 0.00201	<0.00202 0.00202
m,p-Xylenes		<0.00403 0.00403	<0.00400 0.00400	<0.00402 0.00402	<0.00402 0.00402	<0.00402 0.00402	<0.00404 0.00404
o-Xylene		<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201	<0.00201 0.00201	<0.00201 0.00201	<0.00202 0.00202
Total Xylenes		<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201	<0.00201 0.00201	<0.00201 0.00201	<0.00202 0.00202
Total BTEX		<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201	<0.00201 0.00201	<0.00201 0.00201	<0.00202 0.00202
Chloride by EPA 300	<i>Extracted:</i>	07.01.2020 17:00	07.01.2020 17:00	07.01.2020 17:00	07.01.2020 17:09	07.01.2020 17:09	07.01.2020 17:09
	<i>Analyzed:</i>	07.01.2020 20:42	07.01.2020 20:48	07.01.2020 20:54	07.01.2020 21:29	07.01.2020 21:47	07.01.2020 21:53
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		313 10.1	577 10.0	666 9.98	348 50.1	306 10.0	527 10.1
TPH by SW8015 Mod	<i>Extracted:</i>	07.01.2020 17:20	07.01.2020 17:20	07.01.2020 17:20	07.01.2020 17:20	07.01.2020 17:20	07.01.2020 17:17
	<i>Analyzed:</i>	07.01.2020 19:23	07.01.2020 19:43	07.01.2020 20:04	07.01.2020 20:24	07.01.2020 20:45	07.01.2020 20:04
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.2 50.2	<50.3 50.3	<50.2 50.2	<49.8 49.8	<50.3 50.3	<50.1 50.1
Diesel Range Organics (DRO)		<50.2 50.2	<50.3 50.3	<50.2 50.2	<49.8 49.8	<50.3 50.3	<50.1 50.1
Motor Oil Range Hydrocarbons (MRO)		<50.2 50.2	<50.3 50.3	<50.2 50.2	<49.8 49.8	<50.3 50.3	<50.1 50.1
Total GRO-DRO		<50.2 50.2	<50.3 50.3	<50.2 50.2	<49.8 49.8	<50.3 50.3	<50.1 50.1
Total TPH		<50.2 50.2	<50.3 50.3	<50.2 50.2	<49.8 49.8	<50.3 50.3	<50.1 50.1

BRL - Below Reporting Limit

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

Certificate of Analysis Summary 666160



LT Environmental, Inc., Arvada, CO

Project Name: PLU 25 BD 901H

Project Id: 012920030

Contact: Dan Moir

Project Location:

Date Received in Lab: Wed 07.01.2020 16:20

Report Date: 07.02.2020 17:29

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	666160-007	666160-008	666160-009			
	Field Id:	Sw02	FS10	FS12			
	Depth:	0-5 ft	5.0- ft	5.0- ft			
	Matrix:	SOIL	SOIL	SOIL			
	Sampled:	07.01.2020 11:38	07.01.2020 12:54	07.01.2020 12:58			
BTEX by EPA 8021B	Extracted:	07.01.2020 17:02	07.01.2020 17:02	07.01.2020 17:02			
	Analyzed:	07.02.2020 01:14	07.02.2020 01:35	07.02.2020 01:55			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
Benzene		<0.00202 0.00202	<0.00201 0.00201	<0.00202 0.00202			
Toluene		<0.00202 0.00202	<0.00201 0.00201	<0.00202 0.00202			
Ethylbenzene		<0.00202 0.00202	<0.00201 0.00201	<0.00202 0.00202			
m,p-Xylenes		<0.00403 0.00403	<0.00402 0.00402	<0.00404 0.00404			
o-Xylene		<0.00202 0.00202	<0.00201 0.00201	<0.00202 0.00202			
Total Xylenes		<0.00202 0.00202	<0.00201 0.00201	<0.00202 0.00202			
Total BTEX		<0.00202 0.00202	<0.00201 0.00201	<0.00202 0.00202			
Chloride by EPA 300	Extracted:	07.01.2020 17:09	07.01.2020 17:09	07.01.2020 17:09			
	Analyzed:	07.01.2020 21:59	07.01.2020 22:05	07.01.2020 22:11			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
Chloride		415 10.1	336 9.98	186 10.1			
TPH by SW8015 Mod	Extracted:	07.01.2020 17:17	07.01.2020 17:17	07.01.2020 17:17			
	Analyzed:	07.01.2020 20:24	07.01.2020 20:45	07.01.2020 21:05			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
Gasoline Range Hydrocarbons (GRO)		<50.1 50.1	<50.3 50.3	<50.2 50.2			
Diesel Range Organics (DRO)		<50.1 50.1	<50.3 50.3	<50.2 50.2			
Motor Oil Range Hydrocarbons (MRO)		<50.1 50.1	<50.3 50.3	<50.2 50.2			
Total GRO-DRO		<50.1 50.1	<50.3 50.3	<50.2 50.2			
Total TPH		<50.1 50.1	<50.3 50.3	<50.2 50.2			

BRL - Below Reporting Limit

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



Xenco

Analytical Report 666160

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU 25 BD 901H

012920030

07.02.2020

Collected By: Client

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

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-36), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-25), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-17)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-20-7)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



07.02.2020

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: Eurofins Xenco, LLC Report No(s): **666160**

PLU 25 BD 901H

Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 666160. 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 Eurofins Xenco, LLC. 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. 666160 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 Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Carlos Castro

Project Manager

A Small Business and Minority Company

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

**Sample Cross Reference 666160****LT Environmental, Inc., Arvada, CO**

PLU 25 BD 901H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS0	S	07.01.2020 09:15	5.0 ft	666160-001
FS03A	S	07.01.2020 09:19	5.0 ft	666160-002
FS04	S	07.01.2020 09:22	5.0 ft	666160-003
FS06	S	07.01.2020 09:26	4.0 ft	666160-004
FS07	S	07.01.2020 09:30	4.0 ft	666160-005
Sw01	S	07.01.2020 11:32	0 - 5 ft	666160-006
Sw02	S	07.01.2020 11:38	0 - 5 ft	666160-007
FS10	S	07.01.2020 12:54	5.0 ft	666160-008
FS12	S	07.01.2020 12:58	5.0 ft	666160-009



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 25 BD 901H

Project ID: 012920030
Work Order Number(s): 666160

Report Date: 07.02.2020
Date Received: 07.01.2020

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 666160

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS0** Matrix: Soil Date Received: 07.01.2020 16:20
 Lab Sample Id: 666160-001 Date Collected: 07.01.2020 09:15 Sample Depth: 5.0 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.01.2020 17:00 Basis: Wet Weight
 Seq Number: 3130578

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	313	10.1	mg/kg	07.01.2020 20:42		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.01.2020 17:20 Basis: Wet Weight
 Seq Number: 3130574

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	07.01.2020 19:23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	07.01.2020 19:23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	07.01.2020 19:23	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	07.01.2020 19:23	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	07.01.2020 19:23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	132	%	70-135	07.01.2020 19:23	
o-Terphenyl	84-15-1	116	%	70-135	07.01.2020 19:23	



Certificate of Analytical Results 666160

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS0**
Lab Sample Id: 666160-001

Matrix: Soil
Date Collected: 07.01.2020 09:15

Date Received: 07.01.2020 16:20
Sample Depth: 5.0 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.01.2020 17:02

Basis: Wet Weight

Seq Number: 3130571

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.01.2020 23:12	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.01.2020 23:12	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.01.2020 23:12	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	07.01.2020 23:12	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.01.2020 23:12	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.01.2020 23:12	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.01.2020 23:12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	70-130	07.01.2020 23:12	
1,4-Difluorobenzene	540-36-3	101	%	70-130	07.01.2020 23:12	



Certificate of Analytical Results 666160

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS03A** Matrix: Soil Date Received: 07.01.2020 16:20
 Lab Sample Id: 666160-002 Date Collected: 07.01.2020 09:19 Sample Depth: 5.0 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.01.2020 17:00 Basis: Wet Weight
 Seq Number: 3130578

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	577	10.0	mg/kg	07.01.2020 20:48		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.01.2020 17:20 Basis: Wet Weight
 Seq Number: 3130574

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	07.01.2020 19:43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	07.01.2020 19:43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	07.01.2020 19:43	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	07.01.2020 19:43	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	07.01.2020 19:43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-135	07.01.2020 19:43	
o-Terphenyl	84-15-1	106	%	70-135	07.01.2020 19:43	



Certificate of Analytical Results 666160

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS03A**
Lab Sample Id: 666160-002

Matrix: Soil
Date Collected: 07.01.2020 09:19

Date Received: 07.01.2020 16:20
Sample Depth: 5.0 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.01.2020 17:02

Basis: Wet Weight

Seq Number: 3130571

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.01.2020 23:32	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.01.2020 23:32	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.01.2020 23:32	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	07.01.2020 23:32	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.01.2020 23:32	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.01.2020 23:32	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.01.2020 23:32	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	07.01.2020 23:32		
4-Bromofluorobenzene	460-00-4	105	%	70-130	07.01.2020 23:32		



Certificate of Analytical Results 666160

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS04** Matrix: Soil Date Received: 07.01.2020 16:20
 Lab Sample Id: 666160-003 Date Collected: 07.01.2020 09:22 Sample Depth: 5.0 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.01.2020 17:00 Basis: Wet Weight
 Seq Number: 3130578

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	666	9.98	mg/kg	07.01.2020 20:54		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.01.2020 17:20 Basis: Wet Weight
 Seq Number: 3130574

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	07.01.2020 20:04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	07.01.2020 20:04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	07.01.2020 20:04	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	07.01.2020 20:04	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	07.01.2020 20:04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	07.01.2020 20:04	
o-Terphenyl	84-15-1	104	%	70-135	07.01.2020 20:04	



Certificate of Analytical Results 666160

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS04**
Lab Sample Id: 666160-003

Matrix: Soil
Date Collected: 07.01.2020 09:22

Date Received: 07.01.2020 16:20
Sample Depth: 5.0 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.01.2020 17:02

Basis: Wet Weight

Seq Number: 3130571

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.01.2020 23:53	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.01.2020 23:53	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.01.2020 23:53	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.01.2020 23:53	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.01.2020 23:53	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.01.2020 23:53	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.01.2020 23:53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	70-130	07.01.2020 23:53	
1,4-Difluorobenzene	540-36-3	102	%	70-130	07.01.2020 23:53	



Certificate of Analytical Results 666160

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS06** Matrix: Soil Date Received: 07.01.2020 16:20
 Lab Sample Id: 666160-004 Date Collected: 07.01.2020 09:26 Sample Depth: 4.0 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.01.2020 17:09 Basis: Wet Weight
 Seq Number: 3130579

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	348	50.1	mg/kg	07.01.2020 21:29		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.01.2020 17:20 Basis: Wet Weight
 Seq Number: 3130574

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	07.01.2020 20:24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	07.01.2020 20:24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	07.01.2020 20:24	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	07.01.2020 20:24	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	07.01.2020 20:24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-135	07.01.2020 20:24	
o-Terphenyl	84-15-1	104	%	70-135	07.01.2020 20:24	



Certificate of Analytical Results 666160

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS06**
Lab Sample Id: 666160-004

Matrix: Soil
Date Collected: 07.01.2020 09:26

Date Received: 07.01.2020 16:20
Sample Depth: 4.0 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.01.2020 17:02

Basis: Wet Weight

Seq Number: 3130571

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.02.2020 00:13	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.02.2020 00:13	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.02.2020 00:13	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.02.2020 00:13	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.02.2020 00:13	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.02.2020 00:13	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.02.2020 00:13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	07.02.2020 00:13	
1,4-Difluorobenzene	540-36-3	104	%	70-130	07.02.2020 00:13	



Certificate of Analytical Results 666160

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS07** Matrix: Soil Date Received: 07.01.2020 16:20
 Lab Sample Id: 666160-005 Date Collected: 07.01.2020 09:30 Sample Depth: 4.0 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.01.2020 17:09 Basis: Wet Weight
 Seq Number: 3130579

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	306	10.0	mg/kg	07.01.2020 21:47		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.01.2020 17:20 Basis: Wet Weight
 Seq Number: 3130574

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	07.01.2020 20:45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	07.01.2020 20:45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	07.01.2020 20:45	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	07.01.2020 20:45	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	07.01.2020 20:45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-135	07.01.2020 20:45	
o-Terphenyl	84-15-1	105	%	70-135	07.01.2020 20:45	



Certificate of Analytical Results 666160

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS07**
Lab Sample Id: 666160-005

Matrix: Soil
Date Collected: 07.01.2020 09:30

Date Received: 07.01.2020 16:20
Sample Depth: 4.0 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.01.2020 17:02

Basis: Wet Weight

Seq Number: 3130571

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.02.2020 00:33	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.02.2020 00:33	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.02.2020 00:33	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.02.2020 00:33	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.02.2020 00:33	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.02.2020 00:33	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.02.2020 00:33	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	105	%	70-130	07.02.2020 00:33		
1,4-Difluorobenzene	540-36-3	103	%	70-130	07.02.2020 00:33		



Certificate of Analytical Results 666160

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **Sw01** Matrix: Soil Date Received: 07.01.2020 16:20
 Lab Sample Id: 666160-006 Date Collected: 07.01.2020 11:32 Sample Depth: 0 - 5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.01.2020 17:09 Basis: Wet Weight
 Seq Number: 3130579

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	527	10.1	mg/kg	07.01.2020 21:53		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.01.2020 17:17 Basis: Wet Weight
 Seq Number: 3130577

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	07.01.2020 20:04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	07.01.2020 20:04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	07.01.2020 20:04	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	07.01.2020 20:04	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	07.01.2020 20:04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	81	%	70-135	07.01.2020 20:04	
o-Terphenyl	84-15-1	79	%	70-135	07.01.2020 20:04	



Certificate of Analytical Results 666160

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **Sw01**
Lab Sample Id: 666160-006

Matrix: Soil
Date Collected: 07.01.2020 11:32

Date Received: 07.01.2020 16:20
Sample Depth: 0 - 5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3130571

Prep Method: SW5035A

% Moisture:

Date Prep: 07.01.2020 17:02

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.02.2020 00:54	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.02.2020 00:54	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.02.2020 00:54	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	07.02.2020 00:54	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.02.2020 00:54	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.02.2020 00:54	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.02.2020 00:54	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	105	%	70-130	07.02.2020 00:54		
1,4-Difluorobenzene	540-36-3	103	%	70-130	07.02.2020 00:54		



Certificate of Analytical Results 666160

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **Sw02** Matrix: Soil Date Received: 07.01.2020 16:20
 Lab Sample Id: 666160-007 Date Collected: 07.01.2020 11:38 Sample Depth: 0 - 5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.01.2020 17:09 Basis: Wet Weight
 Seq Number: 3130579

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	415	10.1	mg/kg	07.01.2020 21:59		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.01.2020 17:17 Basis: Wet Weight
 Seq Number: 3130577

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	07.01.2020 20:24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	07.01.2020 20:24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	07.01.2020 20:24	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	07.01.2020 20:24	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	07.01.2020 20:24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	81	%	70-135	07.01.2020 20:24	
o-Terphenyl	84-15-1	76	%	70-135	07.01.2020 20:24	



Certificate of Analytical Results 666160

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **Sw02**
Lab Sample Id: 666160-007

Matrix: Soil
Date Collected: 07.01.2020 11:38

Date Received: 07.01.2020 16:20
Sample Depth: 0 - 5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3130571

Prep Method: SW5035A

% Moisture:

Date Prep: 07.01.2020 17:02

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.02.2020 01:14	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.02.2020 01:14	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.02.2020 01:14	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	07.02.2020 01:14	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.02.2020 01:14	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.02.2020 01:14	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.02.2020 01:14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	07.02.2020 01:14	
1,4-Difluorobenzene	540-36-3	102	%	70-130	07.02.2020 01:14	



Certificate of Analytical Results 666160

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS10** Matrix: Soil Date Received: 07.01.2020 16:20
 Lab Sample Id: 666160-008 Date Collected: 07.01.2020 12:54 Sample Depth: 5.0 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.01.2020 17:09 Basis: Wet Weight
 Seq Number: 3130579

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	336	9.98	mg/kg	07.01.2020 22:05		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.01.2020 17:17 Basis: Wet Weight
 Seq Number: 3130577

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	07.01.2020 20:45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	07.01.2020 20:45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	07.01.2020 20:45	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	07.01.2020 20:45	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	07.01.2020 20:45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	81	%	70-135	07.01.2020 20:45	
o-Terphenyl	84-15-1	78	%	70-135	07.01.2020 20:45	



Certificate of Analytical Results 666160

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS10**
Lab Sample Id: 666160-008

Matrix: Soil
Date Collected: 07.01.2020 12:54

Date Received: 07.01.2020 16:20
Sample Depth: 5.0 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3130571

Prep Method: SW5035A

% Moisture:

Date Prep: 07.01.2020 17:02

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.02.2020 01:35	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.02.2020 01:35	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.02.2020 01:35	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.02.2020 01:35	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.02.2020 01:35	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.02.2020 01:35	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.02.2020 01:35	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	105	%	70-130	07.02.2020 01:35		
1,4-Difluorobenzene	540-36-3	102	%	70-130	07.02.2020 01:35		



Certificate of Analytical Results 666160

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS12** Matrix: Soil Date Received: 07.01.2020 16:20
 Lab Sample Id: 666160-009 Date Collected: 07.01.2020 12:58 Sample Depth: 5.0 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.01.2020 17:09 Basis: Wet Weight
 Seq Number: 3130579

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	186	10.1	mg/kg	07.01.2020 22:11		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.01.2020 17:17 Basis: Wet Weight
 Seq Number: 3130577

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	07.01.2020 21:05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	07.01.2020 21:05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	07.01.2020 21:05	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	07.01.2020 21:05	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	07.01.2020 21:05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-135	07.01.2020 21:05	
o-Terphenyl	84-15-1	80	%	70-135	07.01.2020 21:05	



Certificate of Analytical Results 666160

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS12**
Lab Sample Id: 666160-009

Matrix: Soil
Date Collected: 07.01.2020 12:58

Date Received: 07.01.2020 16:20
Sample Depth: 5.0 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.01.2020 17:02

Basis: Wet Weight

Seq Number: 3130571

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.02.2020 01:55	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.02.2020 01:55	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.02.2020 01:55	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	07.02.2020 01:55	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.02.2020 01:55	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.02.2020 01:55	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.02.2020 01:55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	07.02.2020 01:55	
4-Bromofluorobenzene	460-00-4	104	%	70-130	07.02.2020 01:55	

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

LT Environmental, Inc.

PLU 25 BD 901H

Analytical Method: Chloride by EPA 300

Seq Number: 3130578

MB Sample Id: 7706575-1-BLK

Matrix: Solid

LCS Sample Id: 7706575-1-BKS

Prep Method: E300P

Date Prep: 07.01.2020

LCSD Sample Id: 7706575-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	256	102	264	106	90-110	3	20	mg/kg	07.01.2020 18:00	

Analytical Method: Chloride by EPA 300

Seq Number: 3130579

MB Sample Id: 7706602-1-BLK

Matrix: Solid

LCS Sample Id: 7706602-1-BKS

Prep Method: E300P

Date Prep: 07.01.2020

LCSD Sample Id: 7706602-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	257	103	265	106	90-110	3	20	mg/kg	07.01.2020 21:18	

Analytical Method: Chloride by EPA 300

Seq Number: 3130578

Parent Sample Id: 666068-002

Matrix: Soil

MS Sample Id: 666068-002 S

Prep Method: E300P

Date Prep: 07.01.2020

MSD Sample Id: 666068-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	5010	203	5210	99	5210	100	90-110	0	20	mg/kg	07.01.2020 18:18	

Analytical Method: Chloride by EPA 300

Seq Number: 3130578

Parent Sample Id: 666135-001

Matrix: Soil

MS Sample Id: 666135-001 S

Prep Method: E300P

Date Prep: 07.01.2020

MSD Sample Id: 666135-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	275	199	418	72	419	72	90-110	0	20	mg/kg	07.01.2020 19:42	X

Analytical Method: Chloride by EPA 300

Seq Number: 3130579

Parent Sample Id: 666160-004

Matrix: Soil

MS Sample Id: 666160-004 S

Prep Method: E300P

Date Prep: 07.01.2020

MSD Sample Id: 666160-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	348	201	528	90	533	92	90-110	1	20	mg/kg	07.01.2020 21:35	

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

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

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

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

LT Environmental, Inc.

PLU 25 BD 901H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3130574

MB Sample Id: 7706586-1-BLK

Matrix: Solid

LCS Sample Id: 7706586-1-BKS

Prep Method: SW8015P

Date Prep: 07.01.2020

LCSD Sample Id: 7706586-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1070	107	1090	109	70-135	2	35	mg/kg	07.01.2020 10:45	
Diesel Range Organics (DRO)	<50.0	1000	1120	112	1130	113	70-135	1	35	mg/kg	07.01.2020 10:45	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	122		118		120		70-135	%	07.01.2020 10:45
o-Terphenyl	110		109		109		70-135	%	07.01.2020 10:45

Analytical Method: TPH by SW8015 Mod

Seq Number: 3130577

MB Sample Id: 7706589-1-BLK

Matrix: Solid

LCS Sample Id: 7706589-1-BKS

Prep Method: SW8015P

Date Prep: 07.01.2020

LCSD Sample Id: 7706589-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1050	105	996	100	70-135	5	35	mg/kg	07.01.2020 10:45	
Diesel Range Organics (DRO)	<50.0	1000	1140	114	1110	111	70-135	3	35	mg/kg	07.01.2020 10:45	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	105		121		118		70-135	%	07.01.2020 10:45
o-Terphenyl	101		108		107		70-135	%	07.01.2020 10:45

Analytical Method: TPH by SW8015 Mod

Seq Number: 3130574

Matrix: Solid

MB Sample Id: 7706586-1-BLK

Prep Method: SW8015P

Date Prep: 07.01.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	07.01.2020 10:25	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3130577

Matrix: Solid

MB Sample Id: 7706589-1-BLK

Prep Method: SW8015P

Date Prep: 07.01.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	07.01.2020 10:25	

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

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

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

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

LT Environmental, Inc.

PLU 25 BD 901H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3130574

Parent Sample Id: 666055-001

Matrix: Soil

MS Sample Id: 666055-001 S

Prep Method: SW8015P

Date Prep: 07.01.2020

MSD Sample Id: 666055-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.3	1010	1200	119	1180	118	70-135	2	35	mg/kg	07.01.2020 13:33	
Diesel Range Organics (DRO)	<50.3	1010	1160	115	1120	112	70-135	4	35	mg/kg	07.01.2020 13:33	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	127		125		70-135	%	07.01.2020 13:33
o-Terphenyl	113		110		70-135	%	07.01.2020 13:33

Analytical Method: TPH by SW8015 Mod

Seq Number: 3130577

Parent Sample Id: 666055-002

Matrix: Soil

MS Sample Id: 666055-002 S

Prep Method: SW8015P

Date Prep: 07.01.2020

MSD Sample Id: 666055-002 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)	<50.2	1000	1180	118	1030	103	70-135	14	35	mg/kg	07.01.2020 13:33	
Diesel Range Organics (DRO)	<50.2	1000	1090	109	1160	116	70-135	6	35	mg/kg	07.01.2020 13:33	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	113		100		70-135	%	07.01.2020 13:33
o-Terphenyl	93		99		70-135	%	07.01.2020 13:33

Analytical Method: BTEX by EPA 8021B

Seq Number: 3130571

MB Sample Id: 7706591-1-BLK

Matrix: Solid

LCS Sample Id: 7706591-1-BKS

Prep Method: SW5035A

Date Prep: 07.01.2020

LCSD Sample Id: 7706591-1-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	0.0921	92	0.0950	95	70-130	3	35	mg/kg	07.01.2020 16:21	
Toluene	<0.00200	0.100	0.0924	92	0.0937	94	70-130	1	35	mg/kg	07.01.2020 16:21	
Ethylbenzene	<0.00200	0.100	0.0963	96	0.0995	100	71-129	3	35	mg/kg	07.01.2020 16:21	
m,p-Xylenes	<0.00400	0.200	0.197	99	0.203	102	70-135	3	35	mg/kg	07.01.2020 16:21	
o-Xylene	<0.00200	0.100	0.0974	97	0.100	100	71-133	3	35	mg/kg	07.01.2020 16:21	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		99		98		70-130	%	07.01.2020 16:21
4-Bromofluorobenzene	102		97		100		70-130	%	07.01.2020 16:21

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

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

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

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

LT Environmental, Inc.

