

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	NRM2015059528
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 32.379242 Longitude -103.886995
(NAD 83 in decimal degrees to 5 decimal places)

Site Name JRU DI-1A CTB	Site Type Tank Battery
Date Release Discovered 5/15/2020	API# (if applicable)

Unit Letter	Section	Township	Range	County
F	21	22S	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) 10.04	Volume Recovered (bbls) 5
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release A flange on the water transfer line leaked produced water onto the pad. A third-party contractor will be retained for remediation activities.

Form C-141

State of New Mexico
Oil Conservation Division

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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? N/A
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? N/A	

Initial Response

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

- ☒ The source of the release has been stopped.
- ☒ The impacted area has been secured to protect human health and the environment.
- ☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
- ☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

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

Printed Name: Kyle Littrell

Title: SH&E Supervisor

Signature: 

Date: 5-28-20

email: Kyle.Littrell@xtoenergy.com

Telephone: 432-221-7331

OCD Only

Received by: Ramona Marcus

Date: 5/29/2020

NRM2015059528

Location:	JRU DI 1A CTB	
Spill Date:	5/14/2020	
Area 1		
Approximate Area =	1538.00	sq. ft.
Average Saturation (or depth) of spill =	0.50	inches
Average Porosity Factor =	0.03	
VOLUME OF LEAK		
Total Produced Water =	5.34	bbls
Area 2		
Approximate Area =	767.00	sq. ft.
Average Saturation (or depth) of spill =	2.75	inches
Average Porosity Factor =	0.15	
VOLUME OF LEAK		
Total Produced Water =	4.70	bbls
TOTAL VOLUME OF LEAK		
Total Produced Water =	10.04	bbls
TOTAL VOLUME RECOVERED		
Total Produced Water =	5.00	bbls

Incident ID	NRM2015059528
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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?	>100 (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: _____ Date: _____

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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: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____



LT Environmental, Inc.

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

August 7, 2020

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

**RE: Closure Request
JRU DI-1A CTB
Incident Number NRM2015059528
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 JRU DI-1A CTB (Site) located in Unit F, Section 21, Township 22 South, Range 30 East, in Eddy County, New Mexico (Figure 1). A summary of remedial activities following a release of approximately 10.04 barrels (bbls) of produced water is provided in the attached materials.

Approximately 125 cubic yards of soil were excavated and transported to R360 in Hobbs, New Mexico for disposal under XTO approved manifests. Remediation of impacted soils was successfully achieved as demonstrated through soil confirmation sampling and in compliance with site-specific Closure Criteria. As such, XTO requests Closure and no further action (NFA) for Incident Number NRM2015059528.

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

Sincerely,

Anna Byers
Staff Geologist

Ashley L. Ager, P.G.
Senior Geologist

cc:

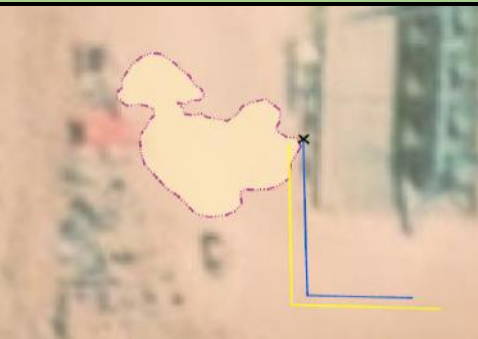
Kyle Littrell, XTO
United States Bureau of Land Management
Robert Hamlet, NMOCD
Victoria Venegas, NMOCD

Appendices:

Figure 1	Site Location Map and Receptors (also embedded in Page 2)
Figure 2	Delineation Soil Sample Locations
Figure 3	Excavation Soil Sample Locations
Table 1	Soil Analytical Results
Attachment 1	Referenced Well Records
Attachment 2	Lithologic/Soil Sampling Logs
Attachment 3	Laboratory Analytical Reports

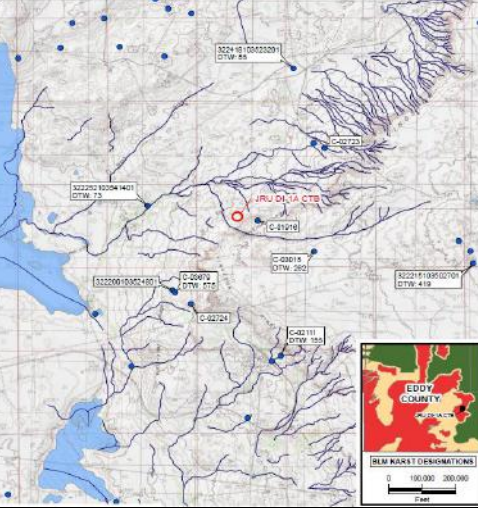
**BACKGROUND**

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	May 15, 2020	RELEASE EXTENT
Lat / Long	32.379242, -103.886995	
Location	Unit F Section 21 Township 22 South Range 30 East, Eddy County, New Mexico	
Surface Owner	Federal	
Reason For Release	A flange on the water transfer line leaked onto the well pad surface.	
Volume of Product Released	10.04 bbls of produced water; on pad	
Volume of Product Recovered	5 bbls of produced water were recovered by vacuum truck	
Notification to NMOCD Date	May 28, 2020 on Form C-141	

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-03015 (2004) 0.96 miles SE: 262 feet bgs USGS 322252103541401 (1959) 1.01 miles W-NW: 73 feet bgs NM OSE Well C-03679 (2013) 1.14 miles SW: 575 feet bgs NM OSE Well C-02111 (1962) 1.79 miles S-SE: 155 feet bgs USGS 322418103523201 (1992) 1.89 miles N-NE: 55 feet bgs USGS 322215103502701 (1977) 2.73 miles E-SE: 419 feet bgs Regional DTW determination: Greater than 50 feet bgs within a 2.73 mile radius	Greater than 100 feet bgs at the Site based on nearest water well data (NM OSE Well C-03015) Referenced Well Records are provided as Attachment 1	
Closest continuously flowing water or significant watercourse	Unnamed dry wash 658 feet SW	N/A	
Lakebed, sinkhole, or playa lake	Greater than 200 feet	N/A	
Occupied Residence, school, hospital, institution, church, wet	Greater than 300 feet	N/A	
Freshwater well or spring	Greater than 1,000 feet	N/A	
100-year flood plain or overlying subsurface mine	Not present	N/A	
Unstable Geology	Yes	High karst potential	

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	NE	EPA Method 8015 M/D
TPH	100	EPA Method 8015 M/D
Chloride	600	EPA Method 300.0
Chloride reclamation requirement for off pad	600	EPA Method 300.0



FIELD ACTIVITIES AND SOIL SCREENING PROTOCOL

The release extent was mapped utilizing a handheld GPS unit and is depicted on Figure 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. The delineation 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.

INITIAL ASSESSMENT

Assessment Date(s)	May 19, 2020
Preliminary soil samples collected	NA
Analytical Results	NA
Follow-up Field Activities	Delineation activities scheduled to confirm absence of soil impacts.

ASSESSMENT PHOTOGRAPHS



Northwest view of the subject release (outlined).



East view of the subject release (outlined).

DELINEATION

Assessment Date(s)	July 22, 2020
Delineation soil samples collected	(6) Potholes were installed utilizing heavy equipment (PH01 through PH06)
Analytical Results	Excluding soil samples PH01 and PH04 at 0.5 foot bgs, all delineation soil samples were within the applicable Closure Criteria limits. Soils samples PH01 and PH04 exceeded Closure Criteria for chloride.
Follow-up Field Activities	Excavation was warranted based on field screening results and analytical results of pothole soil samples.

DELINEATION PHOTOGRAPHS



West view of the Site during delineation activities.



South view of the Site during delineation activities.



North view of the Site following delineation activities.

EXCAVATION	
Excavation Date(s)	July 23, 2020 and June 29, 2020
Confirmation soil samples collected	(6) floor soil samples (FS01 through FS06) and (2) sidewall soil samples (SW01 and SW02)
Analytical Results	All constituents for confirmation soil samples were within the applicable Closure Criteria limits.
Follow-up Field Activities	Based on analytical results of confirmation soil samples, NFA is warranted.
Excavation Dimensions	1,195 square feet total
Excavation Volume	125 cubic yards

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 field screened, collected and handled as previously described.

EXCAVATION PHOTOGRAPHS	
	
Northwest view of the Site during excavation activities.	East view of the Site during excavation activities.

BACKFILL PHOTOGRAPHS		
		
Southeast view of the Site following backfilling activities.	Southeast view of the Site following backfilling activities.	Southeast view of the Site following backfilling 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