PLU 25 BD 901H

Analytical Method: BTEX by EPA 8021B

Seq Number: 3130571

Parent Sample Id: 666129-001

Matrix: Soil

MS Sample Id: 666129-001 S

Prep Method: SW5035A

Date Prep: 07.01.2020

MSD Sample Id: 666129-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.110	110	0.109	108	70-130	1	35	mg/kg	07.01.2020 17:01	
Toluene	<0.00200	0.0998	0.106	106	0.105	104	70-130	1	35	mg/kg	07.01.2020 17:01	
Ethylbenzene	<0.00200	0.0998	0.111	111	0.108	107	71-129	3	35	mg/kg	07.01.2020 17:01	
m,p-Xylenes	<0.00399	0.200	0.227	114	0.222	110	70-135	2	35	mg/kg	07.01.2020 17:01	
o-Xylene	<0.00200	0.0998	0.111	111	0.110	109	71-133	1	35	mg/kg	07.01.2020 17:01	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		99		70-130	%	07.01.2020 17:01
4-Bromofluorobenzene	96		101		70-130	%	07.01.2020 17:01

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

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

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

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



Chain of Custody

Work Order No: 1631160

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334
 Midland, TX (432) 704-5440 EL Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296
 Hobbs, NM (575) 392-7550 Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000

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Page 1 of 1

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littlell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	522 W. Mermod St.
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	jhill@ltenv.com , dmoir@ltenv.com

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

Project Name:	PLU 25 00 901H	Turn Around	
Project Number:	01926030	Routine	☐
P.O. Number:	5p.11 date 2/11/20	Rush:	24hr
Sampler's Name:	Jeremy Hill	Due Date:	7/1/20

SAMPLE RECEIPT		Temp Blank:	☒ Yes ☐ No	Wet Ice:	☒ Yes ☐ No
Temperature (°C):	4.0/3.8	Thermometer ID: TMM007			
Received Intact:	☒ Yes ☐ No	Correction Factor: -0.2			
Cooler Custody Seals:	☒ Yes ☐ No	Total Containers: 9			

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers			ANALYSIS REQUEST										Work Order Notes	
					TPH (EPA 8015)														
					BTEX (EPA 0-8021)														
					Chloride (EPA 300.0)														
F501	S	7/1/20	0915	5.0															
F503A			0919	5.0															
F504			0921	5.0															
F506			0926	4.8															
F507			0930	4.0															
S501			1132	0-5'															
S502			1138	0-5'															
F510			1254	5.0															
F511			1258	5.0															

Total 200.7 / 6010		200.8 / 6020:		8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn	
Circle Method(s) and Metal(s) to be analyzed		TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U		1631 / 245.1 / 7470 / 7471 : Hg	
Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	7/1/20 16:20			

Certificate of Analysis Summary 666160



Xenco

LT Environmental, Inc., Arvada, CO

Project Name: PLU 25 BD 901H

Project Id: 012920030

Contact: Dan Moir

Project Location:

Date Received in Lab: Wed 07.01.2020 16:20

Report Date: 07.21.2020 14:38

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	666160-001	666160-002	666160-003	666160-004	666160-005	666160-006
	<i>Field Id:</i>	FS01	FS03A	FS04	FS06	FS07	Sw01
	<i>Depth:</i>	5.0- ft	5.0- ft	5.0- ft	4.0- ft	4.0- ft	0-5 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	07.01.2020 09:15	07.01.2020 09:19	07.01.2020 09:22	07.01.2020 09:26	07.01.2020 09:30	07.01.2020 11:32
BTEX by EPA 8021B	<i>Extracted:</i>	07.01.2020 17:02	07.01.2020 17:02	07.01.2020 17:02	07.01.2020 17:02	07.01.2020 17:02	07.01.2020 17:02
	<i>Analyzed:</i>	07.01.2020 23:12	07.01.2020 23:32	07.01.2020 23:53	07.02.2020 00:13	07.02.2020 00:33	07.02.2020 00:54
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201	<0.00201 0.00201	<0.00201 0.00201	<0.00202 0.00202
Toluene		<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201	<0.00201 0.00201	<0.00201 0.00201	<0.00202 0.00202
Ethylbenzene		<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201	<0.00201 0.00201	<0.00201 0.00201	<0.00202 0.00202
m,p-Xylenes		<0.00403 0.00403	<0.00400 0.00400	<0.00402 0.00402	<0.00402 0.00402	<0.00402 0.00402	<0.00404 0.00404
o-Xylene		<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201	<0.00201 0.00201	<0.00201 0.00201	<0.00202 0.00202
Total Xylenes		<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201	<0.00201 0.00201	<0.00201 0.00201	<0.00202 0.00202
Total BTEX		<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201	<0.00201 0.00201	<0.00201 0.00201	<0.00202 0.00202
Chloride by EPA 300	<i>Extracted:</i>	07.01.2020 17:00	07.01.2020 17:00	07.01.2020 17:00	07.01.2020 17:09	07.01.2020 17:09	07.01.2020 17:09
	<i>Analyzed:</i>	07.01.2020 20:42	07.01.2020 20:48	07.01.2020 20:54	07.01.2020 21:29	07.01.2020 21:47	07.01.2020 21:53
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		313 10.1	577 10.0	666 9.98	348 50.1	306 10.0	527 10.1
TPH by SW8015 Mod	<i>Extracted:</i>	07.01.2020 17:20	07.01.2020 17:20	07.01.2020 17:20	07.01.2020 17:20	07.01.2020 17:20	07.01.2020 17:17
	<i>Analyzed:</i>	07.01.2020 19:23	07.01.2020 19:43	07.01.2020 20:04	07.01.2020 20:24	07.01.2020 20:45	07.01.2020 20:04
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.2 50.2	<50.3 50.3	<50.2 50.2	<49.8 49.8	<50.3 50.3	<50.1 50.1
Diesel Range Organics (DRO)		<50.2 50.2	<50.3 50.3	<50.2 50.2	<49.8 49.8	<50.3 50.3	<50.1 50.1
Motor Oil Range Hydrocarbons (MRO)		<50.2 50.2	<50.3 50.3	<50.2 50.2	<49.8 49.8	<50.3 50.3	<50.1 50.1
Total GRO-DRO		<50.2 50.2	<50.3 50.3	<50.2 50.2	<49.8 49.8	<50.3 50.3	<50.1 50.1
Total TPH		<50.2 50.2	<50.3 50.3	<50.2 50.2	<49.8 49.8	<50.3 50.3	<50.1 50.1

BRL - Below Reporting Limit

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



Xenco

Certificate of Analysis Summary 666160

LT Environmental, Inc., Arvada, CO

Project Name: PLU 25 BD 901H

Project Id: 012920030

Contact: Dan Moir

Project Location:

Date Received in Lab: Wed 07.01.2020 16:20

Report Date: 07.21.2020 14:38

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	666160-007	666160-008	666160-009			
	Field Id:	Sw02	FS10	FS12			
	Depth:	0-5 ft	5.0- ft	5.0- ft			
	Matrix:	SOIL	SOIL	SOIL			
	Sampled:	07.01.2020 11:38	07.01.2020 12:54	07.01.2020 12:58			
BTEX by EPA 8021B	Extracted:	07.01.2020 17:02	07.01.2020 17:02	07.01.2020 17:02			
	Analyzed:	07.02.2020 01:14	07.02.2020 01:35	07.02.2020 01:55			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
Benzene		<0.00202 0.00202	<0.00201 0.00201	<0.00202 0.00202			
Toluene		<0.00202 0.00202	<0.00201 0.00201	<0.00202 0.00202			
Ethylbenzene		<0.00202 0.00202	<0.00201 0.00201	<0.00202 0.00202			
m,p-Xylenes		<0.00403 0.00403	<0.00402 0.00402	<0.00404 0.00404			
o-Xylene		<0.00202 0.00202	<0.00201 0.00201	<0.00202 0.00202			
Total Xylenes		<0.00202 0.00202	<0.00201 0.00201	<0.00202 0.00202			
Total BTEX		<0.00202 0.00202	<0.00201 0.00201	<0.00202 0.00202			
Chloride by EPA 300	Extracted:	07.01.2020 17:09	07.01.2020 17:09	07.01.2020 17:09			
	Analyzed:	07.01.2020 21:59	07.01.2020 22:05	07.01.2020 22:11			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
Chloride		415 10.1	336 9.98	186 10.1			
TPH by SW8015 Mod	Extracted:	07.01.2020 17:17	07.01.2020 17:17	07.01.2020 17:17			
	Analyzed:	07.01.2020 20:24	07.01.2020 20:45	07.01.2020 21:05			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
Gasoline Range Hydrocarbons (GRO)		<50.1 50.1	<50.3 50.3	<50.2 50.2			
Diesel Range Organics (DRO)		<50.1 50.1	<50.3 50.3	<50.2 50.2			
Motor Oil Range Hydrocarbons (MRO)		<50.1 50.1	<50.3 50.3	<50.2 50.2			
Total GRO-DRO		<50.1 50.1	<50.3 50.3	<50.2 50.2			
Total TPH		<50.1 50.1	<50.3 50.3	<50.2 50.2			

BRL - Below Reporting Limit

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

Jessica Kramer



Xenco

Analytical Report 666160

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU 25 BD 901H

012920030

07.21.2020

Collected By: Client

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

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-36), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-25), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-17)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-20-7)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



07.21.2020

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: Eurofins Xenco, LLC Report No(s): **666160**

PLU 25 BD 901H

Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 666160. 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 Eurofins Xenco, LLC. 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. 666160 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 Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

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

Jessica Kramer

Project Manager

A Small Business and Minority Company

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

**Sample Cross Reference 666160****LT Environmental, Inc., Arvada, CO**

PLU 25 BD 901H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	07.01.2020 09:15	5.0 ft	666160-001
FS03A	S	07.01.2020 09:19	5.0 ft	666160-002
FS04	S	07.01.2020 09:22	5.0 ft	666160-003
FS06	S	07.01.2020 09:26	4.0 ft	666160-004
FS07	S	07.01.2020 09:30	4.0 ft	666160-005
Sw01	S	07.01.2020 11:32	0 - 5 ft	666160-006
Sw02	S	07.01.2020 11:38	0 - 5 ft	666160-007
FS10	S	07.01.2020 12:54	5.0 ft	666160-008
FS12	S	07.01.2020 12:58	5.0 ft	666160-009



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 25 BD 901H

Project ID: 012920030
Work Order Number(s): 666160

Report Date: 07.21.2020
Date Received: 07.01.2020

Sample receipt non conformances and comments:

V1.001 Revision (client email) Corrected typo on sample 001. Correct sample name is FS01

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 666160

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS01** Matrix: Soil Date Received: 07.01.2020 16:20
 Lab Sample Id: 666160-001 Date Collected: 07.01.2020 09:15 Sample Depth: 5.0 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.01.2020 17:00 Basis: Wet Weight
 Seq Number: 3130578

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	313	10.1	mg/kg	07.01.2020 20:42		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.01.2020 17:20 Basis: Wet Weight
 Seq Number: 3130574

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	07.01.2020 19:23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	07.01.2020 19:23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	07.01.2020 19:23	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	07.01.2020 19:23	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	07.01.2020 19:23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	132	%	70-135	07.01.2020 19:23	
o-Terphenyl	84-15-1	116	%	70-135	07.01.2020 19:23	



Certificate of Analytical Results 666160

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS01**
Lab Sample Id: 666160-001

Matrix: Soil
Date Collected: 07.01.2020 09:15

Date Received: 07.01.2020 16:20
Sample Depth: 5.0 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.01.2020 17:02

Basis: Wet Weight

Seq Number: 3130571

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.01.2020 23:12	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.01.2020 23:12	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.01.2020 23:12	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	07.01.2020 23:12	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.01.2020 23:12	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.01.2020 23:12	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.01.2020 23:12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	70-130	07.01.2020 23:12	
1,4-Difluorobenzene	540-36-3	101	%	70-130	07.01.2020 23:12	



Certificate of Analytical Results 666160

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS03A** Matrix: Soil Date Received: 07.01.2020 16:20
 Lab Sample Id: 666160-002 Date Collected: 07.01.2020 09:19 Sample Depth: 5.0 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.01.2020 17:00 Basis: Wet Weight
 Seq Number: 3130578

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	577	10.0	mg/kg	07.01.2020 20:48		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.01.2020 17:20 Basis: Wet Weight
 Seq Number: 3130574

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	07.01.2020 19:43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	07.01.2020 19:43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	07.01.2020 19:43	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	07.01.2020 19:43	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	07.01.2020 19:43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-135	07.01.2020 19:43	
o-Terphenyl	84-15-1	106	%	70-135	07.01.2020 19:43	



Certificate of Analytical Results 666160

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS03A**
Lab Sample Id: 666160-002

Matrix: Soil
Date Collected: 07.01.2020 09:19

Date Received: 07.01.2020 16:20
Sample Depth: 5.0 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3130571

Prep Method: SW5035A

% Moisture:

Date Prep: 07.01.2020 17:02

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.01.2020 23:32	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.01.2020 23:32	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.01.2020 23:32	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	07.01.2020 23:32	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.01.2020 23:32	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.01.2020 23:32	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.01.2020 23:32	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	07.01.2020 23:32		
4-Bromofluorobenzene	460-00-4	105	%	70-130	07.01.2020 23:32		



Certificate of Analytical Results 666160

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS04** Matrix: Soil Date Received: 07.01.2020 16:20
 Lab Sample Id: 666160-003 Date Collected: 07.01.2020 09:22 Sample Depth: 5.0 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.01.2020 17:00 Basis: Wet Weight
 Seq Number: 3130578

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	666	9.98	mg/kg	07.01.2020 20:54		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.01.2020 17:20 Basis: Wet Weight
 Seq Number: 3130574

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	07.01.2020 20:04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	07.01.2020 20:04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	07.01.2020 20:04	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	07.01.2020 20:04	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	07.01.2020 20:04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	07.01.2020 20:04	
o-Terphenyl	84-15-1	104	%	70-135	07.01.2020 20:04	



Certificate of Analytical Results 666160

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS04**
Lab Sample Id: 666160-003

Matrix: Soil
Date Collected: 07.01.2020 09:22

Date Received: 07.01.2020 16:20
Sample Depth: 5.0 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3130571

Prep Method: SW5035A

% Moisture:

Date Prep: 07.01.2020 17:02

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.01.2020 23:53	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.01.2020 23:53	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.01.2020 23:53	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.01.2020 23:53	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.01.2020 23:53	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.01.2020 23:53	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.01.2020 23:53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	70-130	07.01.2020 23:53	
1,4-Difluorobenzene	540-36-3	102	%	70-130	07.01.2020 23:53	



Certificate of Analytical Results 666160

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS06** Matrix: Soil Date Received: 07.01.2020 16:20
 Lab Sample Id: 666160-004 Date Collected: 07.01.2020 09:26 Sample Depth: 4.0 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.01.2020 17:09 Basis: Wet Weight
 Seq Number: 3130579

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	348	50.1	mg/kg	07.01.2020 21:29		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.01.2020 17:20 Basis: Wet Weight
 Seq Number: 3130574

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	07.01.2020 20:24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	07.01.2020 20:24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	07.01.2020 20:24	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	07.01.2020 20:24	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	07.01.2020 20:24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-135	07.01.2020 20:24	
o-Terphenyl	84-15-1	104	%	70-135	07.01.2020 20:24	



Certificate of Analytical Results 666160

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS06**
Lab Sample Id: 666160-004

Matrix: Soil
Date Collected: 07.01.2020 09:26

Date Received: 07.01.2020 16:20
Sample Depth: 4.0 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.01.2020 17:02

Basis: Wet Weight

Seq Number: 3130571

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.02.2020 00:13	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.02.2020 00:13	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.02.2020 00:13	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.02.2020 00:13	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.02.2020 00:13	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.02.2020 00:13	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.02.2020 00:13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	07.02.2020 00:13	
1,4-Difluorobenzene	540-36-3	104	%	70-130	07.02.2020 00:13	



Certificate of Analytical Results 666160

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS07** Matrix: Soil Date Received: 07.01.2020 16:20
 Lab Sample Id: 666160-005 Date Collected: 07.01.2020 09:30 Sample Depth: 4.0 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.01.2020 17:09 Basis: Wet Weight
 Seq Number: 3130579

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	306	10.0	mg/kg	07.01.2020 21:47		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.01.2020 17:20 Basis: Wet Weight
 Seq Number: 3130574

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	07.01.2020 20:45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	07.01.2020 20:45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	07.01.2020 20:45	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	07.01.2020 20:45	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	07.01.2020 20:45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-135	07.01.2020 20:45	
o-Terphenyl	84-15-1	105	%	70-135	07.01.2020 20:45	



Certificate of Analytical Results 666160

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS07**
Lab Sample Id: 666160-005

Matrix: Soil
Date Collected: 07.01.2020 09:30

Date Received: 07.01.2020 16:20
Sample Depth: 4.0 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.01.2020 17:02

Basis: Wet Weight

Seq Number: 3130571

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.02.2020 00:33	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.02.2020 00:33	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.02.2020 00:33	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.02.2020 00:33	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.02.2020 00:33	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.02.2020 00:33	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.02.2020 00:33	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	105	%	70-130	07.02.2020 00:33		
1,4-Difluorobenzene	540-36-3	103	%	70-130	07.02.2020 00:33		



Certificate of Analytical Results 666160

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **Sw01** Matrix: Soil Date Received: 07.01.2020 16:20
 Lab Sample Id: 666160-006 Date Collected: 07.01.2020 11:32 Sample Depth: 0 - 5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.01.2020 17:09 Basis: Wet Weight
 Seq Number: 3130579

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	527	10.1	mg/kg	07.01.2020 21:53		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.01.2020 17:17 Basis: Wet Weight
 Seq Number: 3130577

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	07.01.2020 20:04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	07.01.2020 20:04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	07.01.2020 20:04	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	07.01.2020 20:04	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	07.01.2020 20:04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	81	%	70-135	07.01.2020 20:04	
o-Terphenyl	84-15-1	79	%	70-135	07.01.2020 20:04	



Certificate of Analytical Results 666160

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **Sw01**
Lab Sample Id: 666160-006

Matrix: Soil
Date Collected: 07.01.2020 11:32

Date Received: 07.01.2020 16:20
Sample Depth: 0 - 5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.01.2020 17:02

Basis: Wet Weight

Seq Number: 3130571

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.02.2020 00:54	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.02.2020 00:54	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.02.2020 00:54	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	07.02.2020 00:54	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.02.2020 00:54	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.02.2020 00:54	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.02.2020 00:54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	07.02.2020 00:54	
1,4-Difluorobenzene	540-36-3	103	%	70-130	07.02.2020 00:54	



Certificate of Analytical Results 666160

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **Sw02** Matrix: Soil Date Received: 07.01.2020 16:20
 Lab Sample Id: 666160-007 Date Collected: 07.01.2020 11:38 Sample Depth: 0 - 5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.01.2020 17:09 Basis: Wet Weight
 Seq Number: 3130579

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	415	10.1	mg/kg	07.01.2020 21:59		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.01.2020 17:17 Basis: Wet Weight
 Seq Number: 3130577

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	07.01.2020 20:24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	07.01.2020 20:24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	07.01.2020 20:24	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	07.01.2020 20:24	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	07.01.2020 20:24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	81	%	70-135	07.01.2020 20:24	
o-Terphenyl	84-15-1	76	%	70-135	07.01.2020 20:24	



Certificate of Analytical Results 666160

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **Sw02**
Lab Sample Id: 666160-007

Matrix: Soil
Date Collected: 07.01.2020 11:38

Date Received: 07.01.2020 16:20
Sample Depth: 0 - 5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3130571

Prep Method: SW5035A

% Moisture:

Date Prep: 07.01.2020 17:02

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.02.2020 01:14	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.02.2020 01:14	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.02.2020 01:14	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	07.02.2020 01:14	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.02.2020 01:14	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.02.2020 01:14	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.02.2020 01:14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	07.02.2020 01:14	
1,4-Difluorobenzene	540-36-3	102	%	70-130	07.02.2020 01:14	



Certificate of Analytical Results 666160

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS10** Matrix: Soil Date Received: 07.01.2020 16:20
 Lab Sample Id: 666160-008 Date Collected: 07.01.2020 12:54 Sample Depth: 5.0 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.01.2020 17:09 Basis: Wet Weight
 Seq Number: 3130579

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	336	9.98	mg/kg	07.01.2020 22:05		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.01.2020 17:17 Basis: Wet Weight
 Seq Number: 3130577

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	07.01.2020 20:45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	07.01.2020 20:45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	07.01.2020 20:45	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	07.01.2020 20:45	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	07.01.2020 20:45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	81	%	70-135	07.01.2020 20:45	
o-Terphenyl	84-15-1	78	%	70-135	07.01.2020 20:45	



Certificate of Analytical Results 666160

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS10**
Lab Sample Id: 666160-008

Matrix: Soil
Date Collected: 07.01.2020 12:54

Date Received: 07.01.2020 16:20
Sample Depth: 5.0 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3130571

Prep Method: SW5035A

% Moisture:

Date Prep: 07.01.2020 17:02

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.02.2020 01:35	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.02.2020 01:35	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.02.2020 01:35	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.02.2020 01:35	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.02.2020 01:35	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.02.2020 01:35	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.02.2020 01:35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	07.02.2020 01:35	
1,4-Difluorobenzene	540-36-3	102	%	70-130	07.02.2020 01:35	



Certificate of Analytical Results 666160

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS12** Matrix: Soil Date Received: 07.01.2020 16:20
 Lab Sample Id: 666160-009 Date Collected: 07.01.2020 12:58 Sample Depth: 5.0 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.01.2020 17:09 Basis: Wet Weight
 Seq Number: 3130579

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	186	10.1	mg/kg	07.01.2020 22:11		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.01.2020 17:17 Basis: Wet Weight
 Seq Number: 3130577

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	07.01.2020 21:05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	07.01.2020 21:05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	07.01.2020 21:05	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	07.01.2020 21:05	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	07.01.2020 21:05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-135	07.01.2020 21:05	
o-Terphenyl	84-15-1	80	%	70-135	07.01.2020 21:05	



Certificate of Analytical Results 666160

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS12**
Lab Sample Id: 666160-009

Matrix: Soil
Date Collected: 07.01.2020 12:58

Date Received: 07.01.2020 16:20
Sample Depth: 5.0 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.01.2020 17:02

Basis: Wet Weight

Seq Number: 3130571

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.02.2020 01:55	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.02.2020 01:55	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.02.2020 01:55	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	07.02.2020 01:55	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.02.2020 01:55	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.02.2020 01:55	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.02.2020 01:55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	07.02.2020 01:55	
4-Bromofluorobenzene	460-00-4	104	%	70-130	07.02.2020 01:55	

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

LT Environmental, Inc.

PLU 25 BD 901H

Analytical Method: Chloride by EPA 300

Seq Number: 3130578

MB Sample Id: 7706575-1-BLK

Matrix: Solid

LCS Sample Id: 7706575-1-BKS

Prep Method: E300P

Date Prep: 07.01.2020

LCSD Sample Id: 7706575-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	256	102	264	106	90-110	3	20	mg/kg	07.01.2020 18:00	

Analytical Method: Chloride by EPA 300

Seq Number: 3130579

MB Sample Id: 7706602-1-BLK

Matrix: Solid

LCS Sample Id: 7706602-1-BKS

Prep Method: E300P

Date Prep: 07.01.2020

LCSD Sample Id: 7706602-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	257	103	265	106	90-110	3	20	mg/kg	07.01.2020 21:18	

Analytical Method: Chloride by EPA 300

Seq Number: 3130578

Parent Sample Id: 666068-002

Matrix: Soil

MS Sample Id: 666068-002 S

Prep Method: E300P

Date Prep: 07.01.2020

MSD Sample Id: 666068-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	5010	203	5210	99	5210	100	90-110	0	20	mg/kg	07.01.2020 18:18	

Analytical Method: Chloride by EPA 300

Seq Number: 3130578

Parent Sample Id: 666135-001

Matrix: Soil

MS Sample Id: 666135-001 S

Prep Method: E300P

Date Prep: 07.01.2020

MSD Sample Id: 666135-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	275	199	418	72	419	72	90-110	0	20	mg/kg	07.01.2020 19:42	X

Analytical Method: Chloride by EPA 300

Seq Number: 3130579

Parent Sample Id: 666160-004

Matrix: Soil

MS Sample Id: 666160-004 S

Prep Method: E300P

Date Prep: 07.01.2020

MSD Sample Id: 666160-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	348	201	528	90	533	92	90-110	1	20	mg/kg	07.01.2020 21:35	

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

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

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

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

LT Environmental, Inc.

PLU 25 BD 901H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3130574

MB Sample Id: 7706586-1-BLK

Matrix: Solid

LCS Sample Id: 7706586-1-BKS

Prep Method: SW8015P

Date Prep: 07.01.2020

LCSD Sample Id: 7706586-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1070	107	1090	109	70-135	2	35	mg/kg	07.01.2020 10:45	
Diesel Range Organics (DRO)	<50.0	1000	1120	112	1130	113	70-135	1	35	mg/kg	07.01.2020 10:45	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	122		118		120		70-135	%	07.01.2020 10:45
o-Terphenyl	110		109		109		70-135	%	07.01.2020 10:45

Analytical Method: TPH by SW8015 Mod

Seq Number: 3130577

MB Sample Id: 7706589-1-BLK

Matrix: Solid

LCS Sample Id: 7706589-1-BKS

Prep Method: SW8015P

Date Prep: 07.01.2020

LCSD Sample Id: 7706589-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1050	105	996	100	70-135	5	35	mg/kg	07.01.2020 10:45	
Diesel Range Organics (DRO)	<50.0	1000	1140	114	1110	111	70-135	3	35	mg/kg	07.01.2020 10:45	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	105		121		118		70-135	%	07.01.2020 10:45
o-Terphenyl	101		108		107		70-135	%	07.01.2020 10:45

Analytical Method: TPH by SW8015 Mod

Seq Number: 3130574

Matrix: Solid

MB Sample Id: 7706586-1-BLK

Prep Method: SW8015P

Date Prep: 07.01.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	07.01.2020 10:25	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3130577

Matrix: Solid

MB Sample Id: 7706589-1-BLK

Prep Method: SW8015P

Date Prep: 07.01.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	07.01.2020 10:25	

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

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

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

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

LT Environmental, Inc.

PLU 25 BD 901H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3130574

Parent Sample Id: 666055-001

Matrix: Soil

MS Sample Id: 666055-001 S

Prep Method: SW8015P

Date Prep: 07.01.2020

MSD Sample Id: 666055-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.3	1010	1200	119	1180	118	70-135	2	35	mg/kg	07.01.2020 13:33	
Diesel Range Organics (DRO)	<50.3	1010	1160	115	1120	112	70-135	4	35	mg/kg	07.01.2020 13:33	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	127		125		70-135	%	07.01.2020 13:33
o-Terphenyl	113		110		70-135	%	07.01.2020 13:33

Analytical Method: TPH by SW8015 Mod

Seq Number: 3130577

Parent Sample Id: 666055-002

Matrix: Soil

MS Sample Id: 666055-002 S

Prep Method: SW8015P

Date Prep: 07.01.2020

MSD Sample Id: 666055-002 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)	<50.2	1000	1180	118	1030	103	70-135	14	35	mg/kg	07.01.2020 13:33	
Diesel Range Organics (DRO)	<50.2	1000	1090	109	1160	116	70-135	6	35	mg/kg	07.01.2020 13:33	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	113		100		70-135	%	07.01.2020 13:33
o-Terphenyl	93		99		70-135	%	07.01.2020 13:33

Analytical Method: BTEX by EPA 8021B

Seq Number: 3130571

MB Sample Id: 7706591-1-BLK

Matrix: Solid

LCS Sample Id: 7706591-1-BKS

Prep Method: SW5035A

Date Prep: 07.01.2020

LCSD Sample Id: 7706591-1-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	0.0921	92	0.0950	95	70-130	3	35	mg/kg	07.01.2020 16:21	
Toluene	<0.00200	0.100	0.0924	92	0.0937	94	70-130	1	35	mg/kg	07.01.2020 16:21	
Ethylbenzene	<0.00200	0.100	0.0963	96	0.0995	100	71-129	3	35	mg/kg	07.01.2020 16:21	
m,p-Xylenes	<0.00400	0.200	0.197	99	0.203	102	70-135	3	35	mg/kg	07.01.2020 16:21	
o-Xylene	<0.00200	0.100	0.0974	97	0.100	100	71-133	3	35	mg/kg	07.01.2020 16:21	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		99		98		70-130	%	07.01.2020 16:21
4-Bromofluorobenzene	102		97		100		70-130	%	07.01.2020 16:21

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

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

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

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

LT Environmental, Inc.

PLU 25 BD 901H

Analytical Method: BTEX by EPA 8021B

Seq Number: 3130571

Parent Sample Id: 666129-001

Matrix: Soil

MS Sample Id: 666129-001 S

Prep Method: SW5035A

Date Prep: 07.01.2020

MSD Sample Id: 666129-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.110	110	0.109	108	70-130	1	35	mg/kg	07.01.2020 17:01	
Toluene	<0.00200	0.0998	0.106	106	0.105	104	70-130	1	35	mg/kg	07.01.2020 17:01	
Ethylbenzene	<0.00200	0.0998	0.111	111	0.108	107	71-129	3	35	mg/kg	07.01.2020 17:01	
m,p-Xylenes	<0.00399	0.200	0.227	114	0.222	110	70-135	2	35	mg/kg	07.01.2020 17:01	
o-Xylene	<0.00200	0.0998	0.111	111	0.110	109	71-133	1	35	mg/kg	07.01.2020 17:01	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		99		70-130	%	07.01.2020 17:01
4-Bromofluorobenzene	96		101		70-130	%	07.01.2020 17:01

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

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

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

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



Chain of Custody

Work Order No: 1631160

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

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

www.xenco.com Page 1 of 1

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Little
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	522 W. Mermod St.
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	jhill@ltenv.com, dmoir@ltenv.com

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

Project Name:	PLU 25 00 901H	Turn Around	
Project Number:	01926030	Routine	☐
P.O. Number:	5p.11 date 2/11/20	Rush:	24hr
Sampler's Name:	Jeremy Hill	Due Date:	2/11/20

SAMPLE RECEIPT	Temp Blank:	☒ Yes	☐ No	Wet Ice:	☒ Yes	☐ No
	Temperature (°C):	4.0/3.8	Thermometer ID			
	Received Intact:	☒ Yes	☐ No	Correction Factor:		
	Cooler Custody Seals:	☒ Yes	☐ No	Total Containers:		
	Sample Custody Seals:	☒ Yes	☐ No	9		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers			ANALYSIS REQUEST										Work Order Notes	
F501	S	7/1/20	0915	5.0	1	X	X	X											
F503A			0919	5.0															
F504			0921	5.0															
F506			0926	4.8															
F507			0930	4.0															
S501			1132	0-5'															
S502			1138	0-5'															
S510			1254	5.0															
S511			1258	5.0															

Total 200.7 / 6010		200.8 / 6020:		8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn	
Circle Method(s) and Metal(s) to be analyzed		TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U		1631 / 245.1 / 7470 / 7471 : Hg	
Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	7/1/20 16:20	<i>[Signature]</i>	<i>[Signature]</i>	7/1/20 16:20

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

Certificate of Analysis Summary 666606

LT Environmental, Inc., Arvada, CO

Project Name: PLU 25 RD 901 H

Project Id: 012920030

Contact: Dan Moir

Project Location:

Date Received in Lab: Wed 07.08.2020 13:30

Report Date: 07.09.2020 13:54

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	666606-001	666606-002	666606-003			
	Field Id:	FS16	FS19	FS22			
	Depth:	3- ft	3-4 ft	3-4 ft			
	Matrix:	SOIL	SOIL	SOIL			
	Sampled:	07.08.2020 07:13	07.08.2020 07:28	07.08.2020 07:42			
BTEX by EPA 8021B	Extracted:	07.08.2020 14:31	07.08.2020 14:31	07.08.2020 14:31			
	Analyzed:	07.08.2020 17:21	07.08.2020 17:42	07.08.2020 18:02			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
		<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200			
Benzene							
Toluene							
Ethylbenzene							
m,p-Xylenes							
o-Xylene							
Total Xylenes							
Total BTEX							
Chloride by EPA 300	Extracted:	07.08.2020 14:37	07.08.2020 14:37	07.08.2020 14:37			
	Analyzed:	07.08.2020 15:34	07.08.2020 15:40	07.08.2020 15:45			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
		541 10.0	472 10.1	788 10.1			
Chloride							
TPH by SW8015 Mod	Extracted:	07.08.2020 13:40	07.08.2020 13:40	07.08.2020 13:40			
	Analyzed:	07.08.2020 14:50	07.08.2020 15:11	07.08.2020 15:32			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
		<50.2 50.2	<50.2 50.2	<50.0 50.0			
Gasoline Range Hydrocarbons (GRO)							
Diesel Range Organics (DRO)							
Motor Oil Range Hydrocarbons (MRO)							
Total GRO-DRO							
Total TPH							

BRL - Below Reporting Limit

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





Xenco

Analytical Report 666606

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU 25 RD 901 H

012920030

07.09.2020

Collected By: Client

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

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-36), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-25), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-17)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-20-7)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



07.09.2020

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: Eurofins Xenco, LLC Report No(s): **666606**

PLU 25 RD 901 H

Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 666606. 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 Eurofins Xenco, LLC. 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. 666606 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 Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

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

Jessica Kramer

Project Manager

A Small Business and Minority Company

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

**Sample Cross Reference 666606****LT Environmental, Inc., Arvada, CO**

PLU 25 RD 901 H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS16	S	07.08.2020 07:13	3 ft	666606-001
FS19	S	07.08.2020 07:28	3 - 4 ft	666606-002
FS22	S	07.08.2020 07:42	3 - 4 ft	666606-003



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *PLU 25 RD 901 H*

Project ID: 012920030
Work Order Number(s): 666606

Report Date: 07.09.2020
Date Received: 07.08.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 666606

LT Environmental, Inc., Arvada, CO

PLU 25 RD 901 H

Sample Id: **FS16** Matrix: Soil Date Received: 07.08.2020 13:30
 Lab Sample Id: 666606-001 Date Collected: 07.08.2020 07:13 Sample Depth: 3 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.08.2020 14:37 Basis: Wet Weight
 Seq Number: 3131076

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	541	10.0	mg/kg	07.08.2020 15:34		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.08.2020 13:40 Basis: Wet Weight
 Seq Number: 3131067

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	07.08.2020 14:50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	07.08.2020 14:50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	07.08.2020 14:50	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	07.08.2020 14:50	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	07.08.2020 14:50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	07.08.2020 14:50	
o-Terphenyl	84-15-1	109	%	70-135	07.08.2020 14:50	



Certificate of Analytical Results 666606

LT Environmental, Inc., Arvada, CO

PLU 25 RD 901 H

Sample Id: **FS16**
Lab Sample Id: 666606-001

Matrix: Soil
Date Collected: 07.08.2020 07:13

Date Received: 07.08.2020 13:30
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.08.2020 14:31

Basis: Wet Weight

Seq Number: 3131087

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.08.2020 17:21	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.08.2020 17:21	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.08.2020 17:21	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.08.2020 17:21	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.08.2020 17:21	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.08.2020 17:21	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.08.2020 17:21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	07.08.2020 17:21	
4-Bromofluorobenzene	460-00-4	101	%	70-130	07.08.2020 17:21	



Certificate of Analytical Results 666606

LT Environmental, Inc., Arvada, CO

PLU 25 RD 901 H

Sample Id: **FS19** Matrix: Soil Date Received: 07.08.2020 13:30
 Lab Sample Id: 666606-002 Date Collected: 07.08.2020 07:28 Sample Depth: 3 - 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.08.2020 14:37 Basis: Wet Weight
 Seq Number: 3131076

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	472	10.1	mg/kg	07.08.2020 15:40		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.08.2020 13:40 Basis: Wet Weight
 Seq Number: 3131067

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	07.08.2020 15:11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	07.08.2020 15:11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	07.08.2020 15:11	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	07.08.2020 15:11	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	07.08.2020 15:11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	07.08.2020 15:11	
o-Terphenyl	84-15-1	101	%	70-135	07.08.2020 15:11	



Certificate of Analytical Results 666606

LT Environmental, Inc., Arvada, CO

PLU 25 RD 901 H

Sample Id: **FS19**
Lab Sample Id: 666606-002

Matrix: Soil
Date Collected: 07.08.2020 07:28

Date Received: 07.08.2020 13:30
Sample Depth: 3 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.08.2020 14:31

Basis: Wet Weight

Seq Number: 3131087

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.08.2020 17:42	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.08.2020 17:42	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.08.2020 17:42	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.08.2020 17:42	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.08.2020 17:42	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.08.2020 17:42	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.08.2020 17:42	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	100	%	70-130	07.08.2020 17:42		
1,4-Difluorobenzene	540-36-3	100	%	70-130	07.08.2020 17:42		



Certificate of Analytical Results 666606

LT Environmental, Inc., Arvada, CO

PLU 25 RD 901 H

Sample Id: **FS22** Matrix: Soil Date Received: 07.08.2020 13:30
 Lab Sample Id: 666606-003 Date Collected: 07.08.2020 07:42 Sample Depth: 3 - 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.08.2020 14:37 Basis: Wet Weight
 Seq Number: 3131076

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	788	10.1	mg/kg	07.08.2020 15:45		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.08.2020 13:40 Basis: Wet Weight
 Seq Number: 3131067

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.08.2020 15:32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.08.2020 15:32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.08.2020 15:32	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	07.08.2020 15:32	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.08.2020 15:32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	07.08.2020 15:32	
o-Terphenyl	84-15-1	95	%	70-135	07.08.2020 15:32	



Certificate of Analytical Results 666606

LT Environmental, Inc., Arvada, CO

PLU 25 RD 901 H

Sample Id: **FS22**
Lab Sample Id: 666606-003

Matrix: Soil
Date Collected: 07.08.2020 07:42

Date Received: 07.08.2020 13:30
Sample Depth: 3 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.08.2020 14:31

Basis: Wet Weight

Seq Number: 3131087

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.08.2020 18:02	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.08.2020 18:02	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.08.2020 18:02	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.08.2020 18:02	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.08.2020 18:02	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.08.2020 18:02	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.08.2020 18:02	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	105	%	70-130	07.08.2020 18:02		
4-Bromofluorobenzene	460-00-4	106	%	70-130	07.08.2020 18:02		

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

LT Environmental, Inc.

PLU 25 RD 901 H

Analytical Method: Chloride by EPA 300

Seq Number: 3131076

Matrix: Water

MB Sample Id: 7706949-1-BLK

LCS Sample Id: 7706949-1-BKS

LCSD Sample Id: 7706949-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.500	25.0	24.4	98	25.5	102	90-110	4	20	mg/L	07.08.2020 15:06	

Analytical Method: Chloride by EPA 300

Seq Number: 3131076

Matrix: Soil

Parent Sample Id: 666594-001

MS Sample Id: 666594-001 S

Prep Method: E300P

Date Prep: 07.08.2020

MSD Sample Id: 666594-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	166	202	381	106	380	106	90-110	0	20	mg/kg	07.08.2020 15:23	

Analytical Method: Chloride by EPA 300

Seq Number: 3131076

Matrix: Soil

Parent Sample Id: 666648-001

MS Sample Id: 666648-001 S

Prep Method: E300P

Date Prep: 07.08.2020

MSD Sample Id: 666648-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1030	200	1230	100	1240	105	90-110	1	20	mg/kg	07.08.2020 16:41	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3131067

Matrix: Solid

MB Sample Id: 7706940-1-BLK

LCS Sample Id: 7706940-1-BKS

Prep Method: SW8015P

Date Prep: 07.08.2020

LCSD Sample Id: 7706940-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1120	112	1150	115	70-135	3	35	mg/kg	07.08.2020 12:34	
Diesel Range Organics (DRO)	<50.0	1000	1210	121	1230	123	70-135	2	35	mg/kg	07.08.2020 12:34	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	97		122		128		70-135	%	07.08.2020 12:34
o-Terphenyl	104		119		124		70-135	%	07.08.2020 12:34

Analytical Method: TPH by SW8015 Mod

Seq Number: 3131067

Matrix: Solid

MB Sample Id: 7706940-1-BLK

Prep Method: SW8015P

Date Prep: 07.08.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	07.08.2020 12:13	

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

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

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

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

LT Environmental, Inc.

PLU 25 RD 901 H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3131067

Parent Sample Id: 666594-001

Matrix: Soil

MS Sample Id: 666594-001 S

Prep Method: SW8015P

Date Prep: 07.08.2020

MSD Sample Id: 666594-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1080	108	1050	105	70-135	3	35	mg/kg	07.08.2020 14:09	
Diesel Range Organics (DRO)	<50.0	1000	1170	117	1110	111	70-135	5	35	mg/kg	07.08.2020 14:09	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	120		115		70-135	%	07.08.2020 14:09
o-Terphenyl	116		110		70-135	%	07.08.2020 14:09

Analytical Method: BTEX by EPA 8021B

Seq Number: 3131087

MB Sample Id: 7706936-1-BLK

Matrix: Solid

LCS Sample Id: 7706936-1-BKS

Prep Method: SW5035A

Date Prep: 07.08.2020

LCSD Sample Id: 7706936-1-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	0.0974	97	0.0916	92	70-130	6	35	mg/kg	07.08.2020 15:04	
Toluene	<0.00200	0.100	0.0953	95	0.0890	89	70-130	7	35	mg/kg	07.08.2020 15:04	
Ethylbenzene	<0.00200	0.100	0.102	102	0.0940	94	71-129	8	35	mg/kg	07.08.2020 15:04	
m,p-Xylenes	<0.00400	0.200	0.207	104	0.193	97	70-135	7	35	mg/kg	07.08.2020 15:04	
o-Xylene	<0.00200	0.100	0.101	101	0.0949	95	71-133	6	35	mg/kg	07.08.2020 15:04	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		99		98		70-130	%	07.08.2020 15:04
4-Bromofluorobenzene	103		101		98		70-130	%	07.08.2020 15:04

Analytical Method: BTEX by EPA 8021B

Seq Number: 3131087

Parent Sample Id: 666594-001

Matrix: Soil

MS Sample Id: 666594-001 S

Prep Method: SW5035A

Date Prep: 07.08.2020

MSD Sample Id: 666594-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.0978	98	0.105	105	70-130	7	35	mg/kg	07.08.2020 15:45	
Toluene	<0.00201	0.100	0.0923	92	0.0999	100	70-130	8	35	mg/kg	07.08.2020 15:45	
Ethylbenzene	<0.00201	0.100	0.0965	97	0.104	104	71-129	7	35	mg/kg	07.08.2020 15:45	
m,p-Xylenes	<0.00402	0.201	0.197	98	0.211	105	70-135	7	35	mg/kg	07.08.2020 15:45	
o-Xylene	<0.00201	0.100	0.0960	96	0.103	103	71-133	7	35	mg/kg	07.08.2020 15:45	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		96		70-130	%	07.08.2020 15:45
4-Bromofluorobenzene	100		98		70-130	%	07.08.2020 15:45

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

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

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

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

Work Order No: 1666606

Page _____ of _____
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Project Name:	PLU 25 RD 90114	Turn Around	ANALYSIS REQUEST										Work Order Notes
Project Number:	012570030		Routine	☐									
P.O. Number:	Spill data		Rush:	24hr									
Sampler's Name:	Jeremy Hill		Due Date:	7/9/20									

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number	TPH (EPA)	BTEX (EPA)	Chloride	Sample Comments
FS16	S	7/8/20	0713	3'	1	X	X	✓	Composite ↓
FS19	↓	↓	0728	3-4'	↓	↓	↓		
FS22	↓	↓	0742	3-4'	↓	↓	↓		

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		7/8/20 1330			

Revised Date 05/14/18 Rev. 2018.1

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 07.08.2020 01:30.00 PM

Work Order #: 666606

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	2.4
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	No
#18 Water VOC samples have zero headspace?	N/A

Samples received in bulk containers.

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

Analyst:

PH Device/Lot#:

Checklist completed by:



Elizabeth McClellan

Date: 07.08.2020

Checklist reviewed by:



Jessica Kramer

Date: 07.09.2020

Certificate of Analysis Summary 666609



LT Environmental, Inc., Arvada, CO

Project Name: PLU 25 RD 901 H

Project Id: 012920030

Contact: Dan Moir

Project Location:

Date Received in Lab: Wed 07.08.2020 13:30

Report Date: 07.09.2020 13:55

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	666609-001	666609-002	666609-003	666609-004	666609-005	
	Field Id:	FS13	FS14	FS15	FS20	FS21	
	Depth:	3- ft	4- ft	4- ft	4- ft	4- ft	
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	
	Sampled:	07.08.2020 07:01	07.08.2020 11:01	07.08.2020 11:06	07.08.2020 07:33	07.08.2020 07:38	
BTEX by EPA 8021B	Extracted:	07.08.2020 14:31	07.08.2020 14:31	07.08.2020 14:31	07.08.2020 14:31	07.08.2020 14:31	
	Analyzed:	07.08.2020 18:23	07.08.2020 18:43	07.08.2020 19:04	07.08.2020 19:24	07.08.2020 19:44	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Benzene		<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	
Toluene		<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	
Ethylbenzene		<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	
m,p-Xylenes		<0.00402 0.00402	<0.00401 0.00401	<0.00400 0.00400	<0.00397 0.00397	<0.00399 0.00399	
o-Xylene		<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	
Total Xylenes		<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	
Total BTEX		<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	
Chloride by EPA 300	Extracted:	07.08.2020 14:37	07.08.2020 14:37	07.08.2020 14:37	07.08.2020 14:37	07.08.2020 14:37	
	Analyzed:	07.08.2020 15:51	07.08.2020 16:08	07.08.2020 16:13	07.08.2020 16:19	07.08.2020 16:24	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		217 10.0	57.5 10.1	87.1 10.1	183 9.96	66.2 10.1	
TPH by SW8015 Mod	Extracted:	07.08.2020 13:40	07.08.2020 13:40	07.08.2020 13:40	07.08.2020 13:40	07.08.2020 13:40	
	Analyzed:	07.08.2020 15:52	07.08.2020 16:13	07.08.2020 16:34	07.08.2020 16:55	07.08.2020 17:15	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Gasoline Range Hydrocarbons (GRO)		<50.1 50.1	<50.2 50.2	<50.0 50.0	<50.2 50.2	<50.0 50.0	
Diesel Range Organics (DRO)		<50.1 50.1	<50.2 50.2	<50.0 50.0	<50.2 50.2	<50.0 50.0	
Motor Oil Range Hydrocarbons (MRO)		<50.1 50.1	<50.2 50.2	<50.0 50.0	<50.2 50.2	<50.0 50.0	
Total GRO-DRO		<50.1 50.1	<50.2 50.2	<50.0 50.0	<50.2 50.2	<50.0 50.0	
Total TPH		<50.1 50.1	<50.2 50.2	<50.0 50.0	<50.2 50.2	<50.0 50.0	

BRL - Below Reporting Limit

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



Xenco

Analytical Report 666609

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU 25 RD 901 H

012920030

07.09.2020

Collected By: Client

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

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-36), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-25), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-17)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-20-7)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



07.09.2020

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: Eurofins Xenco, LLC Report No(s): **666609**

PLU 25 RD 901 H

Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 666609. 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 Eurofins Xenco, LLC. 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. 666609 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 Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

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

Jessica Kramer

Project Manager

A Small Business and Minority Company

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

**Sample Cross Reference 666609****LT Environmental, Inc., Arvada, CO**

PLU 25 RD 901 H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS13	S	07.08.2020 07:01	3 ft	666609-001
FS14	S	07.08.2020 11:01	4 ft	666609-002
FS15	S	07.08.2020 11:06	4 ft	666609-003
FS20	S	07.08.2020 07:33	4 ft	666609-004
FS21	S	07.08.2020 07:38	4 ft	666609-005



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *PLU 25 RD 901 H*

Project ID: 012920030
Work Order Number(s): 666609

Report Date: 07.09.2020
Date Received: 07.08.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 666609

LT Environmental, Inc., Arvada, CO

PLU 25 RD 901 H

Sample Id: **FS13** Matrix: Soil Date Received: 07.08.2020 13:30
 Lab Sample Id: 666609-001 Date Collected: 07.08.2020 07:01 Sample Depth: 3 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.08.2020 14:37 Basis: Wet Weight
 Seq Number: 3131076

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	217	10.0	mg/kg	07.08.2020 15:51		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.08.2020 13:40 Basis: Wet Weight
 Seq Number: 3131067

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	07.08.2020 15:52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	07.08.2020 15:52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	07.08.2020 15:52	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	07.08.2020 15:52	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	07.08.2020 15:52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	07.08.2020 15:52	
o-Terphenyl	84-15-1	101	%	70-135	07.08.2020 15:52	



Certificate of Analytical Results 666609

LT Environmental, Inc., Arvada, CO

PLU 25 RD 901 H

Sample Id: **FS13**
Lab Sample Id: 666609-001

Matrix: Soil
Date Collected: 07.08.2020 07:01

Date Received: 07.08.2020 13:30
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.08.2020 14:31

Basis: Wet Weight

Seq Number: 3131087

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.08.2020 18:23	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.08.2020 18:23	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.08.2020 18:23	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.08.2020 18:23	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.08.2020 18:23	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.08.2020 18:23	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.08.2020 18:23	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	99	%	70-130	07.08.2020 18:23		
4-Bromofluorobenzene	460-00-4	101	%	70-130	07.08.2020 18:23		



Certificate of Analytical Results 666609

LT Environmental, Inc., Arvada, CO

PLU 25 RD 901 H

Sample Id: **FS14** Matrix: Soil Date Received: 07.08.2020 13:30
 Lab Sample Id: 666609-002 Date Collected: 07.08.2020 11:01 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.08.2020 14:37 Basis: Wet Weight
 Seq Number: 3131076

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	57.5	10.1	mg/kg	07.08.2020 16:08		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.08.2020 13:40 Basis: Wet Weight
 Seq Number: 3131067

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	07.08.2020 16:13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	07.08.2020 16:13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	07.08.2020 16:13	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	07.08.2020 16:13	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	07.08.2020 16:13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	07.08.2020 16:13	
o-Terphenyl	84-15-1	100	%	70-135	07.08.2020 16:13	



Certificate of Analytical Results 666609

LT Environmental, Inc., Arvada, CO

PLU 25 RD 901 H

Sample Id: **FS14**
Lab Sample Id: 666609-002

Matrix: Soil
Date Collected: 07.08.2020 11:01

Date Received: 07.08.2020 13:30
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.08.2020 14:31

Basis: Wet Weight

Seq Number: 3131087

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.08.2020 18:43	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.08.2020 18:43	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.08.2020 18:43	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.08.2020 18:43	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.08.2020 18:43	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.08.2020 18:43	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.08.2020 18:43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	07.08.2020 18:43	
4-Bromofluorobenzene	460-00-4	102	%	70-130	07.08.2020 18:43	



Certificate of Analytical Results 666609

LT Environmental, Inc., Arvada, CO

PLU 25 RD 901 H

Sample Id: **FS15** Matrix: Soil Date Received: 07.08.2020 13:30
 Lab Sample Id: 666609-003 Date Collected: 07.08.2020 11:06 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.08.2020 14:37 Basis: Wet Weight
 Seq Number: 3131076