NE - not established

NFA - No Further Action

N/A - not applicable

NM OSE - New Mexico Office of the State Engineer

NMOCD - New Mexico Oil Conservation Division

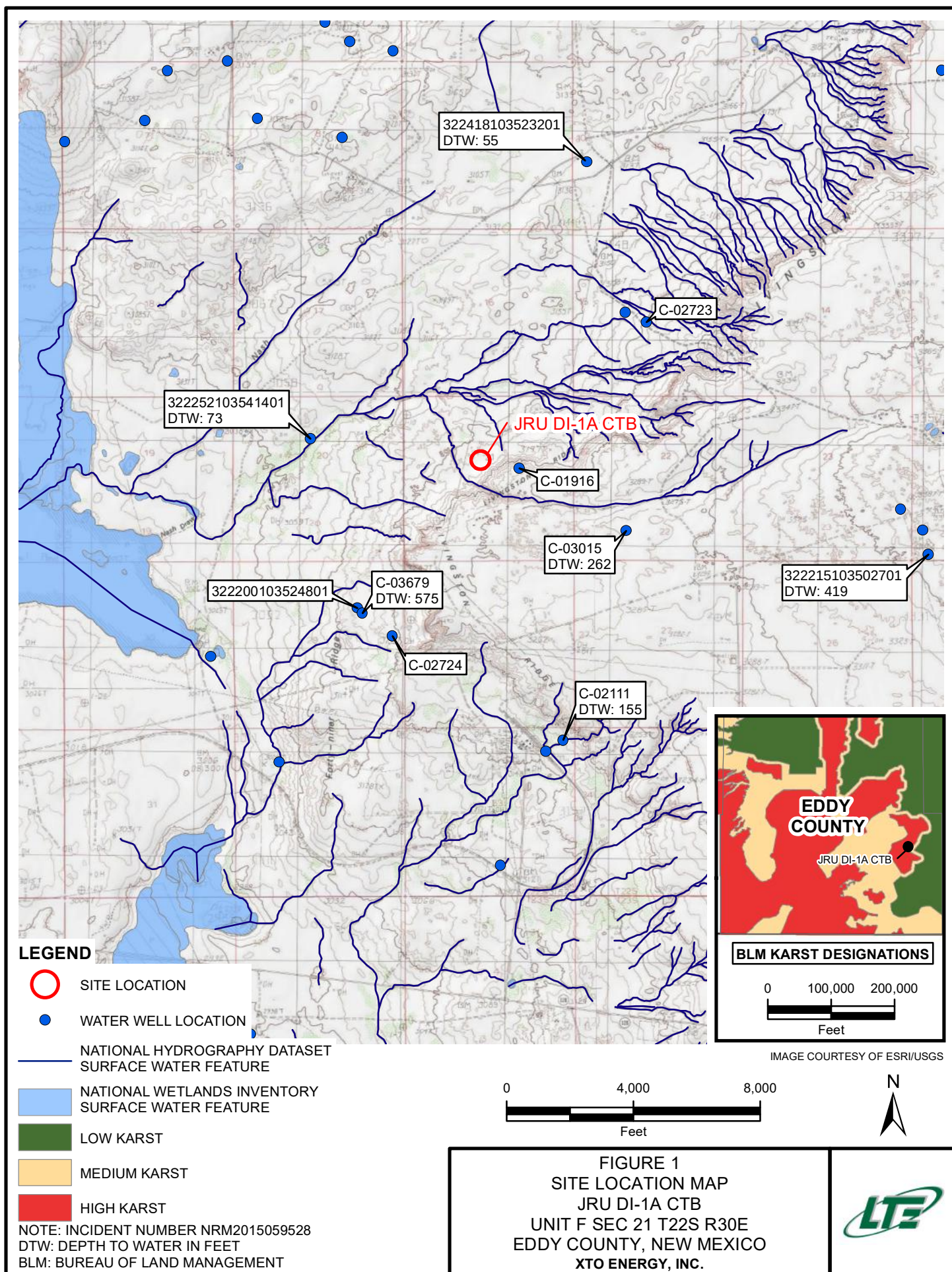
TPH - total petroleum hydrocarbons

USGS - United States Geological Survey

°C - degrees Celsius

FIGURES





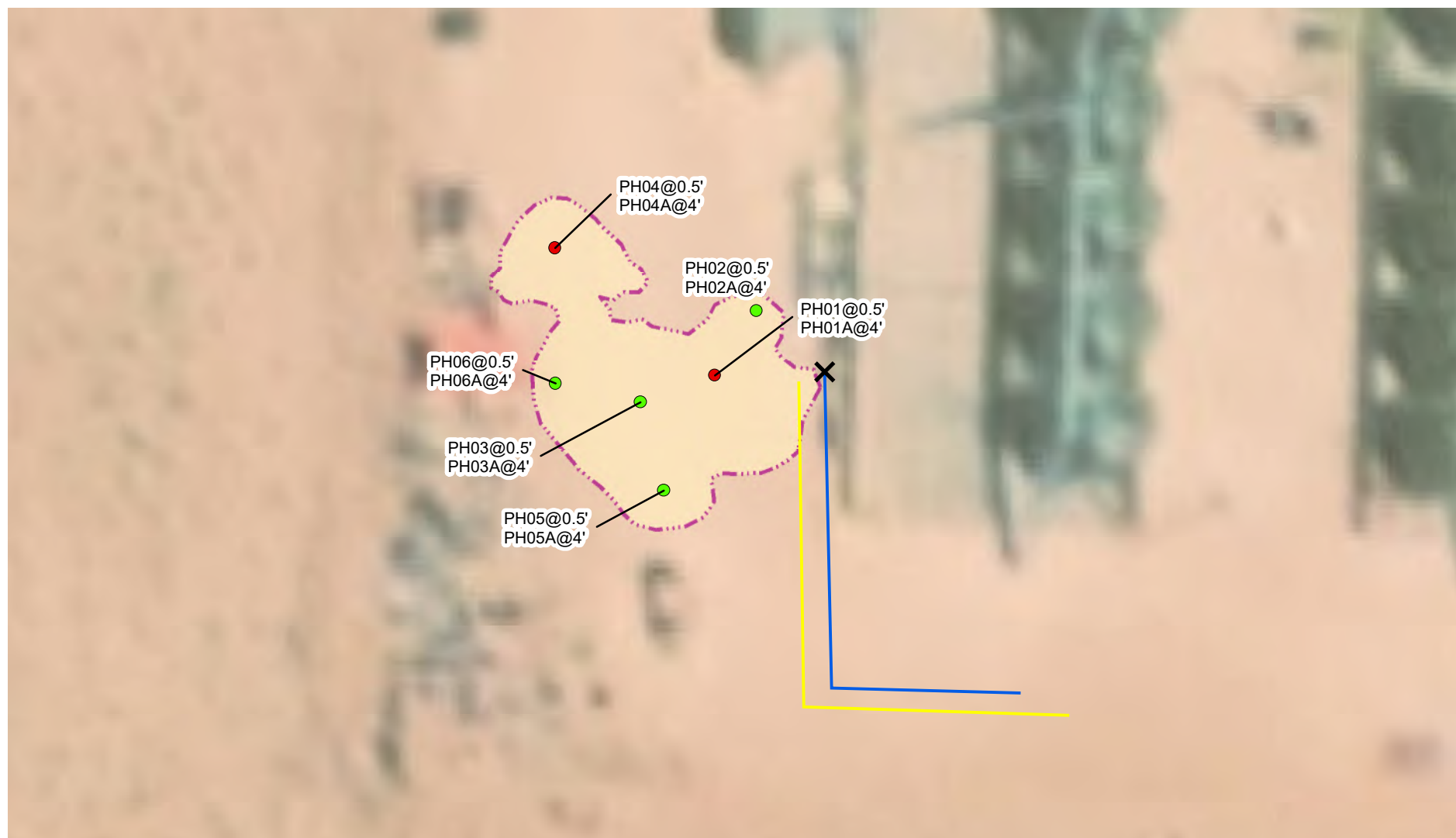


IMAGE COURTESY OF ESRI

LEGEND

RELEASE LOCATION

DELINEATION SOIL SAMPLE WITH CONCENTRATIONS
EXCEEDING APPLICABLE CLOSURE CRITERIADELINEATION SOIL SAMPLE IN COMPLIANCE
WITH APPLICABLE CLOSURE CRITERIA

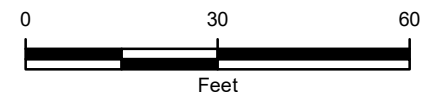
GAS LINE



WATER LINE



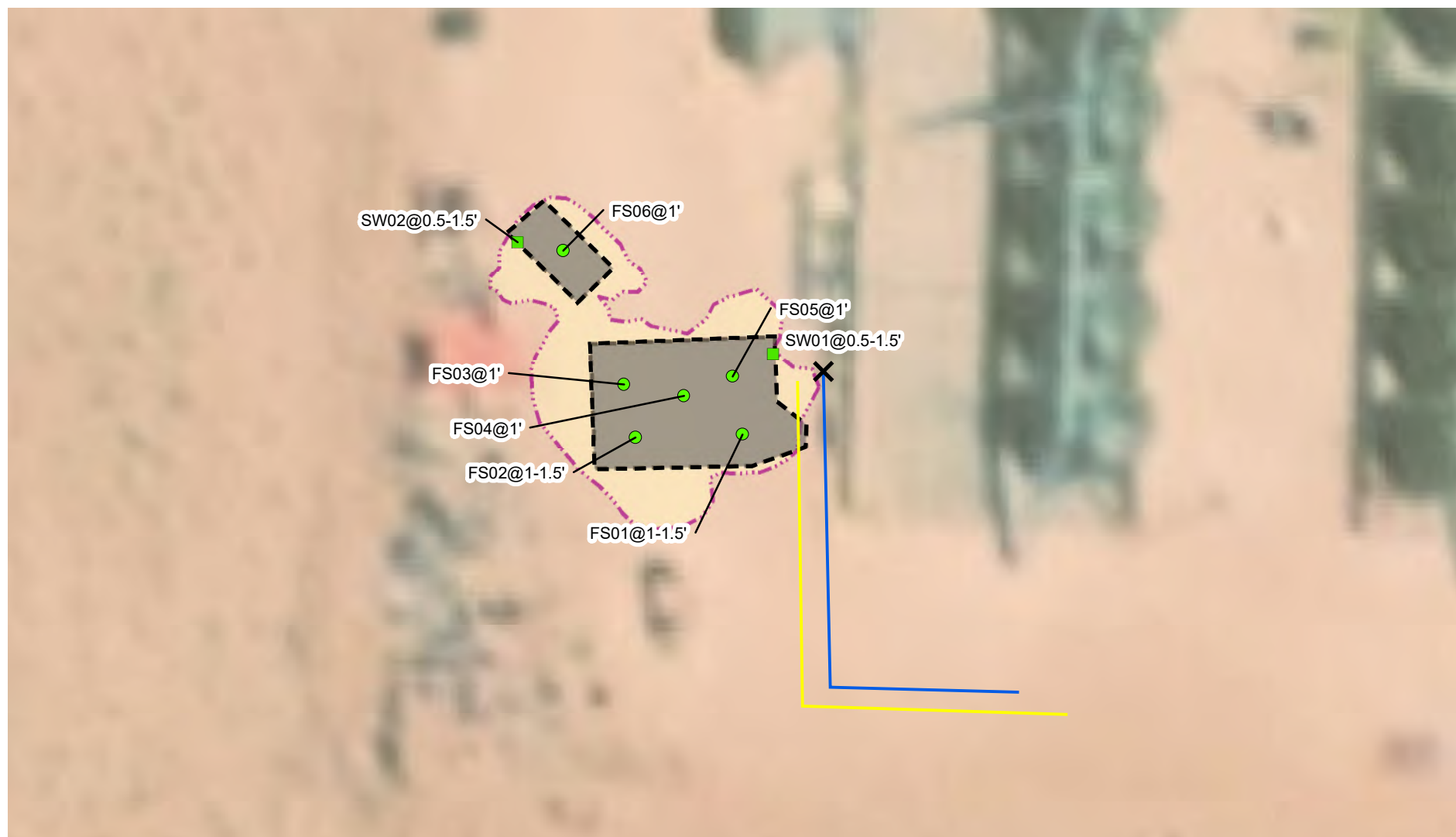
RELEASE EXTENT (2,309 SQUARE FEET)



NOTE: INCIDENT NUMBER NRM2015059528
SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)

FIGURE 2
DELINEATION SOIL SAMPLE LOCATIONS
JRJ DI-1A CTB
UNIT F SEC 21 T22S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.



**LEGEND**

- | | | | |
|---|--|---|------------------------------------|
| ✕ | RELEASE LOCATION | — | GAS LINE |
| ■ | SIDEWALL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA | — | WATER LINE |
| ● | FLOOR SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA | ▨ | EXCAVATION EXTENT |
| | | ▨ | RELEASE EXTENT (2,309 SQUARE FEET) |

NOTE: INCIDENT NUMBER NRM2015059528
 SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)

IMAGE COURTESY OF ESRI

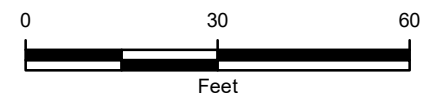


FIGURE 3
EXCAVATION SOIL SAMPLE LOCATIONS
 JRU DI-1A CTB
 UNIT F SEC 21 T22S R30E
 EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.