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	87.1	10.1	mg/kg	07.08.2020 16:13		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.08.2020 13:40 Basis: Wet Weight
 Seq Number: 3131067

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.08.2020 16:34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.08.2020 16:34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.08.2020 16:34	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	07.08.2020 16:34	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.08.2020 16:34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	07.08.2020 16:34	
o-Terphenyl	84-15-1	96	%	70-135	07.08.2020 16:34	



Certificate of Analytical Results 666609

LT Environmental, Inc., Arvada, CO

PLU 25 RD 901 H

Sample Id: **FS15**
Lab Sample Id: 666609-003

Matrix: Soil
Date Collected: 07.08.2020 11:06

Date Received: 07.08.2020 13:30
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.08.2020 14:31

Basis: Wet Weight

Seq Number: 3131087

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.08.2020 19:04	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.08.2020 19:04	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.08.2020 19:04	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	07.08.2020 19:04	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.08.2020 19:04	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.08.2020 19:04	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.08.2020 19:04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	70-130	07.08.2020 19:04	
1,4-Difluorobenzene	540-36-3	102	%	70-130	07.08.2020 19:04	



Certificate of Analytical Results 666609

LT Environmental, Inc., Arvada, CO

PLU 25 RD 901 H

Sample Id: **FS20** Matrix: Soil Date Received: 07.08.2020 13:30
 Lab Sample Id: 666609-004 Date Collected: 07.08.2020 07:33 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.08.2020 14:37 Basis: Wet Weight
 Seq Number: 3131076

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	183	9.96	mg/kg	07.08.2020 16:19		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.08.2020 13:40 Basis: Wet Weight
 Seq Number: 3131067

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	07.08.2020 16:55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	07.08.2020 16:55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	07.08.2020 16:55	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	07.08.2020 16:55	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	07.08.2020 16:55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	07.08.2020 16:55	
o-Terphenyl	84-15-1	101	%	70-135	07.08.2020 16:55	



Certificate of Analytical Results 666609

LT Environmental, Inc., Arvada, CO

PLU 25 RD 901 H

Sample Id: **FS20**
Lab Sample Id: 666609-004

Matrix: Soil
Date Collected: 07.08.2020 07:33

Date Received: 07.08.2020 13:30
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.08.2020 14:31

Basis: Wet Weight

Seq Number: 3131087

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	07.08.2020 19:24	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.08.2020 19:24	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.08.2020 19:24	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	07.08.2020 19:24	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.08.2020 19:24	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	07.08.2020 19:24	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.08.2020 19:24	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	103	%	70-130	07.08.2020 19:24		
4-Bromofluorobenzene	460-00-4	104	%	70-130	07.08.2020 19:24		



Certificate of Analytical Results 666609

LT Environmental, Inc., Arvada, CO

PLU 25 RD 901 H

Sample Id: **FS21** Matrix: Soil Date Received: 07.08.2020 13:30
 Lab Sample Id: 666609-005 Date Collected: 07.08.2020 07:38 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.08.2020 14:37 Basis: Wet Weight
 Seq Number: 3131076

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	66.2	10.1	mg/kg	07.08.2020 16:24		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.08.2020 13:40 Basis: Wet Weight
 Seq Number: 3131067

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.08.2020 17:15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.08.2020 17:15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.08.2020 17:15	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	07.08.2020 17:15	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.08.2020 17:15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	07.08.2020 17:15	
o-Terphenyl	84-15-1	101	%	70-135	07.08.2020 17:15	



Certificate of Analytical Results 666609

LT Environmental, Inc., Arvada, CO

PLU 25 RD 901 H

Sample Id: **FS21**
Lab Sample Id: 666609-005

Matrix: Soil
Date Collected: 07.08.2020 07:38

Date Received: 07.08.2020 13:30
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.08.2020 14:31

Basis: Wet Weight

Seq Number: 3131087

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.08.2020 19:44	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.08.2020 19:44	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.08.2020 19:44	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.08.2020 19:44	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.08.2020 19:44	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.08.2020 19:44	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.08.2020 19:44	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	102	%	70-130	07.08.2020 19:44		
4-Bromofluorobenzene	460-00-4	104	%	70-130	07.08.2020 19:44		

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

LT Environmental, Inc.

PLU 25 RD 901 H

Analytical Method: Chloride by EPA 300

Seq Number: 3131076

Matrix: Water

MB Sample Id: 7706949-1-BLK

LCS Sample Id: 7706949-1-BKS

LCSD Sample Id: 7706949-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.500	25.0	24.4	98	25.5	102	90-110	4	20	mg/L	07.08.2020 15:06	

Analytical Method: Chloride by EPA 300

Seq Number: 3131076

Matrix: Soil

Parent Sample Id: 666594-001

MS Sample Id: 666594-001 S

Prep Method: E300P

Date Prep: 07.08.2020

MSD Sample Id: 666594-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	166	202	381	106	380	106	90-110	0	20	mg/kg	07.08.2020 15:23	

Analytical Method: Chloride by EPA 300

Seq Number: 3131076

Matrix: Soil

Parent Sample Id: 666648-001

MS Sample Id: 666648-001 S

Prep Method: E300P

Date Prep: 07.08.2020

MSD Sample Id: 666648-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1030	200	1230	100	1240	105	90-110	1	20	mg/kg	07.08.2020 16:41	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3131067

Matrix: Solid

MB Sample Id: 7706940-1-BLK

LCS Sample Id: 7706940-1-BKS

Prep Method: SW8015P

Date Prep: 07.08.2020

LCSD Sample Id: 7706940-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1120	112	1150	115	70-135	3	35	mg/kg	07.08.2020 12:34	
Diesel Range Organics (DRO)	<50.0	1000	1210	121	1230	123	70-135	2	35	mg/kg	07.08.2020 12:34	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	97		122		128		70-135	%	07.08.2020 12:34
o-Terphenyl	104		119		124		70-135	%	07.08.2020 12:34

Analytical Method: TPH by SW8015 Mod

Seq Number: 3131067

Matrix: Solid

MB Sample Id: 7706940-1-BLK

Prep Method: SW8015P

Date Prep: 07.08.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	07.08.2020 12:13	

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

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

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

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

LT Environmental, Inc.

PLU 25 RD 901 H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3131067

Parent Sample Id: 666594-001

Matrix: Soil

MS Sample Id: 666594-001 S

Prep Method: SW8015P

Date Prep: 07.08.2020

MSD Sample Id: 666594-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1080	108	1050	105	70-135	3	35	mg/kg	07.08.2020 14:09	
Diesel Range Organics (DRO)	<50.0	1000	1170	117	1110	111	70-135	5	35	mg/kg	07.08.2020 14:09	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	120		115		70-135	%	07.08.2020 14:09
o-Terphenyl	116		110		70-135	%	07.08.2020 14:09

Analytical Method: BTEX by EPA 8021B

Seq Number: 3131087

MB Sample Id: 7706936-1-BLK

Matrix: Solid

LCS Sample Id: 7706936-1-BKS

Prep Method: SW5035A

Date Prep: 07.08.2020

LCSD Sample Id: 7706936-1-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	0.0974	97	0.0916	92	70-130	6	35	mg/kg	07.08.2020 15:04	
Toluene	<0.00200	0.100	0.0953	95	0.0890	89	70-130	7	35	mg/kg	07.08.2020 15:04	
Ethylbenzene	<0.00200	0.100	0.102	102	0.0940	94	71-129	8	35	mg/kg	07.08.2020 15:04	
m,p-Xylenes	<0.00400	0.200	0.207	104	0.193	97	70-135	7	35	mg/kg	07.08.2020 15:04	
o-Xylene	<0.00200	0.100	0.101	101	0.0949	95	71-133	6	35	mg/kg	07.08.2020 15:04	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		99		98		70-130	%	07.08.2020 15:04
4-Bromofluorobenzene	103		101		98		70-130	%	07.08.2020 15:04

Analytical Method: BTEX by EPA 8021B

Seq Number: 3131087

Parent Sample Id: 666594-001

Matrix: Soil

MS Sample Id: 666594-001 S

Prep Method: SW5035A

Date Prep: 07.08.2020

MSD Sample Id: 666594-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.0978	98	0.105	105	70-130	7	35	mg/kg	07.08.2020 15:45	
Toluene	<0.00201	0.100	0.0923	92	0.0999	100	70-130	8	35	mg/kg	07.08.2020 15:45	
Ethylbenzene	<0.00201	0.100	0.0965	97	0.104	104	71-129	7	35	mg/kg	07.08.2020 15:45	
m,p-Xylenes	<0.00402	0.201	0.197	98	0.211	105	70-135	7	35	mg/kg	07.08.2020 15:45	
o-Xylene	<0.00201	0.100	0.0960	96	0.103	103	71-133	7	35	mg/kg	07.08.2020 15:45	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		96		70-130	%	07.08.2020 15:45
4-Bromofluorobenzene	100		98		70-130	%	07.08.2020 15:45

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

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

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

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

Work Order No: 1414101009

Page 1 of 1
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Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		7/8/20 1330			

Revised Date 05/14/18 Rev. 2011

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 07.08.2020 01:30.00 PM

Work Order #: 666609

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	2.4
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	No
#18 Water VOC samples have zero headspace?	N/A

Samples received in bulk containers.

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

Analyst:

PH Device/Lot#:

Checklist completed by:



Elizabeth McClellan

Date: 07.08.2020

Checklist reviewed by:



Jessica Kramer

Date: 07.09.2020

Certificate of Analysis Summary 666761



LT Environmental, Inc., Arvada, CO

Project Name: PLU 25 BD 901H

Project Id: 012920030

Contact: Dan Moir

Project Location:

Date Received in Lab: Thu 07.09.2020 13:53

Report Date: 07.13.2020 13:17

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	666761-001	666761-002	666761-003	666761-004	666761-005	666761-006
	<i>Field Id:</i>	FS17	FS18	FS23	SW03	SW04	SW05
	<i>Depth:</i>	4- ft	4- ft	4- ft	0-5 ft	0-3 ft	0-4 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	07.09.2020 07:00	07.09.2020 07:03	07.09.2020 07:07	07.09.2020 07:11	07.09.2020 07:16	07.09.2020 07:20
BTEX by EPA 8021B	<i>Extracted:</i>	07.09.2020 15:00	07.09.2020 15:00	07.09.2020 15:00	07.09.2020 15:00	07.09.2020 15:00	07.09.2020 15:00
	<i>Analyzed:</i>	07.09.2020 18:33	07.09.2020 18:53	07.09.2020 19:13	07.09.2020 19:34	07.09.2020 19:54	07.09.2020 20:15
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00201 0.00201	<0.00199 0.00199	<0.00201 0.00201
Toluene		<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00201 0.00201	<0.00199 0.00199	<0.00201 0.00201
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00201 0.00201	<0.00199 0.00199	<0.00201 0.00201
m,p-Xylenes		<0.00401 0.00401	<0.00401 0.00401	<0.00404 0.00404	<0.00402 0.00402	<0.00398 0.00398	<0.00402 0.00402
o-Xylene		<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00201 0.00201	<0.00199 0.00199	<0.00201 0.00201
Total Xylenes		<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00201 0.00201	<0.00199 0.00199	<0.00201 0.00201
Total BTEX		<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00201 0.00201	<0.00199 0.00199	<0.00201 0.00201
Chloride by EPA 300	<i>Extracted:</i>	07.10.2020 14:00	07.10.2020 14:00	07.10.2020 14:00	07.10.2020 14:00	07.10.2020 14:00	07.10.2020 14:00
	<i>Analyzed:</i>	07.10.2020 14:03	07.10.2020 14:20	07.10.2020 14:26	07.10.2020 14:31	07.10.2020 14:37	07.10.2020 14:54
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		22.7 10.0	107 9.96	911 9.98	2070 49.6	2510 50.4	1910 50.1
TPH by SW8015 Mod	<i>Extracted:</i>	07.09.2020 14:45	07.09.2020 14:45	07.09.2020 14:45	07.09.2020 14:45	07.09.2020 14:45	07.09.2020 14:45
	<i>Analyzed:</i>	07.09.2020 14:52	07.09.2020 15:53	07.09.2020 16:14	07.09.2020 16:34	07.09.2020 16:55	07.09.2020 17:16
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<49.9 49.9	<50.0 50.0	<49.9 49.9	<50.1 50.1	<50.1 50.1	<50.0 50.0
Diesel Range Organics (DRO)		<49.9 49.9	<50.0 50.0	<49.9 49.9	<50.1 50.1	<50.1 50.1	<50.0 50.0
Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9	<50.0 50.0	<49.9 49.9	<50.1 50.1	<50.1 50.1	<50.0 50.0
Total GRO-DRO		<49.9 49.9	<50.0 50.0	<49.9 49.9	<50.1 50.1	<50.1 50.1	<50.0 50.0
Total TPH		<49.9 49.9	<50.0 50.0	<49.9 49.9	<50.1 50.1	<50.1 50.1	<50.0 50.0

BRL - Below Reporting Limit

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



Xenco

Analytical Report 666761

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU 25 BD 901H

012920030

07.13.2020

Collected By: Client

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

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-36), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-25), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-17)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-20-7)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



07.13.2020

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: Eurofins Xenco, LLC Report No(s): **666761**

PLU 25 BD 901H

Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 666761. 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 Eurofins Xenco, LLC. 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. 666761 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 Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

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

Jessica Kramer

Project Manager

A Small Business and Minority Company

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

**Sample Cross Reference 666761****LT Environmental, Inc., Arvada, CO**

PLU 25 BD 901H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS17	S	07.09.2020 07:00	4 ft	666761-001
FS18	S	07.09.2020 07:03	4 ft	666761-002
FS23	S	07.09.2020 07:07	4 ft	666761-003
SW03	S	07.09.2020 07:11	0 - 5 ft	666761-004
SW04	S	07.09.2020 07:16	0 - 3 ft	666761-005
SW05	S	07.09.2020 07:20	0 - 4 ft	666761-006



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 25 BD 901H

Project ID: 012920030
Work Order Number(s): 666761

Report Date: 07.13.2020
Date Received: 07.09.2020

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 666761

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS17** Matrix: Soil Date Received: 07.09.2020 13:53
 Lab Sample Id: 666761-001 Date Collected: 07.09.2020 07:00 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.10.2020 14:00 Basis: Wet Weight
 Seq Number: 3131392

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	22.7	10.0	mg/kg	07.10.2020 14:03		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.09.2020 14:45 Basis: Wet Weight
 Seq Number: 3131224

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	07.09.2020 14:52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	07.09.2020 14:52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	07.09.2020 14:52	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	07.09.2020 14:52	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	07.09.2020 14:52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	07.09.2020 14:52	
o-Terphenyl	84-15-1	99	%	70-135	07.09.2020 14:52	



Certificate of Analytical Results 666761

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS17**
Lab Sample Id: 666761-001

Matrix: Soil
Date Collected: 07.09.2020 07:00

Date Received: 07.09.2020 13:53
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.09.2020 15:00

Basis: Wet Weight

Seq Number: 3131235

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.09.2020 18:33	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.09.2020 18:33	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.09.2020 18:33	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.09.2020 18:33	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.09.2020 18:33	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.09.2020 18:33	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.09.2020 18:33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	07.09.2020 18:33	
4-Bromofluorobenzene	460-00-4	107	%	70-130	07.09.2020 18:33	



Certificate of Analytical Results 666761

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS18** Matrix: Soil Date Received: 07.09.2020 13:53
 Lab Sample Id: 666761-002 Date Collected: 07.09.2020 07:03 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.10.2020 14:00 Basis: Wet Weight
 Seq Number: 3131392

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	107	9.96	mg/kg	07.10.2020 14:20		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.09.2020 14:45 Basis: Wet Weight
 Seq Number: 3131224

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.09.2020 15:53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.09.2020 15:53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.09.2020 15:53	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	07.09.2020 15:53	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.09.2020 15:53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	07.09.2020 15:53	
o-Terphenyl	84-15-1	104	%	70-135	07.09.2020 15:53	



Certificate of Analytical Results 666761

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS18**
Lab Sample Id: 666761-002

Matrix: Soil
Date Collected: 07.09.2020 07:03

Date Received: 07.09.2020 13:53
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.09.2020 15:00

Basis: Wet Weight

Seq Number: 3131235

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.09.2020 18:53	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.09.2020 18:53	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.09.2020 18:53	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.09.2020 18:53	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.09.2020 18:53	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.09.2020 18:53	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.09.2020 18:53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	07.09.2020 18:53	
1,4-Difluorobenzene	540-36-3	102	%	70-130	07.09.2020 18:53	



Certificate of Analytical Results 666761

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS23** Matrix: Soil Date Received: 07.09.2020 13:53
 Lab Sample Id: 666761-003 Date Collected: 07.09.2020 07:07 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.10.2020 14:00 Basis: Wet Weight
 Seq Number: 3131392

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	911	9.98	mg/kg	07.10.2020 14:26		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.09.2020 14:45 Basis: Wet Weight
 Seq Number: 3131224

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	07.09.2020 16:14	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	07.09.2020 16:14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	07.09.2020 16:14	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	07.09.2020 16:14	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	07.09.2020 16:14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	07.09.2020 16:14	
o-Terphenyl	84-15-1	107	%	70-135	07.09.2020 16:14	



Certificate of Analytical Results 666761

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS23**
Lab Sample Id: 666761-003

Matrix: Soil
Date Collected: 07.09.2020 07:07

Date Received: 07.09.2020 13:53
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.09.2020 15:00

Basis: Wet Weight

Seq Number: 3131235

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.09.2020 19:13	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.09.2020 19:13	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.09.2020 19:13	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	07.09.2020 19:13	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.09.2020 19:13	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.09.2020 19:13	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.09.2020 19:13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	70-130	07.09.2020 19:13	
1,4-Difluorobenzene	540-36-3	104	%	70-130	07.09.2020 19:13	



Certificate of Analytical Results 666761

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SW03** Matrix: Soil Date Received: 07.09.2020 13:53
 Lab Sample Id: 666761-004 Date Collected: 07.09.2020 07:11 Sample Depth: 0 - 5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.10.2020 14:00 Basis: Wet Weight
 Seq Number: 3131392

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2070	49.6	mg/kg	07.10.2020 14:31		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.09.2020 14:45 Basis: Wet Weight
 Seq Number: 3131224

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	07.09.2020 16:34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	07.09.2020 16:34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	07.09.2020 16:34	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	07.09.2020 16:34	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	07.09.2020 16:34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	07.09.2020 16:34	
o-Terphenyl	84-15-1	100	%	70-135	07.09.2020 16:34	



Certificate of Analytical Results 666761

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SW03**
Lab Sample Id: 666761-004

Matrix: Soil
Date Collected: 07.09.2020 07:11

Date Received: 07.09.2020 13:53
Sample Depth: 0 - 5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.09.2020 15:00

Basis: Wet Weight

Seq Number: 3131235

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.09.2020 19:34	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.09.2020 19:34	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.09.2020 19:34	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.09.2020 19:34	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.09.2020 19:34	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.09.2020 19:34	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.09.2020 19:34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	107	%	70-130	07.09.2020 19:34	
1,4-Difluorobenzene	540-36-3	104	%	70-130	07.09.2020 19:34	



Certificate of Analytical Results 666761

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SW04** Matrix: Soil Date Received: 07.09.2020 13:53
 Lab Sample Id: 666761-005 Date Collected: 07.09.2020 07:16 Sample Depth: 0 - 3 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.10.2020 14:00 Basis: Wet Weight
 Seq Number: 3131392

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2510	50.4	mg/kg	07.10.2020 14:37		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.09.2020 14:45 Basis: Wet Weight
 Seq Number: 3131224

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	07.09.2020 16:55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	07.09.2020 16:55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	07.09.2020 16:55	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	07.09.2020 16:55	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	07.09.2020 16:55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	07.09.2020 16:55	
o-Terphenyl	84-15-1	98	%	70-135	07.09.2020 16:55	



Certificate of Analytical Results 666761

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SW04**
Lab Sample Id: 666761-005

Matrix: Soil
Date Collected: 07.09.2020 07:16

Date Received: 07.09.2020 13:53
Sample Depth: 0 - 3 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.09.2020 15:00

Basis: Wet Weight

Seq Number: 3131235

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.09.2020 19:54	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.09.2020 19:54	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.09.2020 19:54	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.09.2020 19:54	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.09.2020 19:54	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.09.2020 19:54	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.09.2020 19:54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	07.09.2020 19:54	
1,4-Difluorobenzene	540-36-3	101	%	70-130	07.09.2020 19:54	



Certificate of Analytical Results 666761

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SW05** Matrix: Soil Date Received: 07.09.2020 13:53
 Lab Sample Id: 666761-006 Date Collected: 07.09.2020 07:20 Sample Depth: 0 - 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.10.2020 14:00 Basis: Wet Weight
 Seq Number: 3131392

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1910	50.1	mg/kg	07.10.2020 14:54		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.09.2020 14:45 Basis: Wet Weight
 Seq Number: 3131224

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.09.2020 17:16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.09.2020 17:16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.09.2020 17:16	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	07.09.2020 17:16	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.09.2020 17:16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	07.09.2020 17:16	
o-Terphenyl	84-15-1	98	%	70-135	07.09.2020 17:16	



Certificate of Analytical Results 666761

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SW05**
Lab Sample Id: 666761-006

Matrix: Soil
Date Collected: 07.09.2020 07:20

Date Received: 07.09.2020 13:53
Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.09.2020 15:00

Basis: Wet Weight

Seq Number: 3131235

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.09.2020 20:15	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.09.2020 20:15	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.09.2020 20:15	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.09.2020 20:15	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.09.2020 20:15	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.09.2020 20:15	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.09.2020 20:15	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	103	%	70-130	07.09.2020 20:15		
1,4-Difluorobenzene	540-36-3	102	%	70-130	07.09.2020 20:15		

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

LT Environmental, Inc.

PLU 25 BD 901H

Analytical Method: Chloride by EPA 300

Seq Number: 3131392

MB Sample Id: 7707139-1-BLK

Matrix: Solid

LCS Sample Id: 7707139-1-BKS

Prep Method: E300P

Date Prep: 07.10.2020

LCSD Sample Id: 7707139-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	243	97	255	102	90-110	5	20	mg/kg	07.10.2020 13:52	

Analytical Method: Chloride by EPA 300

Seq Number: 3131392

Parent Sample Id: 666761-001

Matrix: Soil

MS Sample Id: 666761-001 S

Prep Method: E300P

Date Prep: 07.10.2020

MSD Sample Id: 666761-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	22.7	200	226	102	227	102	90-110	0	20	mg/kg	07.10.2020 14:09	

Analytical Method: Chloride by EPA 300

Seq Number: 3131392

Parent Sample Id: 666861-002

Matrix: Soil

MS Sample Id: 666861-002 S

Prep Method: E300P

Date Prep: 07.10.2020

MSD Sample Id: 666861-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	13.7	200	217	102	217	102	90-110	0	20	mg/kg	07.10.2020 15:27	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3131224

MB Sample Id: 7707077-1-BLK

Matrix: Solid

LCS Sample Id: 7707077-1-BKS

Prep Method: SW8015P

Date Prep: 07.09.2020

LCSD Sample Id: 7707077-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1130	113	1140	114	70-135	1	35	mg/kg	07.09.2020 10:51	
Diesel Range Organics (DRO)	<50.0	1000	1170	117	1170	117	70-135	0	35	mg/kg	07.09.2020 10:51	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	93		120		121		70-135	%	07.09.2020 10:51
o-Terphenyl	98		115		118		70-135	%	07.09.2020 10:51

Analytical Method: TPH by SW8015 Mod

Seq Number: 3131224

Matrix: Solid

MB Sample Id: 7707077-1-BLK

Prep Method: SW8015P

Date Prep: 07.09.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	07.09.2020 10:30	

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

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

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

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

LT Environmental, Inc.