TABLES



TABLE 1
SOIL ANALYTICAL RESULTS

JRU DI-1A CTB
INCIDENT NUMBER NRM2015059528
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	NE	100	600
PH01	0.5	07/22/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	3,610
PH01A	4	07/22/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.1	<50.1	<50.1	<50.1	<50.1	10.0
PH02	0.5	07/22/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	189
PH02A	4	07/22/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	<9.98
PH03	0.5	07/22/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.1	<50.1	<50.1	<50.1	<50.1	454
PH03A	4	07/22/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.2	<50.2	<50.2	<50.2	<50.2	79.2
PH04	0.5	07/22/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	634
PH04A	4	07/22/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.3	<50.3	<50.3	<50.3	<50.3	445
PH05	0.5	07/22/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	147
PH05A	4	07/22/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	<10.0
PH06	0.5	07/22/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.2	<50.2	<50.2	<50.2	<50.2	36.8
PH06A	4	07/22/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	12.5
FS01	1 - 1.5	07/23/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.9	<49.9	<49.9	<49.9	<49.9	78.3
FS02	1 - 1.5	07/23/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.2	<50.2	<50.2	<50.2	<50.2	92.4
FS03	1	07/23/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.2	<50.2	<50.2	<50.2	<50.2	69.4
FS04	1	07/23/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.9	<49.9	<49.9	<49.9	<49.9	69.8
FS05	1	07/23/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.2	<50.2	<50.2	<50.2	<50.2	136
FS06	1	07/29/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.3	<50.3	<50.3	<50.3	<50.3	72.6
SW01	0.5 - 1.5	07/23/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.3	<50.3	<50.3	<50.3	<50.3	343
SW02	0.5 - 1	07/29/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.9	<49.9	<49.9	<49.9	<49.9	515

Notes:

bgs - below ground surface

BTEX - benzene, toluene, ethylbenzene, and total xylenes

DRO - diesel range organics

GRO - gasoline range organics

mg/kg - milligrams per kilogram

MRO - motor oil range organics

NMAC - New Mexico Administrative Code

NMOCD - New Mexico Oil Conservation Division

NE - not established

TPH - total petroleum hydrocarbons

Bold - indicates result exceeds the applicable regulatory standard

< - 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 removed during excavation activities





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	03015	1	4	3	22	22S	30E	606099	3582353* 
Driller License: 331		Driller Company:		SBQ2, LLC DBA STEWART BROTHERS DRILLING CO.					
Driller Name:									
Drill Start Date:	01/21/2004	Drill Finish Date:		01/25/2004		Plug Date:			
Log File Date:	03/04/2004	PCW Rev Date:				Source: Artesian			
Pump Type:		Pipe Discharge Size:				Estimated Yield:			
Casing Size:	6.00	Depth Well:		1316 feet		Depth Water:		262 feet	
Water Bearing Stratifications:					Top	Bottom	Description		
					362	385	Other/Unknown		
Casing Perforations:					Top	Bottom			
					261	386			

*UTM location was derived from PLSS - see Help

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Agency code = usgs

site_no list =

- 322252103541401

Minimum number of levels = 1

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USGS 322252103541401 22S.30E.20.12310

Eddy County, New Mexico

Latitude 32°22'52", Longitude 103°54'14" NAD27

Land-surface elevation 3,065 feet above NAVD88

The depth of the well is 129 feet below land surface.

This well is completed in the Rustler Formation (312RSLR) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1952-02-26			D	81.94		2			U		A
1959-02-19			D	72.96		2			U		A

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level accuracy	2	Water level accuracy to nearest hundredth of a foot
Status		The reported water-level measurement represents a static level
Method of measurement	U	Unknown method.
Measuring agency		Not determined
Source of measurement	U	Source is unknown.
Water-level approval status	A	Approved for publication -- Processing and review completed.

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Title: Groundwater for USA: Water Levels

URL: <https://nwis.waterdata.usgs.gov/nwis/gwlevels?>

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0.26 0.25 nadww01





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	03679 POD1	1	4	2	14	24S	33E	603567	3581547 

Driller License: 1654	Driller Company: NOT WORKING FOR HIRE--SIRMAN DRILLING AND CONSTRUC
Driller Name:	

Drill Start Date: 10/23/2013	Drill Finish Date: 10/29/2013	Plug Date:
Log File Date: 11/07/2013	PCW Rcv Date:	Source: Shallow
Pump Type:	Pipe Discharge Size:	Estimated Yield: 20 GPM
Casing Size: 6.00	Depth Well: 700 feet	Depth Water: 575 feet

Water Bearing Stratifications:	Top	Bottom	Description
	565	665	Sandstone/Gravel/Conglomerate

Casing Perforations:	Top	Bottom
	560	620
	660	700

Meter Number: 16576	Meter Make: MASTERMETER
Meter Serial Number: 8112524	Meter Multiplier: 100.0000
Number of Dials: 6	Meter Type: Diversion
Unit of Measure: Gallons	Return Flow Percent:
Usage Multiplier:	Reading Frequency:

Meter Readings (in Acre-Feet)

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount Online
03/01/2014	2014	29030	A	RPT		0
07/01/2014	2014	49261	A	RPT		6.209
10/01/2014	2014	68901	A	RPT		6.027
12/31/2014	2014	84036	A	RPT		4.645
02/01/2015	2015	89806	A	RPT		1.771
03/02/2015	2015	92350	A	RPT		0.781
04/01/2015	2015	96582	A	RPT		1.299
04/30/2015	2015	104711	A	RPT		2.495
05/31/2015	2015	111086	A	RPT		1.956
07/01/2015	2015	118700	A	RPT		2.337
08/01/2015	2015	123816	A	RPT		1.570
08/31/2015	2015	130025	A	RPT		1.905
10/01/2015	2015	135622	A	RPT		1.718

**YTD Meter Amounts:	Year	Amount
	2014	16.881
	2015	15.832

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POINT OF DIVERSION 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	02111	2	2	2	33	22S	30E	605505	3580336*

**Driller License:****Driller Company:****Driller Name:** WINSTON BROS.**Drill Start Date:****Drill Finish Date:** 11/30/1962**Plug Date:****Log File Date:****PCW Rev Date:****Source:** Shallow**Pump Type:****Pipe Discharge Size:****Estimated Yield:** 29 GPM**Casing Size:** 8.75**Depth Well:** 248 feet**Depth Water:** 155 feet**Meter Number:** 552**Meter Make:** SENSUS**Meter Serial Number:** 1480245**Meter Multiplier:** 100.0000**Number of Dials:** 5**Meter Type:** Diversion**Unit of Measure:** Gallons**Return Flow Percent:****Usage Multiplier:****Reading Frequency:****Meter Readings (in Acre-Feet)**

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount Online
12/31/1998	1999	3519	A	ms		0
06/30/1999	1999	10119	A	ms		2.025
09/30/1999	1999	17046	A	ms		2.126
01/12/2000	1999	23122	A	ms		1.865
03/31/2000	2000	29277	A	mb		1.889
06/30/2000	2000	38063	A	RPT		2.696
09/30/2000	2000	45705	A	RPT		2.345
12/31/2000	2000	53709	A	RPT		2.456
03/31/2001	2001	61935	A	RPT		2.524
06/30/2001	2001	63804	A	RPT		0.574
10/01/2001	2001	63804	A	RPT		0
01/01/2002	2001	3924	R	RPT	Meter Rollover	12.312
04/23/2002	2002	12315	A	RPT		2.575
07/01/2002	2002	12571	A	rm		0.079
01/01/2003	2002	14740	A	RPT		0.666
01/01/2004	2003	14740	A	ab		0
04/01/2004	2004	14740	A	RPT		0
10/30/2004	2004	14740	A	RPT		0
03/31/2005	2005	14740	A	RPT		0
10/30/2005	2005	14740	A	RPT		0
12/31/2005	2005	14740	A	RPT		0
07/07/2006	2006	14740	A	tw		0
11/01/2006	2006	14740	A	RPT		0
06/30/2007	2007	14740	A	RPT		0
09/30/2007	2007	14740	A	RPT		0
12/31/2007	2007	14740	A	RPT		0
03/31/2008	2008	14740	A	RPT		0

06/30/2008	2008	14740	A	RPT	0
09/30/2008	2008	14740	A	RPT	0
12/31/2008	2008	14740	A	RPT	0
03/31/2009	2009	14740	A	RPT	0
06/30/2009	2009	14740	A	RPT	0
09/30/2009	2009	14740	A	RPT	0
03/31/2010	2010	14740	A	tw	0
07/09/2010	2010	14740	A	RPT	0
10/01/2010	2010	14740	A	RPT	0
12/31/2010	2010	14740	A	RPT	0
03/30/2011	2011	14740	A	tw	0
06/30/2011	2011	14740	A	RPT	0
01/09/2012	2011	14740	A	RPT	0
03/31/2012	2012	14740	A	RPT	0
07/03/2012	2012	14740	A	RPT	0
01/10/2013	2012	14740	A	RPT	0
04/08/2013	2013	14740	A	RPT	0
07/11/2013	2013	14740	A	RPT	0

**YTD Meter Amounts:	Year	Amount
	1999	6.016
	2000	9.386
	2001	15.410
	2002	3.320
	2003	0
	2004	0
	2005	0
	2006	0
	2007	0
	2008	0
	2009	0
	2010	0
	2011	0
	2012	0
	2013	0

*UTM location was derived from PLSS - see Help

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Agency code = usgs
site_no list =

- 322418103523201

Minimum number of levels = 1
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USGS 322418103523201 22S.30E.10.31131

Eddy County, New Mexico
Latitude 32°24'18", Longitude 103°52'32" NAD27
Land-surface elevation 3,133 feet above NAVD88
The depth of the well is 77 feet below land surface.
This well is completed in the Rustler Formation (312RSLR) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1948-12-23			D	55.95			2		U		A
1959-02-19			D	60.83			2		U		A
1972-09-12			D	62.80			2		U		A
1976-12-08			D	53.94			2		U		A
1983-01-18			D	52.99			2		U		A
1987-10-20			D	50.95			2		U		A

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1992-12-08			D	54.56		2		S		U	A

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level accuracy	2	Water level accuracy to nearest hundredth of a foot
Status		The reported water-level measurement represents a static level
Method of measurement	S	Steel-tape measurement.
Method of measurement	U	Unknown method.
Measuring agency		Not determined
Source of measurement	U	Source is unknown.
Water-level approval status	A	Approved for publication -- Processing and review completed.

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13.09 0.27 nadww01





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Agency code = usgs

site_no list =

- 322215103502701

Minimum number of levels = 1

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USGS 322215103502701 22S.30E.24.3334 P-14

Eddy County, New Mexico

Latitude 32°22'15", Longitude 103°50'27" NAD27

Land-surface elevation 3,360 feet above NGVD29

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1977-02-24			D	419		0		Z	USGS	S	A

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level accuracy	0	Water level accuracy to nearest foot

Section	Code	Description
Status		The reported water-level measurement represents a static level
Method of measurement	Z	Other.
Measuring agency	USGS	U.S. Geological Survey
Source of measurement	S	Measured by personnel of reporting agency.
Water-level approval status	A	Approved for publication -- Processing and review completed.

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12.75 0.27 nadww01





 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 A proud member of WSP Compliance · Engineering · Remediation		PH01		Date: 7/22/2020				
		Site Name: JRU DI-1A CTB						
		Incident Number: NRM2015059528						
		LTE Job Number: 012920081						
LITHOLOGIC / SOIL SAMPLING LOG								
Lat/Long: 32.37926165N, 103.88708491W		Field Screening: HACH Low Range Cl ⁻ Strips Photoionization Detector (PID)		Hole Diameter: n/a	Method: Backhoe			
Total Depth: 4 feet								
Comments: Chloride field screening was conducted with 1 part soil: 4 part distilled water dilution. Values reported do not include 40% correction factor. BDL - Below detection limit / D - Dry (Moisture Content)								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D	2,464	0	No	PH01	0.5	0	cche	caliche, compacted pad surface material
D	232	0	No		1	1	cche	caliche, compacted pad surface material
D	BDL	0	No		2	2	SP-SM	red, poorly-sorted gypsiferous sand (f.) with silt; no odor, no plasticity
D	BDL	0	No		3	3	SP-SM	red, poorly-sorted gypsiferous sand (f.) with silt; no odor, no plasticity
D	BDL	0	No	PH01A	4	4	SP-SM	red, poorly-sorted gypsiferous sand (f.) with silt; no odor, no plasticity
						Total Depth		
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 A proud member of WSP Compliance · Engineering · Remediation					PH02		Date: 7/22/2020	
					Site Name: JRU DI-1A CTB			
					Incident Number: NRM2015059528			
					LTE Job Number: 012920081			
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: Anna Byers		Method: Backhoe	
Lat/Long: 32.37929742N, 103.88705765W			Field Screening: HACH Low Range Cl ⁻ Strips		Hole Diameter: n/a		Total Depth: 4 feet	
			Photoionization Detector (PID)					
Comments: Chloride field screening was conducted with 1 part soil: 4 part distilled water dilution. Values reported do not include 40% correction factor. BDL - Below detection limit / D - Dry (Moisture Content)								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D	232	0	No	PH02	0.5	0	cche	caliche, compacted pad surface material
D	136	0	No		1	1	cche	caliche, compacted pad surface material
D	BDL	0	No		2	2	SP-SM	red, poorly-sorted gypsiferous sand (f.) with silt; no odor, no plasticity
D	BDL	0	No		3	3	SP-SM	red, poorly-sorted gypsiferous sand (f.) with silt; no odor, no plasticity
D	BDL	0	No	PH02A	4	4	SP-SM	red, poorly-sorted gypsiferous sand (f.) with silt; no odor, no plasticity
						Total Depth		
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 A proud member of WSP Compliance · Engineering · Remediation					PH03		Date: 7/22/2020		
					Site Name: JRU DI-1A CTB				
					Incident Number: NRM2015059528				
					LTE Job Number: 012920081				
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: Anna Byers		Method: Backhoe		
Lat/Long: 32.379247N, 103.88713386W			Field Screening: HACH Low Range Cl ⁻ Strips			Hole Diameter: n/a		Total Depth: 4 feet	
			Photoionization Detector (PID)						
Comments: Chloride field screening was conducted with 1 part soil: 4 part distilled water dilution. Values reported do not include 40% correction factor. BDL - Below detection limit / D - Dry (Moisture Content)									
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks	
D	492	0	No	PH03	0.5	0	cche	caliche, compacted pad surface material	
D	BDL	0	No		1	1	SM	red, poorly-graded silty sand (f.); no odor, no plasticity, clumped - easy to break by hand	
D	BDL	0	No		2	2	SM	red, poorly-graded silty sand (m.); no odor, no plasticity, clumped - easy to break by hand	
D	BDL	0	No		3	3	SP-SM	red, poorly-sorted gypsiferous sand (f.) with silt; no odor, no plasticity	
D	BDL	0	No	PH03A	4	4	SP-SM	red, poorly-sorted gypsiferous sand (f.) with silt; no odor, no plasticity	
						Total Depth			
						5			
						6			
						7			
						8			
						9			
						10			
						11			
						12			

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 A proud member of WSP Compliance · Engineering · Remediation					PH04		Date: 7/22/2020	
					Site Name: JRU DI-1A CTB			
					Incident Number: NRM2015059528			
					LTE Job Number: 012920081			
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: Anna Byers		Method: Backhoe	
Lat/Long: 32.37933279N, 103.88718912W			Field Screening: HACH Low Range Cl ⁻ Strips		Hole Diameter: n/a		Total Depth: 4 feet	
			Photoionization Detector (PID)					
Comments: Chloride field screening was conducted with 1 part soil: 4 part distilled water dilution. Values reported do not include 40% correction factor. BDL - Below detection limit / D - Dry (Moisture Content)								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D	312	0	No	PH04	0.5	0	cche	caliche, compacted pad surface material
D	BDL	0	No		1	1	cche	caliche, compacted pad surface material
D	160	0	No		2	2	SP-SM	red, poorly-sorted gypsiferous sand (f.) with silt; no odor, no plasticity
D	312	0	No		3	3	SP-SM	red, poorly-sorted gypsiferous sand (f.) with silt; no odor, no plasticity
D	348	0	No	PH04A	4	4	SP-SM	red, poorly-sorted gypsiferous sand (f.) with silt; no odor, no plasticity
						Total Depth		
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 A proud member of WSP Compliance · Engineering · Remediation		PH05		Date: 7/22/2020				
		Site Name: JRU DI-1A CTB						
		Incident Number: NRM2015059528						
		LTE Job Number: 012920081						
LITHOLOGIC / SOIL SAMPLING LOG								
Lat/Long: 32.37919797N, 103.88711871W		Field Screening: HACH Low Range Cl ⁻ Strips Photoionization Detector (PID)		Hole Diameter: n/a				
				Total Depth: 4 feet				
Comments: Chloride field screening was conducted with 1 part soil: 4 part distilled water dilution. Values reported do not include 40% correction factor. BDL - Below detection limit / D - Dry (Moisture Content)								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D	112	0	No	PH05	0.5	0	cche	caliche, compacted pad surface material
D	112	0	No		1	1	SP-SM	red, poorly-sorted gypsiferous sand (f.) with silt; no odor, no plasticity
D	BDL	0	No		2	2	SP-SM	red, poorly-sorted gypsiferous sand (f.) with silt; no odor, no plasticity
D	BDL	0	No		3	3	SP-SM	red, poorly-sorted gypsiferous sand (f.) with silt; no odor, no plasticity
D	BDL	0	No	PH05A	4	4	SP-SM	red, poorly-sorted gypsiferous sand (f.) with silt; no odor, no plasticity
						Total Depth		
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 A proud member of WSP Compliance · Engineering · Remediation					PH06		Date: 7/22/2020	
					Site Name: JRU DI-1A CTB			
					Incident Number: NRM2015059528			
					LTE Job Number: 012920081			
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: Anna Byers		Method: Backhoe	
Lat/Long: 32.37925769N, 103.88718911W			Field Screening: HACH Low Range Cl ⁻ Strips Photoionization Detector (PID)		Hole Diameter: n/a		Total Depth: 4 feet	
Comments: Chloride field screening was conducted with 1 part soil: 4 part distilled water dilution. Values reported do not include 40% correction factor. BDL - Below detection limit / D - Dry (Moisture Content)								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D	BDL	0	No	PH06	0.5	0	cche	caliche, compacted pad surface material
D	BDL	0	No		1	1	SP-SM	red, poorly-sorted gypsiferous sand (f.) with silt; no odor, no plasticity
D	BDL	0	No		2	2	SP-SM	red, poorly-sorted gypsiferous sand (f.) with silt; no odor, no plasticity
D	BDL	0	No		3	3	SP-SM	red, poorly-sorted gypsiferous sand (f.) with silt; no odor, no plasticity
D	BDL	0	No	PH06A	4	4	SP-SM	red, poorly-sorted gypsiferous sand (f.) with silt; no odor, no plasticity
						Total Depth		
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		

ATTACHMENT 3: LABORATORY ANALYTICAL RESULTS



Certificate of Analysis Summary 668157



LT Environmental, Inc., Arvada, CO

Project Name: JRU DI -1A CTB

Project Id: 012920081
Contact: Joseph Hernandez
Project Location: Eddy County

Date Received in Lab: Fri 07.24.2020 11:23
Report Date: 07.27.2020 12:34
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	668157-001	668157-002	668157-003	668157-004	668157-005	668157-006
	<i>Field Id:</i>	PH01	PH01A	PH02	PH02A	PH03	PH03A
	<i>Depth:</i>	0.5- ft	4- ft	0.5- ft	4- ft	0.5- ft	4- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	07.22.2020 12:10	07.22.2020 12:20	07.22.2020 12:38	07.22.2020 12:44	07.22.2020 13:15	07.22.2020 13:21
BTEX by EPA 8021B	<i>Extracted:</i>	07.24.2020 17:35	07.24.2020 17:35	07.24.2020 17:35	07.24.2020 17:35	07.24.2020 17:35	07.24.2020 17:35
	<i>Analyzed:</i>	07.24.2020 20:39	07.24.2020 21:00	07.24.2020 21:20	07.24.2020 21:41	07.24.2020 22:01	07.24.2020 22:21
	<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	<0.00201 0.00201	<0.00199 0.00199
Toluene		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199
Ethylbenzene		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199
m,p-Xylenes		<0.00401 0.00401	<0.00402 0.00402	<0.00400 0.00400	<0.00400 0.00400	<0.00402 0.00402	<0.00398 0.00398
o-Xylene		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199
Total Xylenes		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199
Total BTEX		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199
Chloride by EPA 300	<i>Extracted:</i>	07.24.2020 12:28	07.24.2020 12:28	07.24.2020 12:28	07.24.2020 12:28	07.24.2020 12:28	07.24.2020 12:28
	<i>Analyzed:</i>	07.24.2020 15:43	07.24.2020 16:56	07.24.2020 16:17	07.24.2020 18:31	07.24.2020 16:28	07.24.2020 16:34
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		3610 50.0	10.0 9.88	189 49.9	<9.98 9.98	454 49.9	79.2 49.7
TPH by SW8015 Mod	<i>Extracted:</i>	07.24.2020 15:00	07.24.2020 15:00	07.24.2020 15:00	07.24.2020 15:00	07.24.2020 15:00	07.24.2020 15:00
	<i>Analyzed:</i>	07.24.2020 15:11	07.24.2020 15:32	07.24.2020 15:52	07.24.2020 16:12	07.24.2020 16:32	07.24.2020 16:52
	<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	<50.0 50.0	<50.2 50.2	<50.1 50.1	<50.2 50.2
Diesel Range Organics (DRO)		<50.0 50.0	<50.1 50.1	<50.0 50.0	<50.2 50.2	<50.1 50.1	<50.2 50.2
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<50.1 50.1	<50.0 50.0	<50.2 50.2	<50.1 50.1	<50.2 50.2
Total GRO-DRO		<50.0 50.0	<50.1 50.1	<50.0 50.0	<50.2 50.2	<50.1 50.1	<50.2 50.2
Total TPH		<50.0 50.0	<50.1 50.1	<50.0 50.0	<50.2 50.2	<50.1 50.1	<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 668157