PLU 25 BD 901H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3131224

Parent Sample Id: 666761-001

Matrix: Soil

MS Sample Id: 666761-001 S

Prep Method: SW8015P

Date Prep: 07.09.2020

MSD Sample Id: 666761-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.2	1000	1140	114	1130	113	70-135	1	35	mg/kg	07.09.2020 15:12	
Diesel Range Organics (DRO)	<50.2	1000	1180	118	1150	115	70-135	3	35	mg/kg	07.09.2020 15:12	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	121		118		70-135	%	07.09.2020 15:12
o-Terphenyl	113		112		70-135	%	07.09.2020 15:12

Analytical Method: BTEX by EPA 8021B

Seq Number: 3131235

MB Sample Id: 7707073-1-BLK

Matrix: Solid

LCS Sample Id: 7707073-1-BKS

Prep Method: SW5035A

Date Prep: 07.09.2020

LCSD Sample Id: 7707073-1-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	0.0951	95	0.0935	94	70-130	2	35	mg/kg	07.09.2020 16:36	
Toluene	<0.00200	0.100	0.0922	92	0.0915	92	70-130	1	35	mg/kg	07.09.2020 16:36	
Ethylbenzene	<0.00200	0.100	0.0970	97	0.0931	93	71-129	4	35	mg/kg	07.09.2020 16:36	
m,p-Xylenes	<0.00400	0.200	0.198	99	0.189	95	70-135	5	35	mg/kg	07.09.2020 16:36	
o-Xylene	<0.00200	0.100	0.0991	99	0.0954	95	71-133	4	35	mg/kg	07.09.2020 16:36	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		97		100		70-130	%	07.09.2020 16:36
4-Bromofluorobenzene	99		97		97		70-130	%	07.09.2020 16:36

Analytical Method: BTEX by EPA 8021B

Seq Number: 3131235

Parent Sample Id: 666761-001

Matrix: Soil

MS Sample Id: 666761-001 S

Prep Method: SW5035A

Date Prep: 07.09.2020

MSD Sample Id: 666761-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.0936	94	0.0936	93	70-130	0	35	mg/kg	07.09.2020 17:16	
Toluene	<0.00199	0.0996	0.0921	92	0.0909	90	70-130	1	35	mg/kg	07.09.2020 17:16	
Ethylbenzene	<0.00199	0.0996	0.0973	98	0.0960	95	71-129	1	35	mg/kg	07.09.2020 17:16	
m,p-Xylenes	<0.00398	0.199	0.198	99	0.196	97	70-135	1	35	mg/kg	07.09.2020 17:16	
o-Xylene	<0.00199	0.0996	0.0975	98	0.0964	95	71-133	1	35	mg/kg	07.09.2020 17:16	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		102		70-130	%	07.09.2020 17:16
4-Bromofluorobenzene	101		98		70-130	%	07.09.2020 17:16

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

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

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

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



Chain of Custody

Work Order No: 16107161

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334
 Midland, TX (432-704-5440) EL Paso, TX (915)585-3443 Lubbock, TX (806)794-1296
 Hobbs, NM (575-392-7550) Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813-620-2000)

www.xenco.com Page 1 of 1

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littlell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	522 W. Mermod St.
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	jhill@ltenv.com, dmoir@ltenv.com

Program: UST/PT	☐ RP	☐ Crownfields	☐ RC	☐ Depthund
State of Project:				
Reporting Level II	☐ Level III	☐ ST/UST	☐ RP	☐ Level IV
Deliverables: EDD	☐ ADAPT	Other:		

Project Name:	PLU 25 AD 9014	Turn Around	
Project Number:	012920030	Routine	☒
P.O. Number:	Spa 211/20	Rush:	
Sampler's Name:	Jeremy Hill	Due Date:	

SAMPLE RECEIPT		Temp Blank:	☒ Yes ☐ No	Wet Ice:	☒ Yes ☐ No
Temperature (°C):	3.0	Thermometer ID	T-NM-007		
Received Intact:	☒ Yes ☐ No	Correction Factor:	-0.2		
Cooler Custody Seals:	☒ Yes ☐ No	Total Containers:	10		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0-8021)	Chloride (EPA 300.0)	ANALYSIS REQUEST	Work Order Notes
F517	S	7/9/20	0700	4'	1	X	X	X		
F518			0703	4'						
F523			0707	4'						
Su03			0711	0-5'						
Su04			0716	0-3'						
Su05			0720	0-4'						

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

Sample Comments

Composite

Total 200.7 / 6010 200.8 / 6020:

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

TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag TI U 1631 / 245.1 / 7470 / 7471 : Hg

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		7/9/20 1353			

Certificate of Analysis Summary 667030



Xenco

LT Environmental, Inc., Arvada, CO

Project Name: PLU 25 BD 901H

Project Id: 012920030

Contact: Dan Moir

Project Location:

Date Received in Lab: Mon 07.13.2020 13:55

Report Date: 07.15.2020 13:41

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	667030-001	667030-002	667030-003	667030-004	667030-005	667030-006
	<i>Field Id:</i>	FS24	FS25	FS26	FS27	FS28	FS29
	<i>Depth:</i>	4- ft	4- ft	3- ft	3- ft	3-4 ft	3-4 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	07.13.2020 07:22	07.13.2020 07:25	07.13.2020 07:35	07.13.2020 07:38	07.13.2020 07:42	07.13.2020 07:46
BTEX by EPA 8021B	<i>Extracted:</i>	07.13.2020 14:50	07.13.2020 14:50	07.13.2020 14:50	07.13.2020 14:50	07.13.2020 14:50	07.13.2020 14:50
	<i>Analyzed:</i>	07.14.2020 10:21	07.14.2020 10:42	07.13.2020 19:58	07.13.2020 20:20	07.13.2020 20:41	07.13.2020 21:02
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00202 0.00202	<0.00198 0.00198	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200
Toluene		0.00349 0.00200	0.00279 0.00202	<0.00198 0.00198	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200
Ethylbenzene		<0.00200 0.00200	<0.00202 0.00202	0.00372 0.00198	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200
m,p-Xylenes		<0.00400 0.00400	<0.00403 0.00403	<0.00396 0.00396	<0.00403 0.00403	<0.00401 0.00401	<0.00401 0.00401
o-Xylene		<0.00200 0.00200	<0.00202 0.00202	<0.00198 0.00198	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200
Total Xylenes		<0.00200 0.00200	<0.00202 0.00202	<0.00198 0.00198	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200
Total BTEX		0.00349 0.00200	0.00279 0.00202	0.00372 0.00198	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200
Chloride by EPA 300	<i>Extracted:</i>	07.13.2020 17:44	07.13.2020 17:44	07.13.2020 17:44	07.13.2020 17:44	07.13.2020 17:44	07.13.2020 17:44
	<i>Analyzed:</i>	07.13.2020 19:42	07.13.2020 19:47	07.13.2020 19:53	07.13.2020 20:10	07.13.2020 20:15	07.13.2020 20:21
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		2190 50.0	183 9.96	55.5 10.1	66.2 10.0	62.5 9.92	86.7 9.98
TPH by SW8015 Mod	<i>Extracted:</i>	07.13.2020 16:40	07.13.2020 16:40	07.13.2020 16:40	07.13.2020 16:40	07.13.2020 16:40	07.13.2020 16:40
	<i>Analyzed:</i>	07.13.2020 19:37	07.13.2020 20:18	07.13.2020 20:39	07.13.2020 20:59	07.13.2020 21:20	07.13.2020 21:40
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.2 50.2	<50.0 50.0	<50.0 50.0	<50.0 50.0	<50.0 50.0	<50.0 50.0
Diesel Range Organics (DRO)		<50.2 50.2	<50.0 50.0	<50.0 50.0	<50.0 50.0	<50.0 50.0	<50.0 50.0
Motor Oil Range Hydrocarbons (MRO)		<50.2 50.2	<50.0 50.0	<50.0 50.0	<50.0 50.0	<50.0 50.0	<50.0 50.0
Total GRO-DRO		<50.2 50.2	<50.0 50.0	<50.0 50.0	<50.0 50.0	<50.0 50.0	<50.0 50.0
Total TPH		<50.2 50.2	<50.0 50.0	<50.0 50.0	<50.0 50.0	<50.0 50.0	<50.0 50.0

BRL - Below Reporting Limit

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



Xenco

Certificate of Analysis Summary 667030

LT Environmental, Inc., Arvada, CO

Project Name: PLU 25 BD 901H

Project Id: 012920030

Contact: Dan Moir

Project Location:

Date Received in Lab: Mon 07.13.2020 13:55

Report Date: 07.15.2020 13:41

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	667030-007	667030-008				
	Field Id:	SW08	FS22A				
	Depth:	0-4 ft	4- ft				
	Matrix:	SOIL	SOIL				
	Sampled:	07.13.2020 07:57	07.13.2020 11:10				
BTEX by EPA 8021B	Extracted:	07.13.2020 14:50	07.13.2020 14:50				
	Analyzed:	07.13.2020 21:24	07.13.2020 21:45				
	Units/RL:	mg/kg RL	mg/kg RL				
	Benzene	<0.00200 0.00200	<0.00201 0.00201				
	Toluene	<0.00200 0.00200	<0.00201 0.00201				
	Ethylbenzene	<0.00200 0.00200	<0.00201 0.00201				
	m,p-Xylenes	<0.00400 0.00400	<0.00402 0.00402				
	o-Xylene	<0.00200 0.00200	<0.00201 0.00201				
	Total Xylenes	<0.00200 0.00200	<0.00201 0.00201				
	Total BTEX	<0.00200 0.00200	<0.00201 0.00201				
Chloride by EPA 300	Extracted:	07.13.2020 17:44	07.13.2020 17:44				
	Analyzed:	07.13.2020 20:26	07.13.2020 20:32				
	Units/RL:	mg/kg RL	mg/kg RL				
	Chloride	344 10.0	1200 50.3				
TPH by SW8015 Mod	Extracted:	07.13.2020 16:40	07.13.2020 16:40				
	Analyzed:	07.13.2020 22:01	07.13.2020 22:21				
	Units/RL:	mg/kg RL	mg/kg RL				
	Gasoline Range Hydrocarbons (GRO)	<50.0 50.0	<50.0 50.0				
	Diesel Range Organics (DRO)	<50.0 50.0	<50.0 50.0				
	Motor Oil Range Hydrocarbons (MRO)	<50.0 50.0	<50.0 50.0				
	Total GRO-DRO	<50.0 50.0	<50.0 50.0				
	Total TPH	<50.0 50.0	<50.0 50.0				

BRL - Below Reporting Limit

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

Jessica Kramer



Xenco

Analytical Report 667030

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU 25 BD 901H

012920030

07.15.2020

Collected By: Client

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

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-36), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-25), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-17)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-20-7)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



07.15.2020

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: Eurofins Xenco, LLC Report No(s): **667030**

PLU 25 BD 901H

Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 667030. 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 Eurofins Xenco, LLC. 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. 667030 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 Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

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

Jessica Kramer

Project Manager

A Small Business and Minority Company

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

**Sample Cross Reference 667030****LT Environmental, Inc., Arvada, CO**

PLU 25 BD 901H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS24	S	07.13.2020 07:22	4 ft	667030-001
FS25	S	07.13.2020 07:25	4 ft	667030-002
FS26	S	07.13.2020 07:35	3 ft	667030-003
FS27	S	07.13.2020 07:38	3 ft	667030-004
FS28	S	07.13.2020 07:42	3 - 4 ft	667030-005
FS29	S	07.13.2020 07:46	3 - 4 ft	667030-006
SW08	S	07.13.2020 07:57	0 - 4 ft	667030-007
FS22A	S	07.13.2020 11:10	4 ft	667030-008



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *PLU 25 BD 901H*

Project ID: 012920030
Work Order Number(s): 667030

Report Date: 07.15.2020
Date Received: 07.13.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 667030

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS24** Matrix: Soil Date Received: 07.13.2020 13:55
 Lab Sample Id: 667030-001 Date Collected: 07.13.2020 07:22 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.13.2020 17:44 Basis: Wet Weight
 Seq Number: 3131514

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2190	50.0	mg/kg	07.13.2020 19:42		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.13.2020 16:40 Basis: Wet Weight
 Seq Number: 3131538

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	07.13.2020 19:37	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	07.13.2020 19:37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	07.13.2020 19:37	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	07.13.2020 19:37	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	07.13.2020 19:37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	07.13.2020 19:37	
o-Terphenyl	84-15-1	111	%	70-135	07.13.2020 19:37	



Certificate of Analytical Results 667030

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS24**
Lab Sample Id: 667030-001

Matrix: Soil
Date Collected: 07.13.2020 07:22

Date Received: 07.13.2020 13:55
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.13.2020 14:50

Basis: Wet Weight

Seq Number: 3131589

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.14.2020 10:21	U	1
Toluene	108-88-3	0.00349	0.00200	mg/kg	07.14.2020 10:21		1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.14.2020 10:21	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	07.14.2020 10:21	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.14.2020 10:21	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.14.2020 10:21	U	1
Total BTEX		0.00349	0.00200	mg/kg	07.14.2020 10:21		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	98	%	70-130	07.14.2020 10:21		
4-Bromofluorobenzene	460-00-4	95	%	70-130	07.14.2020 10:21		



Certificate of Analytical Results 667030

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS25** Matrix: **Soil** Date Received: 07.13.2020 13:55
 Lab Sample Id: 667030-002 Date Collected: 07.13.2020 07:25 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: **MAB** % Moisture:
 Analyst: **MAB** Date Prep: 07.13.2020 17:44 Basis: **Wet Weight**
 Seq Number: 3131514

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	183	9.96	mg/kg	07.13.2020 19:47		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: **DTH** % Moisture:
 Analyst: **DTH** Date Prep: 07.13.2020 16:40 Basis: **Wet Weight**
 Seq Number: 3131564

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.13.2020 20:18	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.13.2020 20:18	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.13.2020 20:18	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	07.13.2020 20:18	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.13.2020 20:18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	07.13.2020 20:18	
o-Terphenyl	84-15-1	112	%	70-135	07.13.2020 20:18	



Certificate of Analytical Results 667030

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS25**
Lab Sample Id: 667030-002

Matrix: Soil
Date Collected: 07.13.2020 07:25

Date Received: 07.13.2020 13:55
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.13.2020 14:50

Basis: Wet Weight

Seq Number: 3131589

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.14.2020 10:42	U	1
Toluene	108-88-3	0.00279	0.00202	mg/kg	07.14.2020 10:42		1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.14.2020 10:42	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	07.14.2020 10:42	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.14.2020 10:42	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.14.2020 10:42	U	1
Total BTEX		0.00279	0.00202	mg/kg	07.14.2020 10:42		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	104	%	70-130	07.14.2020 10:42		
1,4-Difluorobenzene	540-36-3	101	%	70-130	07.14.2020 10:42		



Certificate of Analytical Results 667030

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS26** Matrix: Soil Date Received: 07.13.2020 13:55
 Lab Sample Id: 667030-003 Date Collected: 07.13.2020 07:35 Sample Depth: 3 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.13.2020 17:44 Basis: Wet Weight
 Seq Number: 3131514

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	55.5	10.1	mg/kg	07.13.2020 19:53		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.13.2020 16:40 Basis: Wet Weight
 Seq Number: 3131564

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.13.2020 20:39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.13.2020 20:39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.13.2020 20:39	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	07.13.2020 20:39	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.13.2020 20:39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	07.13.2020 20:39	
o-Terphenyl	84-15-1	113	%	70-135	07.13.2020 20:39	



Certificate of Analytical Results 667030

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS26**
Lab Sample Id: 667030-003

Matrix: Soil
Date Collected: 07.13.2020 07:35

Date Received: 07.13.2020 13:55
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.13.2020 14:50

Basis: Wet Weight

Seq Number: 3131589

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	07.13.2020 19:58	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.13.2020 19:58	U	1
Ethylbenzene	100-41-4	0.00372	0.00198	mg/kg	07.13.2020 19:58		1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	07.13.2020 19:58	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.13.2020 19:58	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	07.13.2020 19:58	U	1
Total BTEX		0.00372	0.00198	mg/kg	07.13.2020 19:58		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	07.13.2020 19:58	
4-Bromofluorobenzene	460-00-4	109	%	70-130	07.13.2020 19:58	



Certificate of Analytical Results 667030

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS27** Matrix: Soil Date Received: 07.13.2020 13:55
 Lab Sample Id: 667030-004 Date Collected: 07.13.2020 07:38 Sample Depth: 3 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.13.2020 17:44 Basis: Wet Weight
 Seq Number: 3131514

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	66.2	10.0	mg/kg	07.13.2020 20:10		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.13.2020 16:40 Basis: Wet Weight
 Seq Number: 3131564

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.13.2020 20:59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.13.2020 20:59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.13.2020 20:59	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	07.13.2020 20:59	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.13.2020 20:59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	07.13.2020 20:59	
o-Terphenyl	84-15-1	108	%	70-135	07.13.2020 20:59	



Certificate of Analytical Results 667030

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS27**
Lab Sample Id: 667030-004

Matrix: Soil
Date Collected: 07.13.2020 07:38

Date Received: 07.13.2020 13:55
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.13.2020 14:50

Basis: Wet Weight

Seq Number: 3131589

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.13.2020 20:20	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.13.2020 20:20	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.13.2020 20:20	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	07.13.2020 20:20	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.13.2020 20:20	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.13.2020 20:20	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.13.2020 20:20	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	108	%	70-130	07.13.2020 20:20		
1,4-Difluorobenzene	540-36-3	101	%	70-130	07.13.2020 20:20		



Certificate of Analytical Results 667030

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS28** Matrix: Soil Date Received: 07.13.2020 13:55
 Lab Sample Id: 667030-005 Date Collected: 07.13.2020 07:42 Sample Depth: 3 - 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.13.2020 17:44 Basis: Wet Weight
 Seq Number: 3131514

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	62.5	9.92	mg/kg	07.13.2020 20:15		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.13.2020 16:40 Basis: Wet Weight
 Seq Number: 3131564

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.13.2020 21:20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.13.2020 21:20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.13.2020 21:20	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	07.13.2020 21:20	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.13.2020 21:20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	07.13.2020 21:20	
o-Terphenyl	84-15-1	104	%	70-135	07.13.2020 21:20	



Certificate of Analytical Results 667030

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS28**
Lab Sample Id: 667030-005

Matrix: Soil
Date Collected: 07.13.2020 07:42

Date Received: 07.13.2020 13:55
Sample Depth: 3 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.13.2020 14:50

Basis: Wet Weight

Seq Number: 3131589

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.13.2020 20:41	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.13.2020 20:41	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.13.2020 20:41	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.13.2020 20:41	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.13.2020 20:41	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.13.2020 20:41	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.13.2020 20:41	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	103	%	70-130	07.13.2020 20:41		
1,4-Difluorobenzene	540-36-3	100	%	70-130	07.13.2020 20:41		



Certificate of Analytical Results 667030

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS29** Matrix: Soil Date Received: 07.13.2020 13:55
 Lab Sample Id: 667030-006 Date Collected: 07.13.2020 07:46 Sample Depth: 3 - 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.13.2020 17:44 Basis: Wet Weight
 Seq Number: 3131514

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	86.7	9.98	mg/kg	07.13.2020 20:21		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.13.2020 16:40 Basis: Wet Weight
 Seq Number: 3131564

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.13.2020 21:40	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.13.2020 21:40	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.13.2020 21:40	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	07.13.2020 21:40	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.13.2020 21:40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	07.13.2020 21:40	
o-Terphenyl	84-15-1	103	%	70-135	07.13.2020 21:40	



Certificate of Analytical Results 667030

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS29**
Lab Sample Id: 667030-006

Matrix: Soil
Date Collected: 07.13.2020 07:46

Date Received: 07.13.2020 13:55
Sample Depth: 3 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.13.2020 14:50

Basis: Wet Weight

Seq Number: 3131589

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.13.2020 21:02	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.13.2020 21:02	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.13.2020 21:02	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.13.2020 21:02	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.13.2020 21:02	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.13.2020 21:02	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.13.2020 21:02	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	109	%	70-130	07.13.2020 21:02		
1,4-Difluorobenzene	540-36-3	102	%	70-130	07.13.2020 21:02		



Certificate of Analytical Results 667030

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SW08** Matrix: Soil Date Received: 07.13.2020 13:55
 Lab Sample Id: 667030-007 Date Collected: 07.13.2020 07:57 Sample Depth: 0 - 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.13.2020 17:44 Basis: Wet Weight
 Seq Number: 3131514

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	344	10.0	mg/kg	07.13.2020 20:26		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.13.2020 16:40 Basis: Wet Weight
 Seq Number: 3131564

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.13.2020 22:01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.13.2020 22:01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.13.2020 22:01	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	07.13.2020 22:01	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.13.2020 22:01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	07.13.2020 22:01	
o-Terphenyl	84-15-1	106	%	70-135	07.13.2020 22:01	



Certificate of Analytical Results 667030

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SW08**
Lab Sample Id: 667030-007

Matrix: Soil
Date Collected: 07.13.2020 07:57

Date Received: 07.13.2020 13:55
Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3131589

Prep Method: SW5035A

% Moisture:

Date Prep: 07.13.2020 14:50

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.13.2020 21:24	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.13.2020 21:24	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.13.2020 21:24	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	07.13.2020 21:24	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.13.2020 21:24	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.13.2020 21:24	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.13.2020 21:24	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	104	%	70-130	07.13.2020 21:24		
1,4-Difluorobenzene	540-36-3	100	%	70-130	07.13.2020 21:24		



Certificate of Analytical Results 667030

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS22A** Matrix: Soil Date Received: 07.13.2020 13:55
 Lab Sample Id: 667030-008 Date Collected: 07.13.2020 11:10 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.13.2020 17:44 Basis: Wet Weight
 Seq Number: 3131514

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1200	50.3	mg/kg	07.13.2020 20:32		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.13.2020 16:40 Basis: Wet Weight
 Seq Number: 3131564

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.13.2020 22:21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.13.2020 22:21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.13.2020 22:21	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	07.13.2020 22:21	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.13.2020 22:21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	07.13.2020 22:21	
o-Terphenyl	84-15-1	105	%	70-135	07.13.2020 22:21	



Certificate of Analytical Results 667030

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS22A**
Lab Sample Id: 667030-008

Matrix: Soil
Date Collected: 07.13.2020 11:10

Date Received: 07.13.2020 13:55
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.13.2020 14:50

Basis: Wet Weight

Seq Number: 3131589

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.13.2020 21:45	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.13.2020 21:45	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.13.2020 21:45	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.13.2020 21:45	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.13.2020 21:45	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.13.2020 21:45	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.13.2020 21:45	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	106	%	70-130	07.13.2020 21:45		
1,4-Difluorobenzene	540-36-3	100	%	70-130	07.13.2020 21:45		

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

LT Environmental, Inc.

PLU 25 BD 901H

Analytical Method: Chloride by EPA 300

Seq Number: 3131514

MB Sample Id: 7707248-1-BLK

Matrix: Solid

Prep Method: E300P

Date Prep: 07.13.2020

LCS Sample Id: 7707248-1-BKS

LCSD Sample Id: 7707248-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	244	98	255	102	90-110	4	20	mg/kg	07.13.2020 19:08	

Analytical Method: Chloride by EPA 300

Seq Number: 3131514

Parent Sample Id: 667021-019

Matrix: Soil

Prep Method: E300P

Date Prep: 07.13.2020

MS Sample Id: 667021-019 S

MSD Sample Id: 667021-019 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	55.5	201	256	100	256	100	90-110	0	20	mg/kg	07.13.2020 19:25	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3131538

MB Sample Id: 7707282-1-BLK

Matrix: Solid

Prep Method: SW8015P

Date Prep: 07.13.2020

LCS Sample Id: 7707282-1-BKS

LCSD Sample Id: 7707282-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1230	123	1090	109	70-135	12	35	mg/kg	07.14.2020 10:07	
Diesel Range Organics (DRO)	<50.0	1000	1220	122	1060	106	70-135	14	35	mg/kg	07.14.2020 10:07	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	78		130		117		70-135	%	07.14.2020 10:07
o-Terphenyl	80		116		103		70-135	%	07.14.2020 10:07

Analytical Method: TPH by SW8015 Mod

Seq Number: 3131564

MB Sample Id: 7707281-1-BLK

Matrix: Solid

Prep Method: SW8015P

Date Prep: 07.13.2020

LCS Sample Id: 7707281-1-BKS

LCSD Sample Id: 7707281-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1170	117	1080	108	70-135	8	35	mg/kg	07.13.2020 14:46	
Diesel Range Organics (DRO)	<50.0	1000	1210	121	1100	110	70-135	10	35	mg/kg	07.13.2020 14:46	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	107		124		115		70-135	%	07.13.2020 14:46
o-Terphenyl	113		120		111		70-135	%	07.13.2020 14:46

Analytical Method: TPH by SW8015 Mod

Seq Number: 3131538

Matrix: Solid

Prep Method: SW8015P

Date Prep: 07.13.2020

MB Sample Id: 7707282-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	07.13.2020 14:26	

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

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

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

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

LT Environmental, Inc.