LT Environmental, Inc., Arvada, CO

Project Name: JRU DI -1A CTB

Project Id: 012920081
Contact: Joseph Hernandez
Project Location: Eddy County

Date Received in Lab: Fri 07.24.2020 11:23
Report Date: 07.27.2020 12:34
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	668157-007	668157-008	668157-009	668157-010	668157-011	668157-012
	<i>Field Id:</i>	PH04	PH04A	PH05	PH05A	PH06	PH06A
	<i>Depth:</i>	0.5- ft	4- ft	0.5- ft	4- ft	0.5- ft	4- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	07.22.2020 14:05	07.22.2020 14:14	07.22.2020 15:17	07.22.2020 15:22	07.22.2020 13:48	07.22.2020 15:53
BTEX by EPA 8021B	<i>Extracted:</i>	07.24.2020 16:36	07.24.2020 16:36	07.24.2020 16:36	07.24.2020 16:36	07.24.2020 16:36	07.24.2020 16:36
	<i>Analyzed:</i>	07.25.2020 00:38	07.25.2020 02:15	07.25.2020 02:35	07.25.2020 02:55	07.25.2020 03:16	07.25.2020 03:36
	<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	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200
Toluene		<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200
m,p-Xylenes		<0.00399 0.00399	<0.00399 0.00399	<0.00398 0.00398	<0.00401 0.00401	<0.00402 0.00402	<0.00399 0.00399
o-Xylene		<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200
Total Xylenes		<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200
Total BTEX		<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200
Chloride by EPA 300	<i>Extracted:</i>	07.24.2020 15:34	07.24.2020 15:34	07.24.2020 15:34	07.24.2020 15:34	07.24.2020 15:34	07.24.2020 15:34
	<i>Analyzed:</i>	07.24.2020 17:35	07.24.2020 17:52	07.24.2020 17:58	07.24.2020 18:03	07.24.2020 18:20	07.24.2020 18:25
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		634 9.98	445 10.0	147 9.98	<10.0 10.0	36.8 9.94	12.5 9.88
TPH by SW8015 Mod	<i>Extracted:</i>	07.24.2020 15:00	07.24.2020 15:00	07.24.2020 15:00	07.24.2020 15:00	07.24.2020 15:00	07.24.2020 15:00
	<i>Analyzed:</i>	07.24.2020 15:11	07.24.2020 15:32	07.24.2020 15:52	07.24.2020 16:12	07.24.2020 16:32	07.24.2020 16:52
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<49.8 49.8	<50.3 50.3	<49.9 49.9	<50.1 50.1	<50.2 50.2	<50.0 50.0
Diesel Range Organics (DRO)		<49.8 49.8	<50.3 50.3	<49.9 49.9	<50.1 50.1	<50.2 50.2	<50.0 50.0
Motor Oil Range Hydrocarbons (MRO)		<49.8 49.8	<50.3 50.3	<49.9 49.9	<50.1 50.1	<50.2 50.2	<50.0 50.0
Total GRO-DRO		<49.8 49.8	<50.3 50.3	<49.9 49.9	<50.1 50.1	<50.2 50.2	<50.0 50.0
Total TPH		<49.8 49.8	<50.3 50.3	<49.9 49.9	<50.1 50.1	<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



Analytical Report 668157

for

LT Environmental, Inc.

Project Manager: Joseph Hernandez

JRU DI -1A CTB

012920081

07.27.2020

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)



07.27.2020

Project Manager: **Joseph Hernandez**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: Eurofins Xenco, LLC Report No(s): **668157**

JRU DI -1A CTB

Project Address: Eddy County

Joseph Hernandez:

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) 668157. 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. 668157 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 668157****LT Environmental, Inc., Arvada, CO**

JRU DI -1A CTB

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH01	S	07.22.2020 12:10	0.5 ft	668157-001
PH01A	S	07.22.2020 12:20	4 ft	668157-002
PH02	S	07.22.2020 12:38	0.5 ft	668157-003
PH02A	S	07.22.2020 12:44	4 ft	668157-004
PH03	S	07.22.2020 13:15	0.5 ft	668157-005
PH03A	S	07.22.2020 13:21	4 ft	668157-006
PH04	S	07.22.2020 14:05	0.5 ft	668157-007
PH04A	S	07.22.2020 14:14	4 ft	668157-008
PH05	S	07.22.2020 15:17	0.5 ft	668157-009
PH05A	S	07.22.2020 15:22	4 ft	668157-010
PH06	S	07.22.2020 13:48	0.5 ft	668157-011
PH06A	S	07.22.2020 15:53	4 ft	668157-012



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *JRU DI -1A CTB*

Project ID: 012920081
Work Order Number(s): 668157

Report Date: 07.27.2020
Date Received: 07.24.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 668157

LT Environmental, Inc., Arvada, CO

JRU DI -1A CTB

Sample Id: **PH01** Matrix: Soil Date Received: 07.24.2020 11:23
 Lab Sample Id: 668157-001 Date Collected: 07.22.2020 12:10 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.24.2020 12:28 Basis: Wet Weight
 Seq Number: 3132658

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3610	50.0	mg/kg	07.24.2020 15:43		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.24.2020 15:00 Basis: Wet Weight
 Seq Number: 3132640

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.24.2020 15:11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.24.2020 15:11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.24.2020 15:11	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	07.24.2020 15:11	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.24.2020 15:11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	07.24.2020 15:11	
o-Terphenyl	84-15-1	98	%	70-135	07.24.2020 15:11	



Certificate of Analytical Results 668157

LT Environmental, Inc., Arvada, CO

JRU DI -1A CTB

Sample Id: **PH01**
Lab Sample Id: 668157-001

Matrix: Soil
Date Collected: 07.22.2020 12:10

Date Received: 07.24.2020 11:23
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3132662

Prep Method: SW5035A

% Moisture:

Date Prep: 07.24.2020 17:35

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.24.2020 20:39	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.24.2020 20:39	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.24.2020 20:39	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.24.2020 20:39	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.24.2020 20:39	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.24.2020 20:39	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.24.2020 20:39	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	102	%	70-130	07.24.2020 20:39		
4-Bromofluorobenzene	460-00-4	102	%	70-130	07.24.2020 20:39		



Certificate of Analytical Results 668157

LT Environmental, Inc., Arvada, CO

JRU DI -1A CTB

Sample Id: **PH01A** Matrix: Soil Date Received: 07.24.2020 11:23
 Lab Sample Id: 668157-002 Date Collected: 07.22.2020 12:20 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.24.2020 12:28 Basis: Wet Weight
 Seq Number: 3132658

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	10.0	9.88	mg/kg	07.24.2020 16:56		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.24.2020 15:00 Basis: Wet Weight
 Seq Number: 3132640

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	07.24.2020 15:32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	07.24.2020 15:32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	07.24.2020 15:32	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	07.24.2020 15:32	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	07.24.2020 15:32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	07.24.2020 15:32	
o-Terphenyl	84-15-1	97	%	70-135	07.24.2020 15:32	



Certificate of Analytical Results 668157

LT Environmental, Inc., Arvada, CO

JRU DI -1A CTB

Sample Id: **PH01A**
Lab Sample Id: 668157-002

Matrix: Soil
Date Collected: 07.22.2020 12:20

Date Received: 07.24.2020 11:23
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.24.2020 17:35

Basis: Wet Weight

Seq Number: 3132662

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.24.2020 21:00	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.24.2020 21:00	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.24.2020 21:00	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.24.2020 21:00	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.24.2020 21:00	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.24.2020 21:00	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.24.2020 21:00	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	103	%	70-130	07.24.2020 21:00		
4-Bromofluorobenzene	460-00-4	108	%	70-130	07.24.2020 21:00		



Certificate of Analytical Results 668157

LT Environmental, Inc., Arvada, CO

JRU DI -1A CTB

Sample Id: **PH02** Matrix: Soil Date Received: 07.24.2020 11:23
 Lab Sample Id: 668157-003 Date Collected: 07.22.2020 12:38 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.24.2020 12:28 Basis: Wet Weight
 Seq Number: 3132658

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	189	49.9	mg/kg	07.24.2020 16:17		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.24.2020 15:00 Basis: Wet Weight
 Seq Number: 3132640

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.24.2020 15:52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.24.2020 15:52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.24.2020 15:52	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	07.24.2020 15:52	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.24.2020 15:52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	07.24.2020 15:52	
o-Terphenyl	84-15-1	97	%	70-135	07.24.2020 15:52	



Certificate of Analytical Results 668157

LT Environmental, Inc., Arvada, CO

JRU DI -1A CTB

Sample Id: **PH02**
Lab Sample Id: 668157-003

Matrix: Soil
Date Collected: 07.22.2020 12:38

Date Received: 07.24.2020 11:23
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.24.2020 17:35

Basis: Wet Weight

Seq Number: 3132662

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.24.2020 21:20	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.24.2020 21:20	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.24.2020 21:20	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	07.24.2020 21:20	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.24.2020 21:20	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.24.2020 21:20	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.24.2020 21:20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	07.24.2020 21:20	
1,4-Difluorobenzene	540-36-3	102	%	70-130	07.24.2020 21:20	



Certificate of Analytical Results 668157

LT Environmental, Inc., Arvada, CO

JRU DI -1A CTB

Sample Id: **PH02A** Matrix: Soil Date Received: 07.24.2020 11:23
 Lab Sample Id: 668157-004 Date Collected: 07.22.2020 12:44 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.24.2020 12:28 Basis: Wet Weight
 Seq Number: 3132658

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.98	9.98	mg/kg	07.24.2020 18:31	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.24.2020 15:00 Basis: Wet Weight
 Seq Number: 3132640

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	07.24.2020 16:12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	07.24.2020 16:12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	07.24.2020 16:12	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	07.24.2020 16:12	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	07.24.2020 16:12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	07.24.2020 16:12	
o-Terphenyl	84-15-1	97	%	70-135	07.24.2020 16:12	



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LT Environmental, Inc., Arvada, CO

JRU DI -1A CTB

Sample Id: **PH02A**
Lab Sample Id: 668157-004

Matrix: Soil
Date Collected: 07.22.2020 12:44

Date Received: 07.24.2020 11:23
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3132662

Prep Method: SW5035A

% Moisture:

Date Prep: 07.24.2020 17:35

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.24.2020 21:41	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.24.2020 21:41	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.24.2020 21:41	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	07.24.2020 21:41	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.24.2020 21:41	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.24.2020 21:41	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.24.2020 21:41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	70-130	07.24.2020 21:41	
1,4-Difluorobenzene	540-36-3	99	%	70-130	07.24.2020 21:41	



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LT Environmental, Inc., Arvada, CO

JRU DI -1A CTB

Sample Id: **PH03** Matrix: Soil Date Received: 07.24.2020 11:23
 Lab Sample Id: 668157-005 Date Collected: 07.22.2020 13:15 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.24.2020 12:28 Basis: Wet Weight
 Seq Number: 3132658

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	454	49.9	mg/kg	07.24.2020 16:28		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.24.2020 15:00 Basis: Wet Weight
 Seq Number: 3132640

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	07.24.2020 16:32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	07.24.2020 16:32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	07.24.2020 16:32	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	07.24.2020 16:32	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	07.24.2020 16:32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	07.24.2020 16:32	
o-Terphenyl	84-15-1	96	%	70-135	07.24.2020 16:32	