PLU 25 BD 901H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3131564

Matrix: Solid

Prep Method: SW8015P

Date Prep: 07.13.2020

MB Sample Id: 7707281-1-BLK

Parameter

Motor Oil Range Hydrocarbons (MRO)

MB
Result

<50.0

Units

mg/kg

Analysis
Date

07.13.2020 14:26

Flag

Analytical Method: TPH by SW8015 Mod

Seq Number: 3131538

Matrix: Soil

Prep Method: SW8015P

Date Prep: 07.13.2020

Parent Sample Id: 667017-002

MS Sample Id: 667017-002 S

MSD Sample Id: 667017-002 SD

Parameter

Gasoline Range Hydrocarbons (GRO)

Parent
Result

<50.2

Spike
Amount

1000

MS
Result

1230

MS
%Rec

123

MSD
Result

1070

MSD
%Rec

107

Limits

70-135

%RPD

14

RPD
Limit

35

Units

mg/kg

Analysis
Date

07.13.2020 15:47

Flag

Diesel Range Organics (DRO)

<50.2

1000

1200

120

1060

106

70-135

12

35

mg/kg

07.13.2020 15:47

Surrogate

1-Chlorooctane

MS
%Rec

113

MS
FlagMSD
%Rec

100

MSD
Flag

Limits

70-135

Units

%

Analysis
Date

07.13.2020 15:47

o-Terphenyl

85

75

70-135

%

%

07.13.2020 15:47

Analytical Method: TPH by SW8015 Mod

Seq Number: 3131564

Matrix: Soil

Prep Method: SW8015P

Date Prep: 07.13.2020

Parent Sample Id: 666865-013

MS Sample Id: 666865-013 S

MSD Sample Id: 666865-013 SD

Parameter

Gasoline Range Hydrocarbons (GRO)

Parent
Result

<50.0

Spike
Amount

1000

MS
Result

1340

MS
%Rec

134

MSD
Result

1320

MSD
%Rec

132

Limits

70-135

%RPD

2

RPD
Limit

35

Units

mg/kg

Analysis
Date

07.13.2020 15:47

Flag

Diesel Range Organics (DRO)

1450

1000

2550

110

2550

110

70-135

0

35

mg/kg

07.13.2020 15:47

Surrogate

1-Chlorooctane

MS
%Rec

124

MS
FlagMSD
%Rec

133

MSD
Flag

Limits

70-135

Units

%

Analysis
Date

07.13.2020 15:47

o-Terphenyl

107

105

70-135

%

%

07.13.2020 15:47

Analytical Method: BTEX by EPA 8021B

Seq Number: 3131589

Matrix: Solid

Prep Method: SW5035A

Date Prep: 07.13.2020

MB Sample Id: 7707252-1-BLK

LCS Sample Id: 7707252-1-BKS

LCSD Sample Id: 7707252-1-BSD

Parameter

Benzene

MB
Result

<0.00200

Spike
Amount

0.100

LCS
Result

0.114

LCS
%Rec

114

LCSD
Result

0.119

LCSD
%Rec

119

Limits

70-130

%RPD

4

RPD
Limit

35

Units

mg/kg

Analysis
Date

07.13.2020 16:33

Flag

Toluene

<0.00200

0.100

0.108

108

0.112

112

70-130

4

35

mg/kg

07.13.2020 16:33

Ethylbenzene

<0.00200

0.100

0.101

101

0.105

105

71-129

4

35

mg/kg

07.13.2020 16:33

m,p-Xylenes

<0.00400

0.200

0.205

103

0.212

106

70-135

3

35

mg/kg

07.13.2020 16:33

o-Xylene

<0.00200

0.100

0.101

101

0.105

105

71-133

4

35

mg/kg

07.13.2020 16:33

Surrogate

1,4-Difluorobenzene

MB
%Rec

98

MB
FlagLCS
%Rec

99

LCS
FlagLCSD
%Rec

100

LCSD
Flag

Limits

70-130

Units

%

Analysis
Date

07.13.2020 16:33

4-Bromofluorobenzene

93

102

103

70-130

%

%

07.13.2020 16:33

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

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

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

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

LT Environmental, Inc.
PLU 25 BD 901H

Analytical Method: BTEX by EPA 8021B

Seq Number: 3131589

Parent Sample Id: 667021-019

Matrix: Soil

MS Sample Id: 667021-019 S

Prep Method: SW5035A

Date Prep: 07.13.2020

MSD Sample Id: 667021-019 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.114	114	0.111	111	70-130	3	35	mg/kg	07.13.2020 17:16	
Toluene	<0.00200	0.100	0.108	108	0.105	105	70-130	3	35	mg/kg	07.13.2020 17:16	
Ethylbenzene	<0.00200	0.100	0.0986	99	0.0976	98	71-129	1	35	mg/kg	07.13.2020 17:16	
m,p-Xylenes	<0.00400	0.200	0.199	100	0.198	99	70-135	1	35	mg/kg	07.13.2020 17:16	
o-Xylene	<0.00200	0.100	0.0975	98	0.0982	98	71-133	1	35	mg/kg	07.13.2020 17:16	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		100		70-130	%	07.13.2020 17:16
4-Bromofluorobenzene	105		103		70-130	%	07.13.2020 17:16

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

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

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

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



Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334
Midland, TX (432) 704-5440 EL Paso, TX (915) 565-3443 Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550 Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000

Chain of Custody

Work Order No: 467030

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littlell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	522 W. Mermod St.
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	jhlill@xenco.com, dmoir@xenco.com

Project Name:	PLU 25 RD 901H	Turn Around	
Project Number:	01920030	Routine	☒
P.O. Number:	3011 dtd 2/11/20	Rush:	
Sampler's Name:	Jeremy Hill	Due Date:	

SAMPLE RECEIPT				ANALYSIS REQUEST				Work Order Notes	
Temperature (°C):	8.2 / 8.0	Temp Blank:	Yes ☒ No ☒	Wet Ice:	Yes ☒ No ☒	Thermometer ID	TMM07	TAT starts the day received by the lab, if received by 4:30pm	
Received In tact:	Yes ☒ No ☒	Correction Factor:	-0.2	Sample Comments					
Cooler Custody Seals:	Yes ☒ No ☒	Total Containers:	8						
Sample Custody Seals:	Yes ☒ No ☒								

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0-8021)	Chloride (EPA 300.0)	ANALYSIS REQUEST																Work Order Notes
FS24	S	7/13/20	0722	4'	1	X	X	X																	Composite
FS25			0725	4'	1	X	X	X																	
FS26			0735	3'	1	X	X	X																	
FS27			0738	3'	1	X	X	X																	
FS28			0742	3-4'	1	X	X	X																	
FS29			0746	3-4'	1	X	X	X																	
SW28			0757	0-4'	1	X	X	X																	
FS2A			1110	4'	1	X	X	X																	

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	7/13/20 13:55			

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 07.13.2020 01.55.00 PM

Work Order #: 667030

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

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

Samples received in bulk containers.

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

Analyst:

PH Device/Lot#:

Checklist completed by:



Elizabeth McClellan

Date: 07.13.2020

Checklist reviewed by:



Jessica Kramer

Date: 07.15.2020



Xenco

Certificate of Analysis Summary 667127

LT Environmental, Inc., Arvada, CO

Project Name: PLU 25 BD 901H

Project Id: 012920030

Contact: Dan Moir

Project Location:

Date Received in Lab: Tue 07.14.2020 13:20

Report Date: 07.15.2020 13:41

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	667127-001	667127-002				
	Field Id:	SW07	SW09				
	Depth:	0-4 ft	0-4 ft				
	Matrix:	SOIL	SOIL				
	Sampled:	07.14.2020 09:41	07.14.2020 11:03				
BTEX by EPA 8021B	Extracted:	** ** *		** ** *			
	Analyzed:	07.14.2020 21:50		07.14.2020 22:11			
	Units/RL:	mg/kg	RL	mg/kg	RL		
	Benzene		<0.00201	0.00201	<0.00200	0.00200	
Toluene		<0.00201	0.00201	<0.00200	0.00200		
Ethylbenzene		<0.00201	0.00201	<0.00200	0.00200		
m,p-Xylenes		<0.00402	0.00402	<0.00401	0.00401		
o-Xylene		<0.00201	0.00201	<0.00200	0.00200		
Total Xylenes		<0.00201	0.00201	<0.00200	0.00200		
Total BTEX		<0.00201	0.00201	<0.00200	0.00200		
Chloride by EPA 300	Extracted:	07.14.2020 14:44		07.14.2020 14:44			
	Analyzed:	07.14.2020 16:08		07.14.2020 16:02			
	Units/RL:	mg/kg	RL	mg/kg	RL		
Chloride		454	9.98	165	9.96		
TPH by SW8015 Mod	Extracted:	07.14.2020 15:00		07.14.2020 15:00			
	Analyzed:	07.14.2020 16:16		07.14.2020 17:20			
	Units/RL:	mg/kg	RL	mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)		<50.3	50.3	<50.0	50.0		
Diesel Range Organics (DRO)		<50.3	50.3	<50.0	50.0		
Motor Oil Range Hydrocarbons (MRO)		<50.3	50.3	<50.0	50.0		
Total GRO-DRO		<50.3	50.3	<50.0	50.0		
Total TPH		<50.3	50.3	<50.0	50.0		

BRL - Below Reporting Limit

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



Xenco

Analytical Report 667127

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU 25 BD 901H

012920030

07.15.2020

Collected By: Client

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

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-36), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-25), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-17)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-20-7)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



07.15.2020

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: Eurofins Xenco, LLC Report No(s): **667127**

PLU 25 BD 901H

Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 667127. 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 Eurofins Xenco, LLC. 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. 667127 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 Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

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

Jessica Kramer

Project Manager

A Small Business and Minority Company

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

**Sample Cross Reference 667127****LT Environmental, Inc., Arvada, CO**

PLU 25 BD 901H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW07	S	07.14.2020 09:41	0 - 4 ft	667127-001
SW09	S	07.14.2020 11:03	0 - 4 ft	667127-002



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 25 BD 901H

Project ID: 012920030
Work Order Number(s): 667127

Report Date: 07.15.2020
Date Received: 07.14.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 667127

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SW07** Matrix: Soil Date Received: 07.14.2020 13:20
 Lab Sample Id: 667127-001 Date Collected: 07.14.2020 09:41 Sample Depth: 0 - 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.14.2020 14:44 Basis: Wet Weight
 Seq Number: 3131617

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	454	9.98	mg/kg	07.14.2020 16:08		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.14.2020 15:00 Basis: Wet Weight
 Seq Number: 3131618

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	07.14.2020 16:16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	07.14.2020 16:16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	07.14.2020 16:16	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	07.14.2020 16:16	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	07.14.2020 16:16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	07.14.2020 16:16	
o-Terphenyl	84-15-1	106	%	70-135	07.14.2020 16:16	



Certificate of Analytical Results 667127

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SW07**
Lab Sample Id: 667127-001

Matrix: Soil
Date Collected: 07.14.2020 09:41

Date Received: 07.14.2020 13:20
Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3131615

Prep Method: SW5035A

% Moisture:

Date Prep: 07.13.2020 16:36

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.14.2020 21:50	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.14.2020 21:50	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.14.2020 21:50	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.14.2020 21:50	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.14.2020 21:50	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.14.2020 21:50	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.14.2020 21:50	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	102	%	70-130	07.14.2020 21:50		
1,4-Difluorobenzene	540-36-3	101	%	70-130	07.14.2020 21:50		



Certificate of Analytical Results 667127

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SW09** Matrix: Soil Date Received: 07.14.2020 13:20
 Lab Sample Id: 667127-002 Date Collected: 07.14.2020 11:03 Sample Depth: 0 - 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.14.2020 14:44 Basis: Wet Weight
 Seq Number: 3131617

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	165	9.96	mg/kg	07.14.2020 16:02		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.14.2020 15:00 Basis: Wet Weight
 Seq Number: 3131618

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.14.2020 17:20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.14.2020 17:20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.14.2020 17:20	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	07.14.2020 17:20	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.14.2020 17:20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	07.14.2020 17:20	
o-Terphenyl	84-15-1	103	%	70-135	07.14.2020 17:20	



Certificate of Analytical Results 667127

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SW09**
Lab Sample Id: 667127-002

Matrix: Soil
Date Collected: 07.14.2020 11:03

Date Received: 07.14.2020 13:20
Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3131615

Prep Method: SW5035A

% Moisture:

Date Prep: 07.13.2020 16:36

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.14.2020 22:11	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.14.2020 22:11	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.14.2020 22:11	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.14.2020 22:11	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.14.2020 22:11	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.14.2020 22:11	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.14.2020 22:11	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	103	%	70-130	07.14.2020 22:11		
1,4-Difluorobenzene	540-36-3	105	%	70-130	07.14.2020 22:11		

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

LT Environmental, Inc.

PLU 25 BD 901H

Analytical Method: Chloride by EPA 300

Seq Number: 3131617

MB Sample Id: 7707345-1-BLK

Matrix: Solid

LCS Sample Id: 7707345-1-BKS

Prep Method: E300P

Date Prep: 07.14.2020

LCSD Sample Id: 7707345-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	248	99	259	104	90-110	4	20	mg/kg	07.14.2020 15:34	

Analytical Method: Chloride by EPA 300

Seq Number: 3131617

Parent Sample Id: 667127-001

Matrix: Soil

MS Sample Id: 667127-001 S

Prep Method: E300P

Date Prep: 07.14.2020

MSD Sample Id: 667127-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	454	200	654	100	650	98	90-110	1	20	mg/kg	07.14.2020 16:13	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3131618

MB Sample Id: 7707326-1-BLK

Matrix: Solid

LCS Sample Id: 7707326-1-BKS

Prep Method: SW8015P

Date Prep: 07.14.2020

LCSD Sample Id: 7707326-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1190	119	1160	116	70-135	3	35	mg/kg	07.14.2020 15:35	
Diesel Range Organics (DRO)	<50.0	1000	1270	127	1190	119	70-135	7	35	mg/kg	07.14.2020 15:35	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	109		120		126		70-135	%	07.14.2020 15:35
o-Terphenyl	117		122		120		70-135	%	07.14.2020 15:35

Analytical Method: TPH by SW8015 Mod

Seq Number: 3131618

Matrix: Solid

MB Sample Id: 7707326-1-BLK

Prep Method: SW8015P

Date Prep: 07.14.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	07.14.2020 15:14	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3131618

Matrix: Soil

Parent Sample Id: 667127-001

MS Sample Id: 667127-001 S

Prep Method: SW8015P

Date Prep: 07.14.2020

MSD Sample Id: 667127-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.9	998	968	97	946	95	70-135	2	35	mg/kg	07.14.2020 16:37	
Diesel Range Organics (DRO)	<49.9	998	1150	115	1110	111	70-135	4	35	mg/kg	07.14.2020 16:37	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	117		120		70-135	%	07.14.2020 16:37
o-Terphenyl	121		115		70-135	%	07.14.2020 16:37

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

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

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

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

LT Environmental, Inc.

PLU 25 BD 901H

Analytical Method: BTEX by EPA 8021B

Seq Number: 3131615

MB Sample Id: 7707347-1-BLK

Matrix: Solid

LCS Sample Id: 7707347-1-BKS

Prep Method: SW5035A

Date Prep: 07.13.2020

LCSD Sample Id: 7707347-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.106	106	0.0993	99	70-130	7	35	mg/kg	07.14.2020 19:53	
Toluene	<0.00200	0.100	0.0987	99	0.0942	94	70-130	5	35	mg/kg	07.14.2020 19:53	
Ethylbenzene	<0.00200	0.100	0.103	103	0.0970	97	71-129	6	35	mg/kg	07.14.2020 19:53	
m,p-Xylenes	<0.00400	0.200	0.208	104	0.198	99	70-135	5	35	mg/kg	07.14.2020 19:53	
o-Xylene	<0.00200	0.100	0.103	103	0.0973	97	71-133	6	35	mg/kg	07.14.2020 19:53	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		101		98		70-130	%	07.14.2020 19:53
4-Bromofluorobenzene	107		104		94		70-130	%	07.14.2020 19:53

Analytical Method: BTEX by EPA 8021B

Seq Number: 3131615

Parent Sample Id: 667127-001

Matrix: Soil

MS Sample Id: 667127-001 S

Prep Method: SW5035A

Date Prep: 07.13.2020

MSD Sample Id: 667127-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.113	113	0.106	106	70-130	6	35	mg/kg	07.14.2020 20:34	
Toluene	<0.00200	0.100	0.106	106	0.0966	97	70-130	9	35	mg/kg	07.14.2020 20:34	
Ethylbenzene	<0.00200	0.100	0.109	109	0.0974	97	71-129	11	35	mg/kg	07.14.2020 20:34	
m,p-Xylenes	<0.00400	0.200	0.221	111	0.196	98	70-135	12	35	mg/kg	07.14.2020 20:34	
o-Xylene	<0.00200	0.100	0.109	109	0.0967	97	71-133	12	35	mg/kg	07.14.2020 20:34	

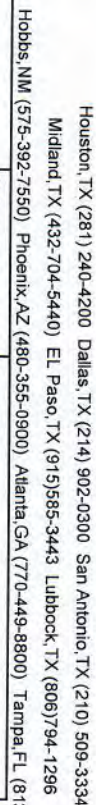
Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		101		70-130	%	07.14.2020 20:34
4-Bromofluorobenzene	95		102		70-130	%	07.14.2020 20:34

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

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

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

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



Chain of Custody

Work Order No.:

ket 197

Project Manager:		Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:		LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:		3300 North A Street	Address:	522 W. Memrod St.
City, State ZIP:		Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:		(432) 236-3849	Email:	jhill@ltenv.com, dmoir@ltenv.com

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

[illegible]

service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		7/14/20 13:30			
			2		
			4		
			6		

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 07.14.2020 01.20.00 PM

Work Order #: 667127

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

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

Samples received in bulk containers

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

Analyst:

PH Device/Lot#:

Checklist completed by:



Elizabeth McClellan

Date: 07.14.2020

Checklist reviewed by:



Jessica Kramer

Date: 07.15.2020

Certificate of Analysis Summary 667339



LT Environmental, Inc., Arvada, CO

Project Name: PLU 25 BD 901H

Project Id: 012920030

Contact: Dan Moir

Project Location:

Date Received in Lab: Wed 07.15.2020 15:30

Report Date: 07.16.2020 14:53

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	667339-001	667339-002	667339-003	667339-004		
	Field Id:	SW06	FS38	SW12	SW10		
	Depth:	0-4 ft	3- ft	0-4 ft	0-4 ft		
	Matrix:	SOIL	SOIL	SOIL	SOIL		
	Sampled:	07.15.2020 07:08	07.15.2020 07:56	07.15.2020 12:52	07.15.2020 13:19		
BTEX by EPA 8021B	Extracted:	07.15.2020 16:37	07.15.2020 16:37	07.15.2020 16:37	07.15.2020 16:37		
	Analyzed:	07.15.2020 18:56	07.15.2020 19:18	07.15.2020 19:39	07.15.2020 20:01		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Benzene		<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202	<0.00202 0.00202		
Toluene		<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202	<0.00202 0.00202		
Ethylbenzene		<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202	<0.00202 0.00202		
m,p-Xylenes		<0.00399 0.00399	<0.00398 0.00398	<0.00403 0.00403	<0.00404 0.00404		
o-Xylene		<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202	<0.00202 0.00202		
Total Xylenes		<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202	<0.00202 0.00202		
Total BTEX		<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202	<0.00202 0.00202		
Chloride by EPA 300	Extracted:	07.15.2020 16:02	07.15.2020 16:02	07.15.2020 16:02	07.15.2020 16:02		
	Analyzed:	07.15.2020 18:03	07.15.2020 18:20	07.15.2020 18:26	07.15.2020 18:42		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		382 9.96	386 10.0	292 10.0	525 10.1		
TPH by SW8015 Mod	Extracted:	07.15.2020 15:35	07.15.2020 15:35	07.15.2020 15:35	07.15.2020 15:35		
	Analyzed:	07.15.2020 15:59	07.15.2020 16:20	07.15.2020 16:40	07.15.2020 17:01		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Gasoline Range Hydrocarbons (GRO)		<50.2 50.2	<50.2 50.2	<50.2 50.2	<50.0 50.0		
Diesel Range Organics (DRO)		<50.2 50.2	<50.2 50.2	<50.2 50.2	<50.0 50.0		
Motor Oil Range Hydrocarbons (MRO)		<50.2 50.2	<50.2 50.2	<50.2 50.2	<50.0 50.0		
Total GRO-DRO		<50.2 50.2	<50.2 50.2	<50.2 50.2	<50.0 50.0		
Total TPH		<50.2 50.2	<50.2 50.2	<50.2 50.2	<50.0 50.0		

BRL - Below Reporting Limit

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



Xenco

Analytical Report 667339

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU 25 BD 901H

012920030

07.16.2020

Collected By: Client

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

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-36), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-25), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-17)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-20-7)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



07.16.2020

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: Eurofins Xenco, LLC Report No(s): **667339**

PLU 25 BD 901H

Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 667339. 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 Eurofins Xenco, LLC. 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. 667339 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 Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

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

Jessica Kramer

Project Manager

A Small Business and Minority Company

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

**Sample Cross Reference 667339****LT Environmental, Inc., Arvada, CO**

PLU 25 BD 901H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW06	S	07.15.2020 07:08	0 - 4 ft	667339-001
FS38	S	07.15.2020 07:56	3 ft	667339-002
SW12	S	07.15.2020 12:52	0 - 4 ft	667339-003
SW10	S	07.15.2020 13:19	0 - 4 ft	667339-004



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 25 BD 901H

Project ID: 012920030
Work Order Number(s): 667339

Report Date: 07.16.2020
Date Received: 07.15.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 667339

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SW06** Matrix: Soil Date Received: 07.15.2020 15:30
 Lab Sample Id: 667339-001 Date Collected: 07.15.2020 07:08 Sample Depth: 0 - 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.15.2020 16:02 Basis: Wet Weight
 Seq Number: 3131770

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	382	9.96	mg/kg	07.15.2020 18:03		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.15.2020 15:35 Basis: Wet Weight
 Seq Number: 3131775

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	07.15.2020 15:59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	07.15.2020 15:59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	07.15.2020 15:59	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	07.15.2020 15:59	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	07.15.2020 15:59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	07.15.2020 15:59	
o-Terphenyl	84-15-1	108	%	70-135	07.15.2020 15:59	



Certificate of Analytical Results 667339

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SW06**
Lab Sample Id: 667339-001

Matrix: Soil
Date Collected: 07.15.2020 07:08

Date Received: 07.15.2020 15:30
Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.15.2020 16:37

Basis: Wet Weight

Seq Number: 3131767

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.15.2020 18:56	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.15.2020 18:56	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.15.2020 18:56	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.15.2020 18:56	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.15.2020 18:56	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.15.2020 18:56	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.15.2020 18:56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	70-130	07.15.2020 18:56	
4-Bromofluorobenzene	460-00-4	95	%	70-130	07.15.2020 18:56	



Certificate of Analytical Results 667339

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS38** Matrix: Soil Date Received: 07.15.2020 15:30
 Lab Sample Id: 667339-002 Date Collected: 07.15.2020 07:56 Sample Depth: 3 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.15.2020 16:02 Basis: Wet Weight
 Seq Number: 3131770

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	386	10.0	mg/kg	07.15.2020 18:20		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.15.2020 15:35 Basis: Wet Weight
 Seq Number: 3131775

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	07.15.2020 16:20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	07.15.2020 16:20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	07.15.2020 16:20	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	07.15.2020 16:20	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	07.15.2020 16:20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	07.15.2020 16:20	
o-Terphenyl	84-15-1	106	%	70-135	07.15.2020 16:20	



Certificate of Analytical Results 667339

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS38**
Lab Sample Id: 667339-002

Matrix: Soil
Date Collected: 07.15.2020 07:56

Date Received: 07.15.2020 15:30
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.15.2020 16:37

Basis: Wet Weight

Seq Number: 3131767

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.15.2020 19:18	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.15.2020 19:18	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.15.2020 19:18	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.15.2020 19:18	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.15.2020 19:18	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.15.2020 19:18	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.15.2020 19:18	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	106	%	70-130	07.15.2020 19:18		
1,4-Difluorobenzene	540-36-3	100	%	70-130	07.15.2020 19:18		



Certificate of Analytical Results 667339

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SW12** Matrix: Soil Date Received: 07.15.2020 15:30
 Lab Sample Id: 667339-003 Date Collected: 07.15.2020 12:52 Sample Depth: 0 - 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.15.2020 16:02 Basis: Wet Weight
 Seq Number: 3131770

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	292	10.0	mg/kg	07.15.2020 18:26		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.15.2020 15:35 Basis: Wet Weight
 Seq Number: 3131775

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	07.15.2020 16:40	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	07.15.2020 16:40	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	07.15.2020 16:40	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	07.15.2020 16:40	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	07.15.2020 16:40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	07.15.2020 16:40	
o-Terphenyl	84-15-1	112	%	70-135	07.15.2020 16:40	



Certificate of Analytical Results 667339

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SW12**
Lab Sample Id: 667339-003

Matrix: Soil
Date Collected: 07.15.2020 12:52

Date Received: 07.15.2020 15:30
Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3131767

Prep Method: SW5035A

% Moisture:

Date Prep: 07.15.2020 16:37

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.15.2020 19:39	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.15.2020 19:39	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.15.2020 19:39	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	07.15.2020 19:39	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.15.2020 19:39	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.15.2020 19:39	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.15.2020 19:39	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	105	%	70-130	07.15.2020 19:39		
1,4-Difluorobenzene	540-36-3	100	%	70-130	07.15.2020 19:39		



Certificate of Analytical Results 667339

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SW10** Matrix: Soil Date Received: 07.15.2020 15:30
 Lab Sample Id: 667339-004 Date Collected: 07.15.2020 13:19 Sample Depth: 0 - 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.15.2020 16:02 Basis: Wet Weight
 Seq Number: 3131770

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	525	10.1	mg/kg	07.15.2020 18:42		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.15.2020 15:35 Basis: Wet Weight
 Seq Number: 3131775

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.15.2020 17:01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.15.2020 17:01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.15.2020 17:01	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	07.15.2020 17:01	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.15.2020 17:01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	07.15.2020 17:01	
o-Terphenyl	84-15-1	110	%	70-135	07.15.2020 17:01	



Certificate of Analytical Results 667339

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SW10**
Lab Sample Id: 667339-004

Matrix: Soil
Date Collected: 07.15.2020 13:19

Date Received: 07.15.2020 15:30
Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.15.2020 16:37

Basis: Wet Weight

Seq Number: 3131767

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.15.2020 20:01	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.15.2020 20:01	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.15.2020 20:01	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	07.15.2020 20:01	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.15.2020 20:01	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.15.2020 20:01	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.15.2020 20:01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	70-130	07.15.2020 20:01	
1,4-Difluorobenzene	540-36-3	101	%	70-130	07.15.2020 20:01	

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

LT Environmental, Inc.

PLU 25 BD 901H

Analytical Method: Chloride by EPA 300

Seq Number: 3131770

MB Sample Id: 7707423-1-BLK

Matrix: Solid

LCS Sample Id: 7707423-1-BKS

Prep Method: E300P

Date Prep: 07.15.2020

LCSD Sample Id: 7707423-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	253	101	264	106	90-110	4	20	mg/kg	07.15.2020 16:34	

Analytical Method: Chloride by EPA 300

Seq Number: 3131770

Parent Sample Id: 667020-001

Matrix: Soil

MS Sample Id: 667020-001 S

Prep Method: E300P

Date Prep: 07.15.2020

MSD Sample Id: 667020-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	200	209	105	208	104	90-110	0	20	mg/kg	07.15.2020 16:51	

Analytical Method: Chloride by EPA 300

Seq Number: 3131770

Parent Sample Id: 667339-001

Matrix: Soil

MS Sample Id: 667339-001 S

Prep Method: E300P

Date Prep: 07.15.2020

MSD Sample Id: 667339-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	382	200	587	103	586	103	90-110	0	20	mg/kg	07.15.2020 18:09	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3131775

MB Sample Id: 7707420-1-BLK

Matrix: Solid

LCS Sample Id: 7707420-1-BKS

Prep Method: SW8015P

Date Prep: 07.15.2020

LCSD Sample Id: 7707420-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1020	102	1010	101	70-135	1	35	mg/kg	07.15.2020 10:48	
Diesel Range Organics (DRO)	<50.0	1000	1100	110	1050	105	70-135	5	35	mg/kg	07.15.2020 10:48	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	95		109		110		70-135	%	07.15.2020 10:48
o-Terphenyl	102		105		103		70-135	%	07.15.2020 10:48

Analytical Method: TPH by SW8015 Mod

Seq Number: 3131775

Matrix: Solid

MB Sample Id: 7707420-1-BLK

Prep Method: SW8015P

Date Prep: 07.15.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	07.15.2020 10:27	

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

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

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

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

LT Environmental, Inc.

PLU 25 BD 901H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3131775

Parent Sample Id: 667020-001

Matrix: Soil

MS Sample Id: 667020-001 S

Prep Method: SW8015P

Date Prep: 07.15.2020

MSD Sample Id: 667020-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.1	1000	871	87	880	88	70-135	1	35	mg/kg	07.15.2020 11:50	
Diesel Range Organics (DRO)	<50.1	1000	1030	103	1020	102	70-135	1	35	mg/kg	07.15.2020 11:50	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	112		113		70-135	%	07.15.2020 11:50
o-Terphenyl	112		109		70-135	%	07.15.2020 11:50

Analytical Method: BTEX by EPA 8021B

Seq Number: 3131767

MB Sample Id: 7707425-1-BLK

Matrix: Solid

LCS Sample Id: 7707425-1-BKS

Prep Method: SW5035A

Date Prep: 07.15.2020

LCSD Sample Id: 7707425-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.111	111	0.114	114	70-130	3	35	mg/kg	07.15.2020 12:27	
Toluene	<0.00200	0.100	0.105	105	0.108	108	70-130	3	35	mg/kg	07.15.2020 12:27	
Ethylbenzene	<0.00200	0.100	0.0999	100	0.102	102	71-129	2	35	mg/kg	07.15.2020 12:27	
m,p-Xylenes	<0.00400	0.200	0.202	101	0.207	104	70-135	2	35	mg/kg	07.15.2020 12:27	
o-Xylene	<0.00200	0.100	0.0972	97	0.101	101	71-133	4	35	mg/kg	07.15.2020 12:27	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		99		101		70-130	%	07.15.2020 12:27
4-Bromofluorobenzene	94		98		102		70-130	%	07.15.2020 12:27

Analytical Method: BTEX by EPA 8021B

Seq Number: 3131767

Parent Sample Id: 667020-001

Matrix: Soil

MS Sample Id: 667020-001 S

Prep Method: SW5035A

Date Prep: 07.15.2020

MSD Sample Id: 667020-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.124	124	0.118	117	70-130	5	35	mg/kg	07.15.2020 13:10	
Toluene	<0.00201	0.100	0.117	117	0.114	113	70-130	3	35	mg/kg	07.15.2020 13:10	
Ethylbenzene	<0.00201	0.100	0.108	108	0.106	105	71-129	2	35	mg/kg	07.15.2020 13:10	
m,p-Xylenes	<0.00402	0.201	0.217	108	0.212	105	70-135	2	35	mg/kg	07.15.2020 13:10	
o-Xylene	<0.00201	0.100	0.106	106	0.104	103	71-133	2	35	mg/kg	07.15.2020 13:10	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		100		70-130	%	07.15.2020 13:10
4-Bromofluorobenzene	101		100		70-130	%	07.15.2020 13:10

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

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

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

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



Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3333
Midland, TX (432) 704-5440 El Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550 Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 291-1111

Work Order No: 706-151
any

Page 1 of 1
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Chain of Custody

Project Manager:		Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:		LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:		3300 North A Street	Address:	522 W. Mermod St.
City, State ZIP:		Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:		(432) 236-3849	Email:	jhlill@ltenv.com, dmoir@ltenv.com

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

[illegible]

Xenoco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenoco, but not analyzed. These terms will be enforced unless previously negotiated.

Total 200.7 / 6010	200.8 / 6020:	8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U															
<i>Circle Method(s) and Metal(s) to be analyzed</i>		1631 / 245.1 / 7470 / 7471 : Hg															
Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.																	
Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time												
		7/15/20 15:30			2												
					4												
					6												

Certificate of Analysis Summary 667343



Xenco

LT Environmental, Inc., Arvada, CO

Project Name: PLU 25 BD 901H

Project Id: 012920030

Contact: Dan Moir

Project Location:

Date Received in Lab: Wed 07.15.2020 15:30

Report Date: 07.16.2020 14:52

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	667343-001	667343-002	667343-003	667343-004	667343-005	667343-006
	<i>Field Id:</i>	FS30	FS31	FS32	FS33	FS35	FS36
	<i>Depth:</i>	4- ft	4- ft	4- ft	4- ft	4- ft	3- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	07.15.2020 07:28	07.15.2020 07:33	07.15.2020 07:37	07.15.2020 07:40	07.15.2020 07:46	07.15.2020 07:49
BTEX by EPA 8021B	<i>Extracted:</i>	07.15.2020 16:37	07.15.2020 16:37	07.15.2020 16:37	07.15.2020 16:37	07.15.2020 16:37	07.15.2020 17:00
	<i>Analyzed:</i>	07.15.2020 20:44	07.15.2020 21:05	07.15.2020 21:26	07.15.2020 21:48	07.15.2020 22:09	07.15.2020 19:38
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200
Toluene		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200
Ethylbenzene		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200
m,p-Xylenes		<0.00400 0.00400	<0.00402 0.00402	<0.00401 0.00401	<0.00401 0.00401	<0.00403 0.00403	<0.00401 0.00401
o-Xylene		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200
Total Xylenes		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200
Total BTEX		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200
Chloride by EPA 300	<i>Extracted:</i>	07.15.2020 16:02	07.15.2020 16:02	07.15.2020 16:02	07.15.2020 16:02	07.15.2020 16:02	07.15.2020 16:02
	<i>Analyzed:</i>	07.15.2020 18:48	07.15.2020 18:54	07.15.2020 18:59	07.15.2020 19:05	07.15.2020 19:10	07.15.2020 19:16
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		183 9.92	1320 49.9	142 10.1	75.4 10.1	1050 10.0	61.2 10.0
TPH by SW8015 Mod	<i>Extracted:</i>	07.15.2020 15:40	07.15.2020 15:40	07.15.2020 15:40	07.15.2020 15:40	07.15.2020 15:40	07.15.2020 17:15
	<i>Analyzed:</i>	07.15.2020 17:42	07.15.2020 18:03	07.15.2020 18:23	07.15.2020 18:44	07.15.2020 19:04	07.15.2020 20:47
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<50.1 50.1	<50.1 50.1	<50.0 50.0	<49.8 49.8	<50.2 50.2
Diesel Range Organics (DRO)		<50.0 50.0	<50.1 50.1	<50.1 50.1	<50.0 50.0	<49.8 49.8	<50.2 50.2
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<50.1 50.1	<50.1 50.1	<50.0 50.0	<49.8 49.8	<50.2 50.2
Total GRO-DRO		<50.0 50.0	<50.1 50.1	<50.1 50.1	<50.0 50.0	<49.8 49.8	<50.2 50.2
Total TPH		<50.0 50.0	<50.1 50.1	<50.1 50.1	<50.0 50.0	<49.8 49.8	<50.2 50.2

BRL - Below Reporting Limit

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

Certificate of Analysis Summary 667343



Xenco

LT Environmental, Inc., Arvada, CO

Project Name: PLU 25 BD 901H

Project Id: 012920030

Contact: Dan Moir

Project Location:

Date Received in Lab: Wed 07.15.2020 15:30

Report Date: 07.16.2020 14:52

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	667343-007	667343-008	667343-009			
	Field Id:	FS37	FS34	SW11			
	Depth:	3- ft	4- ft	0-4 ft			
	Matrix:	SOIL	SOIL	SOIL			
	Sampled:	07.15.2020 07:52	07.15.2020 10:33	07.15.2020 10:54			
BTEX by EPA 8021B	Extracted:	07.15.2020 17:00	07.15.2020 17:00	07.15.2020 17:00			
	Analyzed:	07.15.2020 19:58	07.15.2020 20:18	07.15.2020 20:39			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
		<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201			
Benzene		<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201			
Toluene		<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201			
Ethylbenzene		<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201			
m,p-Xylenes		<0.00398 0.00398	<0.00402 0.00402	<0.00402 0.00402			
o-Xylene		<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201			
Total Xylenes		<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201			
Total BTEX		<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201			
Chloride by EPA 300	Extracted:	07.15.2020 18:35	07.15.2020 18:35	07.15.2020 18:35			
	Analyzed:	07.15.2020 19:44	07.15.2020 20:01	07.15.2020 20:06			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
		66.4 9.94	46.5 10.1	234 9.98			
Chloride		66.4 9.94	46.5 10.1	234 9.98			
TPH by SW8015 Mod	Extracted:	07.15.2020 17:15	07.15.2020 17:15	07.15.2020 17:15			
	Analyzed:	07.15.2020 21:49	07.15.2020 22:09	07.15.2020 22:30			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
		<49.8 49.8	<50.1 50.1	<50.0 50.0			
Gasoline Range Hydrocarbons (GRO)		<49.8 49.8	<50.1 50.1	<50.0 50.0			
Diesel Range Organics (DRO)		<49.8 49.8	<50.1 50.1	<50.0 50.0			
Motor Oil Range Hydrocarbons (MRO)		<49.8 49.8	<50.1 50.1	<50.0 50.0			
Total GRO-DRO		<49.8 49.8	<50.1 50.1	<50.0 50.0			
Total TPH		<49.8 49.8	<50.1 50.1	<50.0 50.0			

BRL - Below Reporting Limit

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



Xenco

Analytical Report 667343

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU 25 BD 901H

012920030

07.16.2020

Collected By: Client

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

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-36), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-25), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-17)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-20-7)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



07.16.2020

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: Eurofins Xenco, LLC Report No(s): **667343**

PLU 25 BD 901H

Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 667343. 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 Eurofins Xenco, LLC. 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. 667343 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 Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

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

Jessica Kramer

Project Manager

A Small Business and Minority Company

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

**Sample Cross Reference 667343****LT Environmental, Inc., Arvada, CO**

PLU 25 BD 901H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS30	S	07.15.2020 07:28	4 ft	667343-001
FS31	S	07.15.2020 07:33	4 ft	667343-002
FS32	S	07.15.2020 07:37	4 ft	667343-003
FS33	S	07.15.2020 07:40	4 ft	667343-004
FS35	S	07.15.2020 07:46	4 ft	667343-005
FS36	S	07.15.2020 07:49	3 ft	667343-006
FS37	S	07.15.2020 07:52	3 ft	667343-007
FS34	S	07.15.2020 10:33	4 ft	667343-008
SW11	S	07.15.2020 10:54	0 - 4 ft	667343-009



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 25 BD 901H

Project ID: 012920030
Work Order Number(s): 667343

Report Date: 07.16.2020
Date Received: 07.15.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 667343

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS30** Matrix: Soil Date Received: 07.15.2020 15:30
 Lab Sample Id: 667343-001 Date Collected: 07.15.2020 07:28 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.15.2020 16:02 Basis: Wet Weight
 Seq Number: 3131770

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	183	9.92	mg/kg	07.15.2020 18:48		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.15.2020 15:40 Basis: Wet Weight
 Seq Number: 3131775

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.15.2020 17:42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.15.2020 17:42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.15.2020 17:42	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	07.15.2020 17:42	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.15.2020 17:42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	07.15.2020 17:42	
o-Terphenyl	84-15-1	109	%	70-135	07.15.2020 17:42	



Certificate of Analytical Results 667343

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS30**
Lab Sample Id: 667343-001

Matrix: Soil
Date Collected: 07.15.2020 07:28

Date Received: 07.15.2020 15:30
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.15.2020 16:37

Basis: Wet Weight

Seq Number: 3131767

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.15.2020 20:44	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.15.2020 20:44	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.15.2020 20:44	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	07.15.2020 20:44	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.15.2020 20:44	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.15.2020 20:44	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.15.2020 20:44	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	104	%	70-130	07.15.2020 20:44		
1,4-Difluorobenzene	540-36-3	101	%	70-130	07.15.2020 20:44		



Certificate of Analytical Results 667343

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS31** Matrix: Soil Date Received: 07.15.2020 15:30
 Lab Sample Id: 667343-002 Date Collected: 07.15.2020 07:33 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.15.2020 16:02 Basis: Wet Weight
 Seq Number: 3131770

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1320	49.9	mg/kg	07.15.2020 18:54		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.15.2020 15:40 Basis: Wet Weight
 Seq Number: 3131775

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	07.15.2020 18:03	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	07.15.2020 18:03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	07.15.2020 18:03	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	07.15.2020 18:03	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	07.15.2020 18:03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	07.15.2020 18:03	
o-Terphenyl	84-15-1	108	%	70-135	07.15.2020 18:03	



Certificate of Analytical Results 667343

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS31**
Lab Sample Id: 667343-002

Matrix: Soil
Date Collected: 07.15.2020 07:33

Date Received: 07.15.2020 15:30
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.15.2020 16:37

Basis: Wet Weight

Seq Number: 3131767

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.15.2020 21:05	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.15.2020 21:05	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.15.2020 21:05	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.15.2020 21:05	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.15.2020 21:05	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.15.2020 21:05	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.15.2020 21:05	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	101	%	70-130	07.15.2020 21:05		
4-Bromofluorobenzene	460-00-4	103	%	70-130	07.15.2020 21:05		



Certificate of Analytical Results 667343

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS32** Matrix: Soil Date Received: 07.15.2020 15:30
 Lab Sample Id: 667343-003 Date Collected: 07.15.2020 07:37 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.15.2020 16:02 Basis: Wet Weight
 Seq Number: 3131770

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	142	10.1	mg/kg	07.15.2020 18:59		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.15.2020 15:40 Basis: Wet Weight
 Seq Number: 3131775

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	07.15.2020 18:23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	07.15.2020 18:23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	07.15.2020 18:23	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	07.15.2020 18:23	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	07.15.2020 18:23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	07.15.2020 18:23	
o-Terphenyl	84-15-1	108	%	70-135	07.15.2020 18:23	



Certificate of Analytical Results 667343

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS32**
Lab Sample Id: 667343-003

Matrix: Soil
Date Collected: 07.15.2020 07:37

Date Received: 07.15.2020 15:30
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.15.2020 16:37

Basis: Wet Weight

Seq Number: 3131767

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.15.2020 21:26	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.15.2020 21:26	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.15.2020 21:26	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.15.2020 21:26	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.15.2020 21:26	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.15.2020 21:26	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.15.2020 21:26	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	104	%	70-130	07.15.2020 21:26		
1,4-Difluorobenzene	540-36-3	101	%	70-130	07.15.2020 21:26		



Certificate of Analytical Results 667343

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS33** Matrix: Soil Date Received: 07.15.2020 15:30
 Lab Sample Id: 667343-004 Date Collected: 07.15.2020 07:40 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.15.2020 16:02 Basis: Wet Weight
 Seq Number: 3131770

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	75.4	10.1	mg/kg	07.15.2020 19:05		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.15.2020 15:40 Basis: Wet Weight
 Seq Number: 3131775

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.15.2020 18:44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.15.2020 18:44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.15.2020 18:44	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	07.15.2020 18:44	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.15.2020 18:44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	07.15.2020 18:44	
o-Terphenyl	84-15-1	108	%	70-135	07.15.2020 18:44	



Certificate of Analytical Results 667343

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS33**
Lab Sample Id: 667343-004

Matrix: Soil
Date Collected: 07.15.2020 07:40

Date Received: 07.15.2020 15:30
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3131767

Prep Method: SW5035A

% Moisture:

Date Prep: 07.15.2020 16:37

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.15.2020 21:48	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.15.2020 21:48	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.15.2020 21:48	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.15.2020 21:48	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.15.2020 21:48	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.15.2020 21:48	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.15.2020 21:48	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	104	%	70-130	07.15.2020 21:48		
1,4-Difluorobenzene	540-36-3	101	%	70-130	07.15.2020 21:48		



Certificate of Analytical Results 667343

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS35** Matrix: Soil Date Received: 07.15.2020 15:30
 Lab Sample Id: 667343-005 Date Collected: 07.15.2020 07:46 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.15.2020 16:02 Basis: Wet Weight
 Seq Number: 3131770

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1050	10.0	mg/kg	07.15.2020 19:10		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.15.2020 15:40 Basis: Wet Weight
 Seq Number: 3131775

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	07.15.2020 19:04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	07.15.2020 19:04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	07.15.2020 19:04	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	07.15.2020 19:04	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	07.15.2020 19:04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	07.15.2020 19:04	
o-Terphenyl	84-15-1	103	%	70-135	07.15.2020 19:04	



Certificate of Analytical Results 667343

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS35**
Lab Sample Id: 667343-005

Matrix: Soil
Date Collected: 07.15.2020 07:46

Date Received: 07.15.2020 15:30
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.15.2020 16:37

Basis: Wet Weight

Seq Number: 3131767

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.15.2020 22:09	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.15.2020 22:09	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.15.2020 22:09	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	07.15.2020 22:09	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.15.2020 22:09	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.15.2020 22:09	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.15.2020 22:09	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	106	%	70-130	07.15.2020 22:09		
1,4-Difluorobenzene	540-36-3	101	%	70-130	07.15.2020 22:09		



Certificate of Analytical Results 667343

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS36** Matrix: Soil Date Received: 07.15.2020 15:30
 Lab Sample Id: 667343-006 Date Collected: 07.15.2020 07:49 Sample Depth: 3 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.15.2020 16:02 Basis: Wet Weight
 Seq Number: 3131770

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	61.2	10.0	mg/kg	07.15.2020 19:16		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.15.2020 17:15 Basis: Wet Weight
 Seq Number: 3131781

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	07.15.2020 20:47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	07.15.2020 20:47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	07.15.2020 20:47	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	07.15.2020 20:47	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	07.15.2020 20:47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	07.15.2020 20:47	
o-Terphenyl	84-15-1	108	%	70-135	07.15.2020 20:47	



Certificate of Analytical Results 667343

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS36**
Lab Sample Id: 667343-006

Matrix: Soil
Date Collected: 07.15.2020 07:49

Date Received: 07.15.2020 15:30
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.15.2020 17:00

Basis: Wet Weight

Seq Number: 3131769

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.15.2020 19:38	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.15.2020 19:38	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.15.2020 19:38	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.15.2020 19:38	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.15.2020 19:38	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.15.2020 19:38	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.15.2020 19:38	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	106	%	70-130	07.15.2020 19:38		
1,4-Difluorobenzene	540-36-3	101	%	70-130	07.15.2020 19:38		



Certificate of Analytical Results 667343

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS37** Matrix: Soil Date Received: 07.15.2020 15:30
 Lab Sample Id: 667343-007 Date Collected: 07.15.2020 07:52 Sample Depth: 3 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.15.2020 18:35 Basis: Wet Weight
 Seq Number: 3131771

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	66.4	9.94	mg/kg	07.15.2020 19:44		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.15.2020 17:15 Basis: Wet Weight
 Seq Number: 3131781

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	07.15.2020 21:49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	07.15.2020 21:49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	07.15.2020 21:49	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	07.15.2020 21:49	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	07.15.2020 21:49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	07.15.2020 21:49	
o-Terphenyl	84-15-1	116	%	70-135	07.15.2020 21:49	



Certificate of Analytical Results 667343

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS37**
Lab Sample Id: 667343-007

Matrix: Soil
Date Collected: 07.15.2020 07:52

Date Received: 07.15.2020 15:30
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.15.2020 17:00

Basis: Wet Weight

Seq Number: 3131769

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.15.2020 19:58	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.15.2020 19:58	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.15.2020 19:58	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.15.2020 19:58	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.15.2020 19:58	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.15.2020 19:58	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.15.2020 19:58	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	103	%	70-130	07.15.2020 19:58		
4-Bromofluorobenzene	460-00-4	104	%	70-130	07.15.2020 19:58		



Certificate of Analytical Results 667343

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS34** Matrix: Soil Date Received: 07.15.2020 15:30
 Lab Sample Id: 667343-008 Date Collected: 07.15.2020 10:33 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.15.2020 18:35 Basis: Wet Weight
 Seq Number: 3131771

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	46.5	10.1	mg/kg	07.15.2020 20:01		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.15.2020 17:15 Basis: Wet Weight
 Seq Number: 3131781

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	07.15.2020 22:09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	07.15.2020 22:09	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	07.15.2020 22:09	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	07.15.2020 22:09	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	07.15.2020 22:09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	07.15.2020 22:09	
o-Terphenyl	84-15-1	115	%	70-135	07.15.2020 22:09	



Certificate of Analytical Results 667343

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **FS34**
Lab Sample Id: 667343-008

Matrix: Soil
Date Collected: 07.15.2020 10:33

Date Received: 07.15.2020 15:30
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.15.2020 17:00

Basis: Wet Weight

Seq Number: 3131769

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.15.2020 20:18	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.15.2020 20:18	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.15.2020 20:18	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.15.2020 20:18	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.15.2020 20:18	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.15.2020 20:18	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.15.2020 20:18	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	100	%	70-130	07.15.2020 20:18		
4-Bromofluorobenzene	460-00-4	104	%	70-130	07.15.2020 20:18		



Certificate of Analytical Results 667343

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SW11** Matrix: Soil Date Received: 07.15.2020 15:30
 Lab Sample Id: 667343-009 Date Collected: 07.15.2020 10:54 Sample Depth: 0 - 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.15.2020 18:35 Basis: Wet Weight
 Seq Number: 3131771

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	234	9.98	mg/kg	07.15.2020 20:06		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.15.2020 17:15 Basis: Wet Weight
 Seq Number: 3131781

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.15.2020 22:30	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.15.2020 22:30	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.15.2020 22:30	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	07.15.2020 22:30	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.15.2020 22:30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	07.15.2020 22:30	
o-Terphenyl	84-15-1	117	%	70-135	07.15.2020 22:30	



Certificate of Analytical Results 667343

LT Environmental, Inc., Arvada, CO

PLU 25 BD 901H

Sample Id: **SW11**
Lab Sample Id: 667343-009

Matrix: Soil
Date Collected: 07.15.2020 10:54

Date Received: 07.15.2020 15:30
Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3131769

Prep Method: SW5035A

% Moisture:

Date Prep: 07.15.2020 17:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.15.2020 20:39	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.15.2020 20:39	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.15.2020 20:39	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.15.2020 20:39	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.15.2020 20:39	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.15.2020 20:39	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.15.2020 20:39	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	103	%	70-130	07.15.2020 20:39		
1,4-Difluorobenzene	540-36-3	102	%	70-130	07.15.2020 20:39		

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

LT Environmental, Inc.

PLU 25 BD 901H

Analytical Method: Chloride by EPA 300

Seq Number: 3131770

MB Sample Id: 7707423-1-BLK

Matrix: Solid

LCS Sample Id: 7707423-1-BKS

Prep Method: E300P

Date Prep: 07.15.2020

LCSD Sample Id: 7707423-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	253	101	264	106	90-110	4	20	mg/kg	07.15.2020 16:34	

Analytical Method: Chloride by EPA 300

Seq Number: 3131771

MB Sample Id: 7707424-1-BLK

Matrix: Solid

LCS Sample Id: 7707424-1-BKS

Prep Method: E300P

Date Prep: 07.15.2020

LCSD Sample Id: 7707424-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	240	96	232	93	90-110	3	20	mg/kg	07.15.2020 22:25	

Analytical Method: Chloride by EPA 300

Seq Number: 3131770

Parent Sample Id: 667020-001

Matrix: Soil

MS Sample Id: 667020-001 S

Prep Method: E300P

Date Prep: 07.15.2020

MSD Sample Id: 667020-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	200	209	105	208	104	90-110	0	20	mg/kg	07.15.2020 16:51	

Analytical Method: Chloride by EPA 300

Seq Number: 3131770

Parent Sample Id: 667339-001

Matrix: Soil

MS Sample Id: 667339-001 S

Prep Method: E300P

Date Prep: 07.15.2020

MSD Sample Id: 667339-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	382	200	587	103	586	103	90-110	0	20	mg/kg	07.15.2020 18:09	

Analytical Method: Chloride by EPA 300

Seq Number: 3131771

Parent Sample Id: 667343-007

Matrix: Soil

MS Sample Id: 667343-007 S

Prep Method: E300P

Date Prep: 07.15.2020

MSD Sample Id: 667343-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	66.4	200	276	105	276	105	90-110	0	20	mg/kg	07.15.2020 19:49	

Analytical Method: Chloride by EPA 300

Seq Number: 3131771

Parent Sample Id: 667349-008

Matrix: Soil

MS Sample Id: 667349-008 S

Prep Method: E300P

Date Prep: 07.15.2020

MSD Sample Id: 667349-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	20.1	199	215	98	215	98	90-110	0	20	mg/kg	07.15.2020 21:07	

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

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

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

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

LT Environmental, Inc.