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LT Environmental, Inc., Arvada, CO

JRU DI -1A CTB

Sample Id: **PH03**
Lab Sample Id: 668157-005

Matrix: Soil
Date Collected: 07.22.2020 13:15

Date Received: 07.24.2020 11:23
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.24.2020 17:35

Basis: Wet Weight

Seq Number: 3132662

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.24.2020 22:01	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.24.2020 22:01	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.24.2020 22:01	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.24.2020 22:01	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.24.2020 22:01	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.24.2020 22:01	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.24.2020 22:01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	07.24.2020 22:01	
4-Bromofluorobenzene	460-00-4	104	%	70-130	07.24.2020 22:01	



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LT Environmental, Inc., Arvada, CO

JRU DI -1A CTB

Sample Id: **PH03A** Matrix: Soil Date Received: 07.24.2020 11:23
 Lab Sample Id: 668157-006 Date Collected: 07.22.2020 13:21 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.24.2020 12:28 Basis: Wet Weight
 Seq Number: 3132658

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	79.2	49.7	mg/kg	07.24.2020 16:34		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.24.2020 15:00 Basis: Wet Weight
 Seq Number: 3132640

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	07.24.2020 16:52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	07.24.2020 16:52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	07.24.2020 16:52	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	07.24.2020 16:52	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	07.24.2020 16:52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	07.24.2020 16:52	
o-Terphenyl	84-15-1	97	%	70-135	07.24.2020 16:52	



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LT Environmental, Inc., Arvada, CO

JRU DI -1A CTB

Sample Id: **PH03A**
Lab Sample Id: 668157-006

Matrix: Soil
Date Collected: 07.22.2020 13:21

Date Received: 07.24.2020 11:23
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.24.2020 17:35

Basis: Wet Weight

Seq Number: 3132662

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.24.2020 22:21	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.24.2020 22:21	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.24.2020 22:21	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.24.2020 22:21	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.24.2020 22:21	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.24.2020 22:21	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.24.2020 22:21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	70-130	07.24.2020 22:21	
1,4-Difluorobenzene	540-36-3	101	%	70-130	07.24.2020 22:21	



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LT Environmental, Inc., Arvada, CO

JRU DI -1A CTB

Sample Id: **PH04** Matrix: Soil Date Received: 07.24.2020 11:23
 Lab Sample Id: 668157-007 Date Collected: 07.22.2020 14:05 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.24.2020 15:34 Basis: Wet Weight
 Seq Number: 3132659

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	634	9.98	mg/kg	07.24.2020 17:35		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.24.2020 15:00 Basis: Wet Weight
 Seq Number: 3132634

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	07.24.2020 15:11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	07.24.2020 15:11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	07.24.2020 15:11	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	07.24.2020 15:11	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	07.24.2020 15:11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	07.24.2020 15:11	
o-Terphenyl	84-15-1	90	%	70-135	07.24.2020 15:11	



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LT Environmental, Inc., Arvada, CO

JRU DI -1A CTB

Sample Id: **PH04**
Lab Sample Id: 668157-007

Matrix: Soil
Date Collected: 07.22.2020 14:05

Date Received: 07.24.2020 11:23
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.24.2020 16:36

Basis: Wet Weight

Seq Number: 3132671

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.25.2020 00:38	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.25.2020 00:38	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.25.2020 00:38	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.25.2020 00:38	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.25.2020 00:38	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.25.2020 00:38	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.25.2020 00:38	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	07.25.2020 00:38		
4-Bromofluorobenzene	460-00-4	101	%	70-130	07.25.2020 00:38		



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LT Environmental, Inc., Arvada, CO

JRU DI -1A CTB

Sample Id: **PH04A** Matrix: Soil Date Received: 07.24.2020 11:23
 Lab Sample Id: 668157-008 Date Collected: 07.22.2020 14:14 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.24.2020 15:34 Basis: Wet Weight
 Seq Number: 3132659

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	445	10.0	mg/kg	07.24.2020 17:52		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.24.2020 15:00 Basis: Wet Weight
 Seq Number: 3132634

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	07.24.2020 15:32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	07.24.2020 15:32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	07.24.2020 15:32	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	07.24.2020 15:32	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	07.24.2020 15:32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	07.24.2020 15:32	
o-Terphenyl	84-15-1	91	%	70-135	07.24.2020 15:32	



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LT Environmental, Inc., Arvada, CO

JRU DI -1A CTB

Sample Id: **PH04A**
Lab Sample Id: 668157-008

Matrix: Soil
Date Collected: 07.22.2020 14:14

Date Received: 07.24.2020 11:23
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.24.2020 16:36

Basis: Wet Weight

Seq Number: 3132671

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.25.2020 02:15	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.25.2020 02:15	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.25.2020 02:15	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.25.2020 02:15	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.25.2020 02:15	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.25.2020 02:15	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.25.2020 02:15	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	104	%	70-130	07.25.2020 02:15		
1,4-Difluorobenzene	540-36-3	102	%	70-130	07.25.2020 02:15		



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LT Environmental, Inc., Arvada, CO

JRU DI -1A CTB

Sample Id: **PH05** Matrix: Soil Date Received: 07.24.2020 11:23
 Lab Sample Id: 668157-009 Date Collected: 07.22.2020 15:17 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.24.2020 15:34 Basis: Wet Weight
 Seq Number: 3132659

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	147	9.98	mg/kg	07.24.2020 17:58		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.24.2020 15:00 Basis: Wet Weight
 Seq Number: 3132634

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	07.24.2020 15:52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	07.24.2020 15:52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	07.24.2020 15:52	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	07.24.2020 15:52	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	07.24.2020 15:52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	07.24.2020 15:52	
o-Terphenyl	84-15-1	94	%	70-135	07.24.2020 15:52	



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LT Environmental, Inc., Arvada, CO

JRU DI -1A CTB

Sample Id: **PH05**
Lab Sample Id: 668157-009

Matrix: Soil
Date Collected: 07.22.2020 15:17

Date Received: 07.24.2020 11:23
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.24.2020 16:36

Basis: Wet Weight

Seq Number: 3132671

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.25.2020 02:35	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.25.2020 02:35	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.25.2020 02:35	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.25.2020 02:35	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.25.2020 02:35	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.25.2020 02:35	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.25.2020 02:35	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	99	%	70-130	07.25.2020 02:35		
4-Bromofluorobenzene	460-00-4	101	%	70-130	07.25.2020 02:35		



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LT Environmental, Inc., Arvada, CO

JRU DI -1A CTB

Sample Id: **PH05A** Matrix: Soil Date Received: 07.24.2020 11:23
 Lab Sample Id: 668157-010 Date Collected: 07.22.2020 15:22 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.24.2020 15:34 Basis: Wet Weight
 Seq Number: 3132659

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<10.0	10.0	mg/kg	07.24.2020 18:03	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.24.2020 15:00 Basis: Wet Weight
 Seq Number: 3132634

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	07.24.2020 16:12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	07.24.2020 16:12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	07.24.2020 16:12	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	07.24.2020 16:12	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	07.24.2020 16:12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	07.24.2020 16:12	
o-Terphenyl	84-15-1	95	%	70-135	07.24.2020 16:12	



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LT Environmental, Inc., Arvada, CO

JRU DI -1A CTB

Sample Id: **PH05A**
Lab Sample Id: 668157-010

Matrix: Soil
Date Collected: 07.22.2020 15:22

Date Received: 07.24.2020 11:23
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.24.2020 16:36

Basis: Wet Weight

Seq Number: 3132671

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.25.2020 02:55	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.25.2020 02:55	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.25.2020 02:55	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.25.2020 02:55	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.25.2020 02:55	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.25.2020 02:55	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.25.2020 02:55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	07.25.2020 02:55	
1,4-Difluorobenzene	540-36-3	102	%	70-130	07.25.2020 02:55	



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LT Environmental, Inc., Arvada, CO

JRU DI -1A CTB

Sample Id: **PH06** Matrix: Soil Date Received: 07.24.2020 11:23
 Lab Sample Id: 668157-011 Date Collected: 07.22.2020 13:48 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.24.2020 15:34 Basis: Wet Weight
 Seq Number: 3132659

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	36.8	9.94	mg/kg	07.24.2020 18:20		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.24.2020 15:00 Basis: Wet Weight
 Seq Number: 3132634

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	07.24.2020 16:32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	07.24.2020 16:32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	07.24.2020 16:32	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	07.24.2020 16:32	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	07.24.2020 16:32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	07.24.2020 16:32	
o-Terphenyl	84-15-1	92	%	70-135	07.24.2020 16:32	



Certificate of Analytical Results 668157

LT Environmental, Inc., Arvada, CO

JRU DI -1A CTB

Sample Id: **PH06**
Lab Sample Id: 668157-011

Matrix: Soil
Date Collected: 07.22.2020 13:48

Date Received: 07.24.2020 11:23
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.24.2020 16:36

Basis: Wet Weight

Seq Number: 3132671

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.25.2020 03:16	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.25.2020 03:16	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.25.2020 03:16	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.25.2020 03:16	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.25.2020 03:16	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.25.2020 03:16	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.25.2020 03:16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	70-130	07.25.2020 03:16	
1,4-Difluorobenzene	540-36-3	102	%	70-130	07.25.2020 03:16	



Certificate of Analytical Results 668157

LT Environmental, Inc., Arvada, CO

JRU DI -1A CTB

Sample Id: **PH06A** Matrix: Soil Date Received: 07.24.2020 11:23
 Lab Sample Id: 668157-012 Date Collected: 07.22.2020 15:53 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.24.2020 15:34 Basis: Wet Weight
 Seq Number: 3132659

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	12.5	9.88	mg/kg	07.24.2020 18:25		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.24.2020 15:00 Basis: Wet Weight
 Seq Number: 3132634

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.24.2020 16:52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.24.2020 16:52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.24.2020 16:52	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	07.24.2020 16:52	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.24.2020 16:52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	07.24.2020 16:52	
o-Terphenyl	84-15-1	96	%	70-135	07.24.2020 16:52	



Certificate of Analytical Results 668157

LT Environmental, Inc., Arvada, CO

JRU DI -1A CTB

Sample Id: **PH06A**
Lab Sample Id: 668157-012

Matrix: Soil
Date Collected: 07.22.2020 15:53

Date Received: 07.24.2020 11:23
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.24.2020 16:36

Basis: Wet Weight

Seq Number: 3132671

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.25.2020 03:36	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.25.2020 03:36	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.25.2020 03:36	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.25.2020 03:36	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.25.2020 03:36	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.25.2020 03:36	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.25.2020 03:36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	70-130	07.25.2020 03:36	
1,4-Difluorobenzene	540-36-3	102	%	70-130	07.25.2020 03:36	

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.
JRU DI -1A CTB

Analytical Method: Chloride by EPA 300

Seq Number: 3132658

MB Sample Id: 7708057-1-BLK

Matrix: Solid

LCS Sample Id: 7708057-1-BKS

Prep Method: E300P

Date Prep: 07.24.2020

LCSD Sample Id: 7708057-1-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	265	106	274	110	90-110	3	20	mg/kg	07.24.2020 13:40	

Analytical Method: Chloride by EPA 300

Seq Number: 3132659

MB Sample Id: 7708059-1-BLK

Matrix: Solid

LCS Sample Id: 7708059-1-BKS

Prep Method: E300P

Date Prep: 07.24.2020

LCSD Sample Id: 7708059-1-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	264	106	274	110	90-110	4	20	mg/kg	07.24.2020 17:24	

Analytical Method: Chloride by EPA 300

Seq Number: 3132658

Parent Sample Id: 668098-001

Matrix: Soil

MS Sample Id: 668098-001 S

Prep Method: E300P

Date Prep: 07.24.2020

MSD Sample Id: 668098-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	310	200	518	104	517	104	90-110	0	20	mg/kg	07.24.2020 13:57	

Analytical Method: Chloride by EPA 300

Seq Number: 3132658

Parent Sample Id: 668154-005

Matrix: Soil

MS Sample Id: 668154-005 S

Prep Method: E300P

Date Prep: 07.24.2020

MSD Sample Id: 668154-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	136	199	339	102	342	104	90-110	1	20	mg/kg	07.24.2020 15:27	

Analytical Method: Chloride by EPA 300

Seq Number: 3132659

Parent Sample Id: 668157-007

Matrix: Soil

MS Sample Id: 668157-007 S

Prep Method: E300P

Date Prep: 07.24.2020

MSD Sample Id: 668157-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	634	201	844	104	842	103	90-110	0	20	mg/kg	07.24.2020 17:41	

Analytical Method: Chloride by EPA 300

Seq Number: 3132659

Parent Sample Id: 668211-005

Matrix: Soil

MS Sample Id: 668211-005 S

Prep Method: E300P

Date Prep: 07.24.2020

MSD Sample Id: 668211-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<9.96	199	211	106	212	106	90-110	0	20	mg/kg	07.24.2020 20:11	

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.
JRU DI -1A CTB

Analytical Method: TPH by SW8015 Mod

Seq Number: 3132634

MB Sample Id: 7708098-1-BLK

Matrix: Solid

LCS Sample Id: 7708098-1-BKS

Prep Method: SW8015P

Date Prep: 07.24.2020

LCSD Sample Id: 7708098-1-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	968	97	1010	101	70-135	4	35	mg/kg	07.24.2020 11:29	
Diesel Range Organics (DRO)	<50.0	1000	1110	111	1160	116	70-135	4	35	mg/kg	07.24.2020 11:29	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	108		127		129		70-135	%	07.24.2020 11:29
o-Terphenyl	120		117		125		70-135	%	07.24.2020 11:29

Analytical Method: TPH by SW8015 Mod

Seq Number: 3132640

MB Sample Id: 7708099-1-BLK

Matrix: Solid

LCS Sample Id: 7708099-1-BKS

Prep Method: SW8015P

Date Prep: 07.24.2020

LCSD Sample Id: 7708099-1-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	1030	103	1100	110	70-135	7	35	mg/kg	07.24.2020 11:29	
Diesel Range Organics (DRO)	<50.0	1000	1180	118	1240	124	70-135	5	35	mg/kg	07.24.2020 11:29	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	121		128		127		70-135	%	07.24.2020 11:29
o-Terphenyl	123		123		130		70-135	%	07.24.2020 11:29

Analytical Method: TPH by SW8015 Mod

Seq Number: 3132634

Matrix: Solid

MB Sample Id: 7708098-1-BLK

Prep Method: SW8015P

Date Prep: 07.24.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	07.24.2020 11:09	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3132640

Matrix: Solid

MB Sample Id: 7708099-1-BLK

Prep Method: SW8015P

Date Prep: 07.24.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	07.24.2020 11:09	

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 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.
JRU DI -1A CTB

Analytical Method: TPH by SW8015 Mod

Seq Number: 3132634

Parent Sample Id: 668065-002

Matrix: Soil

MS Sample Id: 668065-002 S

Prep Method: SW8015P

Date Prep: 07.24.2020

MSD Sample Id: 668065-002 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	977	98	968	97	70-135	1	35	mg/kg	07.24.2020 12:48	
Diesel Range Organics (DRO)	<50.2	1000	1030	103	1020	102	70-135	1	35	mg/kg	07.24.2020 12:48	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	135		133		70-135	%	07.24.2020 12:48
o-Terphenyl	126		127		70-135	%	07.24.2020 12:48

Analytical Method: TPH by SW8015 Mod

Seq Number: 3132640

Parent Sample Id: 668154-001

Matrix: Soil

MS Sample Id: 668154-001 S

Prep Method: SW8015P

Date Prep: 07.24.2020

MSD Sample Id: 668154-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.8	996	948	95	925	93	70-135	2	35	mg/kg	07.24.2020 12:48	
Diesel Range Organics (DRO)	<49.8	996	817	82	788	79	70-135	4	35	mg/kg	07.24.2020 12:48	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	116		113		70-135	%	07.24.2020 12:48
o-Terphenyl	109		105		70-135	%	07.24.2020 12:48

Analytical Method: BTEX by EPA 8021B

Seq Number: 3132662

MB Sample Id: 7708007-1-BLK

Matrix: Solid

LCS Sample Id: 7708007-1-BKS

Prep Method: SW5035A

Date Prep: 07.24.2020

LCSD Sample Id: 7708007-1-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	0.103	103	0.100	100	70-130	3	35	mg/kg	07.24.2020 11:45	
Toluene	<0.00200	0.100	0.0978	98	0.0947	95	70-130	3	35	mg/kg	07.24.2020 11:45	
Ethylbenzene	<0.00200	0.100	0.100	100	0.0978	98	71-129	2	35	mg/kg	07.24.2020 11:45	
m,p-Xylenes	<0.00400	0.200	0.202	101	0.197	99	70-135	3	35	mg/kg	07.24.2020 11:45	
o-Xylene	<0.00200	0.100	0.102	102	0.0994	99	71-133	3	35	mg/kg	07.24.2020 11:45	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		98		99		70-130	%	07.24.2020 11:45
4-Bromofluorobenzene	104		99		100		70-130	%	07.24.2020 11:45

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.
JRU DI -1A CTB

Analytical Method: BTEX by EPA 8021B

Seq Number: 3132671

Matrix: Solid

Prep Method: SW5035A

Date Prep: 07.24.2020

MB Sample Id: 7708060-1-BLK

LCS Sample Id: 7708060-1-BKS

LCSD Sample Id: 7708060-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.101	101	0.101	101	70-130	0	35	mg/kg	07.24.2020 23:58	
Toluene	<0.00200	0.100	0.0947	95	0.0927	93	70-130	2	35	mg/kg	07.24.2020 23:58	
Ethylbenzene	<0.00200	0.100	0.0973	97	0.0976	98	71-129	0	35	mg/kg	07.24.2020 23:58	
m,p-Xylenes	<0.00400	0.200	0.198	99	0.198	99	70-135	0	35	mg/kg	07.24.2020 23:58	
o-Xylene	<0.00200	0.100	0.0996	100	0.0989	99	71-133	1	35	mg/kg	07.24.2020 23:58	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		99		99		70-130	%	07.24.2020 23:58
4-Bromofluorobenzene	105		99		99		70-130	%	07.24.2020 23:58

Analytical Method: BTEX by EPA 8021B

Seq Number: 3132662

Matrix: Soil

Prep Method: SW5035A

Date Prep: 07.24.2020

Parent Sample Id: 668056-011

MS Sample Id: 668056-011 S

MSD Sample Id: 668056-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.100	100	0.0990	99	70-130	1	35	mg/kg	07.24.2020 13:42	
Toluene	<0.00200	0.0998	0.0944	95	0.0930	93	70-130	1	35	mg/kg	07.24.2020 13:42	
Ethylbenzene	<0.00200	0.0998	0.0984	99	0.0934	93	71-129	5	35	mg/kg	07.24.2020 13:42	
m,p-Xylenes	<0.00399	0.200	0.197	99	0.190	95	70-135	4	35	mg/kg	07.24.2020 13:42	
o-Xylene	<0.00200	0.0998	0.0983	98	0.0946	95	71-133	4	35	mg/kg	07.24.2020 13:42	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	96		98		70-130	%	07.24.2020 13:42
4-Bromofluorobenzene	103		102		70-130	%	07.24.2020 13:42

Analytical Method: BTEX by EPA 8021B

Seq Number: 3132671

Matrix: Soil

Prep Method: SW5035A

Date Prep: 07.24.2020

Parent Sample Id: 668157-007

MS Sample Id: 668157-007 S

MSD Sample Id: 668157-007 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	0.0994	99	0.0984	99	70-130	1	35	mg/kg	07.25.2020 00:59	
Toluene	<0.00200	0.100	0.0913	91	0.0911	91	70-130	0	35	mg/kg	07.25.2020 00:59	
Ethylbenzene	<0.00200	0.100	0.0948	95	0.0942	95	71-129	1	35	mg/kg	07.25.2020 00:59	
m,p-Xylenes	<0.00400	0.200	0.192	96	0.190	95	70-135	1	35	mg/kg	07.25.2020 00:59	
o-Xylene	<0.00200	0.100	0.0947	95	0.0943	95	71-133	0	35	mg/kg	07.25.2020 00:59	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	97		100		70-130	%	07.25.2020 00:59
4-Bromofluorobenzene	97		104		70-130	%	07.25.2020 00:59

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

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) 385-3443 Lubbock, TX (806) 794-1296 Crashpad, NM (432) 704-5440
 Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000 West Palm Beach, FL (561) 689-6701

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Page 1 of 2

Project Manager:	JOSEPH HERNANDEZ	Bill to: (if different)	KYLE LITRELL
Company Name:	LT ENVIRONMENTAL	Company Name:	XTO ENERGY
Address:	3300 North A Street	Address:	3104 E. GREENE ST
City, State ZIP:	Midland, TX 79705	City, State ZIP:	CARLSBAD, NM 88220
Phone:	(432) 894-5641	Email:	obyers@xtenv.com

Project Name:	JRU DI - 1A CTB	Turn Around	☐ Routine ☐ Rush: 24HR
Project Number:	012920081	Pres. Code	
Project Location:	EDY 800 COUNTY	Due Date:	
Sampler's Name:	Anna Byers		
PO #:	NAM2015059528	Quote #:	

SAMPLE RECEIPT		Temp Blank:	☒ Yes ☐ No	Wet Ice:	☒ Yes ☐ No
Temperature (°C):	2.2 / 2.0	Thermometer ID	T-NJA-004		
Received Intact:	☒ Yes ☐ No	Correction Factor:	-0.2		
Cooler Custody Seals:	Yes ☒ No ☐ N/A	Total Containers:	12		
Sample Custody Seals:	Yes ☒ No ☐ N/A				

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	ANALYSIS REQUEST	Preservative Codes	Sample Comments
PH01		S	7/22/20	12:10	0.5'	1	TPH (EPA 8015)	MeOH: Me	
PH01A				12:20	4'	1	BTEX (EPA 8021)	None: NO	
PH02				12:38	0.5'	1	Chloride (EPA 8060)	HNO3: HN	
PH02A				12:44	4'	1		H2SO4: H2	
PH03				13:15	0.5'	1		HCL: HL	
PH03A				13:21	4'	1		NaOH: Na	
PH04				14:05	0.5'	1		Zn Acetate+ NaOH: Zn	
PH04A				14:14	4'	1			
PH05				15:17	0.5'	1			
PH05A				15:22	4'	1			