PLU 25 BD 901H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3131775

MB Sample Id: 7707420-1-BLK

Matrix: Solid

LCS Sample Id: 7707420-1-BKS

Prep Method: SW8015P

Date Prep: 07.15.2020

LCSD Sample Id: 7707420-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1020	102	1010	101	70-135	1	35	mg/kg	07.15.2020 10:48	
Diesel Range Organics (DRO)	<50.0	1000	1100	110	1050	105	70-135	5	35	mg/kg	07.15.2020 10:48	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	95		109		110		70-135	%	07.15.2020 10:48
o-Terphenyl	102		105		103		70-135	%	07.15.2020 10:48

Analytical Method: TPH by SW8015 Mod

Seq Number: 3131781

MB Sample Id: 7707455-1-BLK

Matrix: Solid

LCS Sample Id: 7707455-1-BKS

Prep Method: SW8015P

Date Prep: 07.15.2020

LCSD Sample Id: 7707455-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1190	119	1120	112	70-135	6	35	mg/kg	07.15.2020 20:06	
Diesel Range Organics (DRO)	<50.0	1000	1300	130	1220	122	70-135	6	35	mg/kg	07.15.2020 20:06	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	99		129		123		70-135	%	07.15.2020 20:06
o-Terphenyl	108		124		117		70-135	%	07.15.2020 20:06

Analytical Method: TPH by SW8015 Mod

Seq Number: 3131775

Matrix: Solid

MB Sample Id: 7707420-1-BLK

Prep Method: SW8015P

Date Prep: 07.15.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	07.15.2020 10:27	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3131781

Matrix: Solid

MB Sample Id: 7707455-1-BLK

Prep Method: SW8015P

Date Prep: 07.15.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	07.15.2020 19:45	

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

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

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

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

LT Environmental, Inc.

PLU 25 BD 901H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3131775

Parent Sample Id: 667020-001

Matrix: Soil

MS Sample Id: 667020-001 S

Prep Method: SW8015P

Date Prep: 07.15.2020

MSD Sample Id: 667020-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.1	1000	871	87	880	88	70-135	1	35	mg/kg	07.15.2020 11:50	
Diesel Range Organics (DRO)	<50.1	1000	1030	103	1020	102	70-135	1	35	mg/kg	07.15.2020 11:50	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	112		113		70-135	%	07.15.2020 11:50
o-Terphenyl	112		109		70-135	%	07.15.2020 11:50

Analytical Method: TPH by SW8015 Mod

Seq Number: 3131781

Parent Sample Id: 667343-006

Matrix: Soil

MS Sample Id: 667343-006 S

Prep Method: SW8015P

Date Prep: 07.15.2020

MSD Sample Id: 667343-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1060	106	1020	102	70-135	4	35	mg/kg	07.15.2020 21:07	
Diesel Range Organics (DRO)	<50.0	1000	1090	109	1200	120	70-135	10	35	mg/kg	07.15.2020 21:07	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	132		126		70-135	%	07.15.2020 21:07
o-Terphenyl	130		124		70-135	%	07.15.2020 21:07

Analytical Method: BTEX by EPA 8021B

Seq Number: 3131767

MB Sample Id: 7707425-1-BLK

Matrix: Solid

LCS Sample Id: 7707425-1-BKS

Prep Method: SW5035A

Date Prep: 07.15.2020

LCSD Sample Id: 7707425-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.111	111	0.114	114	70-130	3	35	mg/kg	07.15.2020 12:27	
Toluene	<0.00200	0.100	0.105	105	0.108	108	70-130	3	35	mg/kg	07.15.2020 12:27	
Ethylbenzene	<0.00200	0.100	0.0999	100	0.102	102	71-129	2	35	mg/kg	07.15.2020 12:27	
m,p-Xylenes	<0.00400	0.200	0.202	101	0.207	104	70-135	2	35	mg/kg	07.15.2020 12:27	
o-Xylene	<0.00200	0.100	0.0972	97	0.101	101	71-133	4	35	mg/kg	07.15.2020 12:27	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		99		101		70-130	%	07.15.2020 12:27
4-Bromofluorobenzene	94		98		102		70-130	%	07.15.2020 12:27

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

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

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

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

LT Environmental, Inc.

PLU 25 BD 901H

Analytical Method: BTEX by EPA 8021B

Seq Number: 3131769

Matrix: Solid

Prep Method: SW5035A

Date Prep: 07.15.2020

MB Sample Id: 7707446-1-BLK

LCS Sample Id: 7707446-1-BKS

LCSD Sample Id: 7707446-1-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	0.102	102	0.0993	99	70-130	3	35	mg/kg	07.15.2020 17:41	
Toluene	<0.00200	0.100	0.0986	99	0.0949	95	70-130	4	35	mg/kg	07.15.2020 17:41	
Ethylbenzene	<0.00200	0.100	0.104	104	0.101	101	71-129	3	35	mg/kg	07.15.2020 17:41	
m,p-Xylenes	<0.00400	0.200	0.213	107	0.206	103	70-135	3	35	mg/kg	07.15.2020 17:41	
o-Xylene	<0.00200	0.100	0.105	105	0.101	101	71-133	4	35	mg/kg	07.15.2020 17:41	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		100		99		70-130	%	07.15.2020 17:41
4-Bromofluorobenzene	100		101		99		70-130	%	07.15.2020 17:41

Analytical Method: BTEX by EPA 8021B

Seq Number: 3131767

Matrix: Soil

Prep Method: SW5035A

Date Prep: 07.15.2020

Parent Sample Id: 667020-001

MS Sample Id: 667020-001 S

MSD Sample Id: 667020-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.124	124	0.118	117	70-130	5	35	mg/kg	07.15.2020 13:10	
Toluene	<0.00201	0.100	0.117	117	0.114	113	70-130	3	35	mg/kg	07.15.2020 13:10	
Ethylbenzene	<0.00201	0.100	0.108	108	0.106	105	71-129	2	35	mg/kg	07.15.2020 13:10	
m,p-Xylenes	<0.00402	0.201	0.217	108	0.212	105	70-135	2	35	mg/kg	07.15.2020 13:10	
o-Xylene	<0.00201	0.100	0.106	106	0.104	103	71-133	2	35	mg/kg	07.15.2020 13:10	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		100		70-130	%	07.15.2020 13:10
4-Bromofluorobenzene	101		100		70-130	%	07.15.2020 13:10

Analytical Method: BTEX by EPA 8021B

Seq Number: 3131769

Matrix: Soil

Prep Method: SW5035A

Date Prep: 07.15.2020

Parent Sample Id: 667343-006

MS Sample Id: 667343-006 S

MSD Sample Id: 667343-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.101	0.0824	82	0.104	104	70-130	23	35	mg/kg	07.15.2020 18:22	
Toluene	<0.00201	0.101	0.0790	78	0.0996	100	70-130	23	35	mg/kg	07.15.2020 18:22	
Ethylbenzene	<0.00201	0.101	0.0821	81	0.105	105	71-129	24	35	mg/kg	07.15.2020 18:22	
m,p-Xylenes	<0.00402	0.201	0.168	84	0.212	106	70-135	23	35	mg/kg	07.15.2020 18:22	
o-Xylene	<0.00201	0.101	0.0816	81	0.105	105	71-133	25	35	mg/kg	07.15.2020 18:22	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		100		70-130	%	07.15.2020 18:22
4-Bromofluorobenzene	101		102		70-130	%	07.15.2020 18:22

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

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

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

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



Chain of Custody

Work Order No: 10073413

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334
 Midland, TX (432) 704-5440 EL Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296
 Hobbs, NM (575) 392-7550 Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000

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Page 1 of 1

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littlell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	522 W. Mermaid St.
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	jhill@xenco.com, dmoir@xenco.com

Program: ☒ UST/PST ☐ RP ☐ Groundfields ☐ RC ☐ Surfund State of Project:	
Reporting Level: ☐ I ☐ II ☐ III ☐ IV ☐ V	Deliverables: EDD ☐ ADAPT ☐ Other:

Project Name:	PLV 25 B0 9014	Turn Around	
Project Number:	012926030	Route:	R
P.O. Number:	50.11 dth 2/11/20	Rush:	
Sampler's Name:	Jeremy Hill	Due Date:	

SAMPLE RECEIPT		Temp Blank:	Yes ☒ No ☐	Wet Ice:	Yes ☒ No ☐
Temperature (°C):	3.0/2.8	Thermometer ID	TMM007		
Received In tact:	Yes ☒ No ☐	Correction Factor:	-0.2		
Cooler Custody Seals:	Yes ☒ No ☐	Total Containers:	9		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number	TPH (E	BTEX (E	Chloride											Sample Comments
FS30	S	7/15/24	0728	4'	X	1	1	1											Composite
FS31			0733	4'															
FS32			0737	4'															
FS33			0740	4'															
FS35			0746	4'															
FS36			0749	3'															
FS37			0752	3'															
FS34			1033	4'															
SL11			1054	0-4'															

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	7/15/20 15:30			

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 07.15.2020 03.30.00 PM

Work Order #: 667343

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

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

Samples received in bulk containers.

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

Analyst:

PH Device/Lot#:

Checklist completed by:



Elizabeth McClellan

Date: 07.15.2020

Checklist reviewed by:



Jessica Kramer

Date: 07.16.2020



Xenco

Certificate of Analysis Summary 667446

LT Environmental, Inc., Arvada, CO

Project Name: Plu 25 BD 901H

Project Id: 012912030

Contact: Dan Moir

Project Location:

Date Received in Lab: Thu 07.16.2020 14:05

Report Date: 07.20.2020 10:48

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	667446-001	667446-002	667446-003			
	Field Id:	FS39	FS40	FS41			
	Depth:	0-4 ft	0-4 ft	0-4 ft			
	Matrix:	SOIL	SOIL	SOIL			
	Sampled:	07.16.2020 11:42	07.16.2020 11:47	07.16.2020 11:52			
BTEX by EPA 8021B	Extracted:	07.16.2020 16:00	07.16.2020 16:00	07.16.2020 16:00			
	Analyzed:	07.16.2020 22:05	07.16.2020 22:26	07.16.2020 22:46			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
		<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198			
Benzene		<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198			
Toluene		<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198			
Ethylbenzene		<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198			
m,p-Xylenes		<0.00399 0.00399	<0.00398 0.00398	<0.00396 0.00396			
o-Xylene		<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198			
Total Xylenes		<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198			
Total BTEX		<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198			
Chloride by EPA 300	Extracted:	07.16.2020 15:47	07.16.2020 15:47	07.16.2020 15:47			
	Analyzed:	07.16.2020 19:10	07.16.2020 19:15	07.16.2020 19:21			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
		47.5 10.0	34.5 10.0	28.9 10.1			
Chloride		47.5 10.0	34.5 10.0	28.9 10.1			
TPH by SW8015 Mod	Extracted:	07.16.2020 14:45	07.16.2020 14:45	07.16.2020 14:20			
	Analyzed:	07.16.2020 19:38	07.16.2020 19:58	07.16.2020 18:57			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
		<50.3 50.3	<49.8 49.8	<49.8 49.8			
Gasoline Range Hydrocarbons (GRO)		<50.3 50.3	<49.8 49.8	<49.8 49.8			
Diesel Range Organics (DRO)		<50.3 50.3	<49.8 49.8	<49.8 49.8			
Motor Oil Range Hydrocarbons (MRO)		<50.3 50.3	<49.8 49.8	<49.8 49.8			
Total GRO-DRO		<50.3 50.3	<49.8 49.8	<49.8 49.8			
Total TPH		<50.3 50.3	<49.8 49.8	<49.8 49.8			

BRL - Below Reporting Limit

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

Jessica Kramer



Xenco

Analytical Report 667446

for

LT Environmental, Inc.

Project Manager: Dan Moir

Plu 25 BD 901H

012912030

07.20.2020

Collected By: Client

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

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-36), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-25), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-17)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-20-7)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



07.20.2020

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: Eurofins Xenco, LLC Report No(s): **667446**

Plu 25 BD 901H

Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 667446. 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 Eurofins Xenco, LLC. 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. 667446 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 Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

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

Jessica Kramer

Project Manager

A Small Business and Minority Company

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

**Sample Cross Reference 667446****LT Environmental, Inc., Arvada, CO**

Plu 25 BD 901H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS39	S	07.16.2020 11:42	0 - 4 ft	667446-001
FS40	S	07.16.2020 11:47	0 - 4 ft	667446-002
FS41	S	07.16.2020 11:52	0 - 4 ft	667446-003



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *Plu 25 BD 901H*

Project ID: 012912030
Work Order Number(s): 667446

Report Date: 07.20.2020
Date Received: 07.16.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 667446

LT Environmental, Inc., Arvada, CO

Plu 25 BD 901H

Sample Id: **FS39** Matrix: Soil Date Received: 07.16.2020 14:05
 Lab Sample Id: 667446-001 Date Collected: 07.16.2020 11:42 Sample Depth: 0 - 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.16.2020 15:47 Basis: Wet Weight
 Seq Number: 3131940

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	47.5	10.0	mg/kg	07.16.2020 19:10		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.16.2020 14:45 Basis: Wet Weight
 Seq Number: 3131902

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	07.16.2020 19:38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	07.16.2020 19:38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	07.16.2020 19:38	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	07.16.2020 19:38	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	07.16.2020 19:38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	07.16.2020 19:38	
o-Terphenyl	84-15-1	106	%	70-135	07.16.2020 19:38	



Certificate of Analytical Results 667446

LT Environmental, Inc., Arvada, CO

Plu 25 BD 901H

Sample Id: **FS39**
Lab Sample Id: 667446-001

Matrix: Soil
Date Collected: 07.16.2020 11:42

Date Received: 07.16.2020 14:05
Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.16.2020 16:00

Basis: Wet Weight

Seq Number: 3131937

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.16.2020 22:05	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.16.2020 22:05	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.16.2020 22:05	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.16.2020 22:05	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.16.2020 22:05	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.16.2020 22:05	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.16.2020 22:05	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	106	%	70-130	07.16.2020 22:05		
1,4-Difluorobenzene	540-36-3	103	%	70-130	07.16.2020 22:05		



Certificate of Analytical Results 667446

LT Environmental, Inc., Arvada, CO

Plu 25 BD 901H

Sample Id: **FS40** Matrix: Soil Date Received: 07.16.2020 14:05
 Lab Sample Id: 667446-002 Date Collected: 07.16.2020 11:47 Sample Depth: 0 - 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.16.2020 15:47 Basis: Wet Weight
 Seq Number: 3131940

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	34.5	10.0	mg/kg	07.16.2020 19:15		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.16.2020 14:45 Basis: Wet Weight
 Seq Number: 3131902

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	07.16.2020 19:58	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	07.16.2020 19:58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	07.16.2020 19:58	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	07.16.2020 19:58	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	07.16.2020 19:58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	07.16.2020 19:58	
o-Terphenyl	84-15-1	109	%	70-135	07.16.2020 19:58	



Certificate of Analytical Results 667446

LT Environmental, Inc., Arvada, CO

Plu 25 BD 901H

Sample Id: **FS40**
Lab Sample Id: 667446-002

Matrix: Soil
Date Collected: 07.16.2020 11:47

Date Received: 07.16.2020 14:05
Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.16.2020 16:00

Basis: Wet Weight

Seq Number: 3131937

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.16.2020 22:26	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.16.2020 22:26	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.16.2020 22:26	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.16.2020 22:26	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.16.2020 22:26	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.16.2020 22:26	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.16.2020 22:26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	07.16.2020 22:26	
4-Bromofluorobenzene	460-00-4	104	%	70-130	07.16.2020 22:26	



Certificate of Analytical Results 667446

LT Environmental, Inc., Arvada, CO

Plu 25 BD 901H

Sample Id: **FS41** Matrix: Soil Date Received: 07.16.2020 14:05
 Lab Sample Id: 667446-003 Date Collected: 07.16.2020 11:52 Sample Depth: 0 - 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.16.2020 15:47 Basis: Wet Weight
 Seq Number: 3131940

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	28.9	10.1	mg/kg	07.16.2020 19:21		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.16.2020 14:20 Basis: Wet Weight
 Seq Number: 3131933

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	07.16.2020 18:57	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	07.16.2020 18:57	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	07.16.2020 18:57	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	07.16.2020 18:57	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	07.16.2020 18:57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	126	%	70-135	07.16.2020 18:57	
o-Terphenyl	84-15-1	124	%	70-135	07.16.2020 18:57	



Certificate of Analytical Results 667446

LT Environmental, Inc., Arvada, CO

Plu 25 BD 901H

Sample Id: **FS41**
Lab Sample Id: 667446-003

Matrix: Soil
Date Collected: 07.16.2020 11:52

Date Received: 07.16.2020 14:05
Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.16.2020 16:00

Basis: Wet Weight

Seq Number: 3131937

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	07.16.2020 22:46	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.16.2020 22:46	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.16.2020 22:46	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	07.16.2020 22:46	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.16.2020 22:46	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	07.16.2020 22:46	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.16.2020 22:46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	70-130	07.16.2020 22:46	
1,4-Difluorobenzene	540-36-3	102	%	70-130	07.16.2020 22:46	

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

LT Environmental, Inc.

Plu 25 BD 901H

Analytical Method: Chloride by EPA 300

Seq Number: 3131940

MB Sample Id: 7707504-1-BLK

Matrix: Solid

LCS Sample Id: 7707504-1-BKS

Prep Method: E300P

Date Prep: 07.16.2020

LCSD Sample Id: 7707504-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	254	102	265	106	90-110	4	20	mg/kg	07.16.2020 16:45	

Analytical Method: Chloride by EPA 300

Seq Number: 3131940

Parent Sample Id: 667349-038

Matrix: Soil

MS Sample Id: 667349-038 S

Prep Method: E300P

Date Prep: 07.16.2020

MSD Sample Id: 667349-038 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	10.1	200	211	100	210	100	90-110	0	20	mg/kg	07.16.2020 17:02	

Analytical Method: Chloride by EPA 300

Seq Number: 3131940

Parent Sample Id: 667438-003

Matrix: Soil

MS Sample Id: 667438-003 S

Prep Method: E300P

Date Prep: 07.16.2020

MSD Sample Id: 667438-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	22.0	200	219	99	220	99	90-110	0	20	mg/kg	07.16.2020 18:25	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3131902

MB Sample Id: 7707495-1-BLK

Matrix: Solid

LCS Sample Id: 7707495-1-BKS

Prep Method: SW8015P

Date Prep: 07.16.2020

LCSD Sample Id: 7707495-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1020	102	945	95	70-135	8	35	mg/kg	07.16.2020 12:52	
Diesel Range Organics (DRO)	<50.0	1000	1110	111	1080	108	70-135	3	35	mg/kg	07.16.2020 12:52	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	97		128		123		70-135	%	07.16.2020 12:52
o-Terphenyl	103		127		117		70-135	%	07.16.2020 12:52

Analytical Method: TPH by SW8015 Mod

Seq Number: 3131933

MB Sample Id: 7707491-1-BLK

Matrix: Solid

LCS Sample Id: 7707491-1-BKS

Prep Method: SW8015P

Date Prep: 07.16.2020

LCSD Sample Id: 7707491-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	860	86	744	74	70-135	14	35	mg/kg	07.16.2020 12:52	
Diesel Range Organics (DRO)	<50.0	1000	984	98	800	80	70-135	21	35	mg/kg	07.16.2020 12:52	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	101		123		106		70-135	%	07.16.2020 12:52
o-Terphenyl	105		106		87		70-135	%	07.16.2020 12:52

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

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

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

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

LT Environmental, Inc.

Plu 25 BD 901H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3131902

Matrix: Solid

Prep Method: SW8015P

Date Prep: 07.16.2020

MB Sample Id: 7707495-1-BLK

Parameter

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	07.16.2020 12:32	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3131933

Matrix: Solid

Prep Method: SW8015P

Date Prep: 07.16.2020

MB Sample Id: 7707491-1-BLK

Parameter

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	07.16.2020 12:32	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3131902

Matrix: Soil

Prep Method: SW8015P

Date Prep: 07.16.2020

Parent Sample Id: 667349-017

MS Sample Id: 667349-017 S

MSD Sample Id: 667349-017 SD

Parameter

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.1	1000	1000	100	941	94	70-135	6	35	mg/kg	07.16.2020 13:53	
Diesel Range Organics (DRO)	<50.1	1000	1140	114	1090	109	70-135	4	35	mg/kg	07.16.2020 13:53	

Surrogate

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	122		121		70-135	%	07.16.2020 13:53
o-Terphenyl	122		116		70-135	%	07.16.2020 13:53

Analytical Method: TPH by SW8015 Mod

Seq Number: 3131933

Matrix: Soil

Prep Method: SW8015P

Date Prep: 07.16.2020

Parent Sample Id: 667349-037

MS Sample Id: 667349-037 S

MSD Sample Id: 667349-037 SD

Parameter

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	999	944	94	1040	104	70-135	10	35	mg/kg	07.16.2020 13:53	
Diesel Range Organics (DRO)	<50.0	999	1090	109	1200	120	70-135	10	35	mg/kg	07.16.2020 13:53	

Surrogate

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	121		132		70-135	%	07.16.2020 13:53
o-Terphenyl	114		125		70-135	%	07.16.2020 13:53

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

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

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

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

LT Environmental, Inc.

Plu 25 BD 901H

Analytical Method: BTEX by EPA 8021B

Seq Number: 3131937

MB Sample Id: 7707480-1-BLK

Matrix: Solid

LCS Sample Id: 7707480-1-BKS

Prep Method: SW5035A

Date Prep: 07.16.2020

LCSD Sample Id: 7707480-1-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	0.0779	78	0.104	104	70-130	29	35	mg/kg	07.16.2020 14:34	
Toluene	<0.00200	0.100	0.0739	74	0.0996	100	70-130	30	35	mg/kg	07.16.2020 14:34	
Ethylbenzene	<0.00200	0.100	0.0788	79	0.105	105	71-129	29	35	mg/kg	07.16.2020 14:34	
m,p-Xylenes	<0.00400	0.200	0.159	80	0.213	107	70-135	29	35	mg/kg	07.16.2020 14:34	
o-Xylene	<0.00200	0.100	0.0792	79	0.105	105	71-133	28	35	mg/kg	07.16.2020 14:34	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		99		98		70-130	%	07.16.2020 14:34
4-Bromofluorobenzene	105		97		99		70-130	%	07.16.2020 14:34

Analytical Method: BTEX by EPA 8021B

Seq Number: 3131937

Parent Sample Id: 667349-037

Matrix: Soil

MS Sample Id: 667349-037 S

Prep Method: SW5035A

Date Prep: 07.16.2020

MSD Sample Id: 667349-037 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.0952	95	0.104	103	70-130	9	35	mg/kg	07.16.2020 21:24	
Toluene	<0.00200	0.0998	0.0899	90	0.100	99	70-130	11	35	mg/kg	07.16.2020 21:24	
Ethylbenzene	<0.00200	0.0998	0.0939	94	0.102	101	71-129	8	35	mg/kg	07.16.2020 21:24	
m,p-Xylenes	<0.00399	0.200	0.192	96	0.207	102	70-135	8	35	mg/kg	07.16.2020 21:24	
o-Xylene	<0.00200	0.0998	0.0946	95	0.102	101	71-133	8	35	mg/kg	07.16.2020 21:24	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	97		97		70-130	%	07.16.2020 21:24
4-Bromofluorobenzene	100		97		70-130	%	07.16.2020 21:24

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

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

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

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



Chain of Custody

Work Order No:

1631 / 245.1 / 7470 / 7471

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334
 Midland, TX (432-704-5440) EL Paso, TX (915)585-3443 Lubbock, TX (806)794-1296
 Hobbs, NM (575-392-7550) Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813-620-2000)

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Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littlell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	522 W. Memrod St.
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	jhill@ltenv.com, dmoir@ltenv.com

Project Name:	PLU JT BD 9614	Turn Around	
Project Number:	012926030	Routine	☒
P.O. Number:	5011 det 2/11/20	Rush:	
Sampler's Name:	Jeremy Hill	Due Date:	

SAMPLE RECEIPT		Temp Blank:	Yes ☒ No ☐	Wet Ice:	Yes ☒ No ☐
Temperature (°C):	3.2 / 3.0	Thermometer ID			
Received Intact:	Yes ☒ No ☐	Correction Factor: -0.2			
Cooler Custody Seals:	Yes ☒ No ☐ N/A	Total Containers:			
Sample Custody Seals:	Yes ☒ No ☐ N/A	3			

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	ANALYSIS REQUEST										Work Order Notes
					Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)							
F339	S	7/16/20	1143	0-4'	1	X	X	X							
F346	S		1147												
F341	S		1152												

Sample Comments

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

Comments

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U

1631 / 245.1 / 7470 / 7471 : Hg

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		7/16/20 14:05			

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 07.16.2020 02.05.00 PM

Work Order #: 667446

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

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

Samples received in bulk containers.

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

Analyst:

PH Device/Lot#:

Checklist completed by:



Elizabeth McClellan

Date: 07.16.2020

Checklist reviewed by:



Jessica Kramer

Date: 07.20.2020