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

1631 / 245.1 / 7470 / 7471 : Hg

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenoco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenoco 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 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.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Anna Byers	[Signature]	7/24/20 11:23			



Chain of Custody

Work Order No:

W08157

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334
 Midland, TX (432) 704-5440 El Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296
 Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8900 Tampa, FL (813) 620-2000 West Palm Beach, FL (561) 689-6701

www.xenco.com

Page 2 of 2

Project Manager:	JOSEPH HEENAUDEE	Bill to: (if different)	KYLE LITTELL
Company Name:	LT ENVIRONMENTAL	Company Name:	XTO ENERGY
Address:	8380 North A Street	Address:	3104 E. GREENE ST
City, State ZIP:	Midland, TX 79705	City, State ZIP:	CARLSBAD, NM 88226
Phone:	(432) 894-5641	Email:	abys@xenco.com

Program: ☐ UST/ST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting Level: ☐ Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: ☐ EDD ☐ ADAPT ☐ Other:

Project Name:	IEU DI-1A CTB	Turn Around	☐
Project Number:	012920081	Routine	☐
Project Location:	EDY COUNTY	Rush:	24 HR
Sampler's Name:	Anna Byers	Due Date:	
PO #:	NRM20150528	Quote #:	

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	Total Containers:		
Sample Custody Seals:	Yes	No	N/A			

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Pres. Code	ANALYSIS REQUEST	Preservative Codes	Sample Comments
PT06	S	4/2/04	1348	0.5'	1	X	X	TPH (EPA 8015)	MeOH: Me	
PT06A	S	7/22/08	1553	4'	1	X	X	BTEX (EPA 8021)	None: NO	
						X	X	Chloride (EPA 300.0)	HNO3: HN	
									H2SO4: H2	
									HCL: HL	
									NaOH: Na	
									Zn Acetate+ NaOH: Zn	
									TAT starts the day received by the lab, if received by 4:00pm	

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

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
Anna Byers	[Signature]	7/24/20 1123			

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 07.24.2020 11.23.00 AM

Work Order #: 668157

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

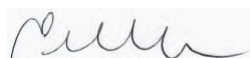
Samples received in bulk containers.

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

Analyst:

PH Device/Lot#:

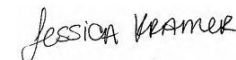
Checklist completed by:



Elizabeth McClellan

Date: 07.24.2020

Checklist reviewed by:



Jessica Kramer

Date: 07.24.2020

Certificate of Analysis Summary 668156

LT Environmental, Inc., Arvada, CO

Project Name: JRU DI -1A CTB

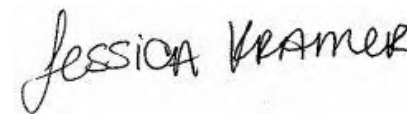
Project Id: 012920081
 Contact: Joseph Hernandez
 Project Location: Eddy County

Date Received in Lab: Fri 07.24.2020 11:23
 Report Date: 07.27.2020 12:35
 Project Manager: Jessica Kramer

Analysis Requested	Lab Id: 668156-001 Field Id: SW01 Depth: 0.5-1.5 ft Matrix: SOIL Sampled: 07.23.2020 11:56					
BTEX by EPA 8021B	Extracted: 07.24.2020 17:35 Analyzed: 07.24.2020 20:19 Units/RL: mg/kg RL					
Benzene	<0.00200 0.00200					
Toluene	<0.00200 0.00200					
Ethylbenzene	<0.00200 0.00200					
m,p-Xylenes	<0.00401 0.00401					
o-Xylene	<0.00200 0.00200					
Total Xylenes	<0.00200 0.00200					
Total BTEX	<0.00200 0.00200					
Chloride by EPA 300	Extracted: 07.24.2020 12:28 Analyzed: 07.24.2020 15:38 Units/RL: mg/kg RL					
Chloride	343 50.5					
TPH by SW8015 Mod	Extracted: 07.24.2020 12:15 Analyzed: 07.24.2020 14:51 Units/RL: mg/kg RL					
Gasoline Range Hydrocarbons (GRO)	<50.3 50.3					
Diesel Range Organics (DRO)	<50.3 50.3					
Motor Oil Range Hydrocarbons (MRO)	<50.3 50.3					
Total GRO-DRO	<50.3 50.3					
Total TPH	<50.3 50.3					

BRL - Below Reporting Limit

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





Analytical Report 668156

for

LT Environmental, Inc.

Project Manager: Joseph Hernandez

JRU DI -1A CTB

012920081

07.27.2020

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)



07.27.2020

Project Manager: **Joseph Hernandez**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: Eurofins Xenco, LLC Report No(s): **668156**

JRU DI -1A CTB

Project Address: Eddy County

Joseph Hernandez:

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) 668156. 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. 668156 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 668156

LT Environmental, Inc., Arvada, CO

JRU DI -1A CTB

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW01	S	07.23.2020 11:56	0.5 - 1.5 ft	668156-001



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *JRU DI -1A CTB*

Project ID: 012920081

Work Order Number(s): 668156

Report Date: 07.27.2020

Date Received: 07.24.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 668156

LT Environmental, Inc., Arvada, CO

JRU DI -1A CTB

Sample Id: **SW01** Matrix: Soil Date Received: 07.24.2020 11:23
 Lab Sample Id: 668156-001 Date Collected: 07.23.2020 11:56 Sample Depth: 0.5 - 1.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.24.2020 12:28 Basis: Wet Weight
 Seq Number: 3132658

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	343	50.5	mg/kg	07.24.2020 15:38		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.24.2020 12:15 Basis: Wet Weight
 Seq Number: 3132640

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	07.24.2020 14:51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	07.24.2020 14:51	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	07.24.2020 14:51	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	07.24.2020 14:51	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	07.24.2020 14:51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	07.24.2020 14:51	
o-Terphenyl	84-15-1	98	%	70-135	07.24.2020 14:51	



Certificate of Analytical Results 668156

LT Environmental, Inc., Arvada, CO

JRU DI -1A CTB

Sample Id: **SW01**
Lab Sample Id: 668156-001

Matrix: Soil
Date Collected: 07.23.2020 11:56

Date Received: 07.24.2020 11:23
Sample Depth: 0.5 - 1.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.24.2020 17:35

Basis: Wet Weight

Seq Number: 3132662

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.24.2020 20:19	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.24.2020 20:19	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.24.2020 20:19	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.24.2020 20:19	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.24.2020 20:19	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.24.2020 20:19	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.24.2020 20:19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	07.24.2020 20:19	
1,4-Difluorobenzene	540-36-3	100	%	70-130	07.24.2020 20:19	

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.
JRU DI -1A CTB

Analytical Method: Chloride by EPA 300

Seq Number: 3132658

MB Sample Id: 7708057-1-BLK

Matrix: Solid

LCS Sample Id: 7708057-1-BKS

Prep Method: E300P

Date Prep: 07.24.2020

LCSD Sample Id: 7708057-1-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	265	106	274	110	90-110	3	20	mg/kg	07.24.2020 13:40	

Analytical Method: Chloride by EPA 300

Seq Number: 3132658

Parent Sample Id: 668098-001

Matrix: Soil

MS Sample Id: 668098-001 S

Prep Method: E300P

Date Prep: 07.24.2020

MSD Sample Id: 668098-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	310	200	518	104	517	104	90-110	0	20	mg/kg	07.24.2020 13:57	

Analytical Method: Chloride by EPA 300

Seq Number: 3132658

Parent Sample Id: 668154-005

Matrix: Soil

MS Sample Id: 668154-005 S

Prep Method: E300P

Date Prep: 07.24.2020

MSD Sample Id: 668154-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	136	199	339	102	342	104	90-110	1	20	mg/kg	07.24.2020 15:27	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3132640

MB Sample Id: 7708099-1-BLK

Matrix: Solid

LCS Sample Id: 7708099-1-BKS

Prep Method: SW8015P

Date Prep: 07.24.2020

LCSD Sample Id: 7708099-1-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	1030	103	1100	110	70-135	7	35	mg/kg	07.24.2020 11:29	
Diesel Range Organics (DRO)	<50.0	1000	1180	118	1240	124	70-135	5	35	mg/kg	07.24.2020 11:29	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	121		128		127		70-135	%	07.24.2020 11:29
o-Terphenyl	123		123		130		70-135	%	07.24.2020 11:29

Analytical Method: TPH by SW8015 Mod

Seq Number: 3132640

Matrix: Solid

MB Sample Id: 7708099-1-BLK

Prep Method: SW8015P

Date Prep: 07.24.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	07.24.2020 11:09	

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 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.
JRU DI -1A CTB

Analytical Method: TPH by SW8015 Mod

Seq Number: 3132640

Parent Sample Id: 668154-001

Matrix: Soil

MS Sample Id: 668154-001 S

Prep Method: SW8015P

Date Prep: 07.24.2020

MSD Sample Id: 668154-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.8	996	948	95	925	93	70-135	2	35	mg/kg	07.24.2020 12:48	
Diesel Range Organics (DRO)	<49.8	996	817	82	788	79	70-135	4	35	mg/kg	07.24.2020 12:48	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	116		113		70-135	%	07.24.2020 12:48
o-Terphenyl	109		105		70-135	%	07.24.2020 12:48

Analytical Method: BTEX by EPA 8021B

Seq Number: 3132662

MB Sample Id: 7708007-1-BLK

Matrix: Solid

LCS Sample Id: 7708007-1-BKS

Prep Method: SW5035A

Date Prep: 07.24.2020

LCSD Sample Id: 7708007-1-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	0.103	103	0.100	100	70-130	3	35	mg/kg	07.24.2020 11:45	
Toluene	<0.00200	0.100	0.0978	98	0.0947	95	70-130	3	35	mg/kg	07.24.2020 11:45	
Ethylbenzene	<0.00200	0.100	0.100	100	0.0978	98	71-129	2	35	mg/kg	07.24.2020 11:45	
m,p-Xylenes	<0.00400	0.200	0.202	101	0.197	99	70-135	3	35	mg/kg	07.24.2020 11:45	
o-Xylene	<0.00200	0.100	0.102	102	0.0994	99	71-133	3	35	mg/kg	07.24.2020 11:45	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		98		99		70-130	%	07.24.2020 11:45
4-Bromofluorobenzene	104		99		100		70-130	%	07.24.2020 11:45

Analytical Method: BTEX by EPA 8021B

Seq Number: 3132662

Parent Sample Id: 668056-011

Matrix: Soil

MS Sample Id: 668056-011 S

Prep Method: SW5035A

Date Prep: 07.24.2020

MSD Sample Id: 668056-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.100	100	0.0990	99	70-130	1	35	mg/kg	07.24.2020 13:42	
Toluene	<0.00200	0.0998	0.0944	95	0.0930	93	70-130	1	35	mg/kg	07.24.2020 13:42	
Ethylbenzene	<0.00200	0.0998	0.0984	99	0.0934	93	71-129	5	35	mg/kg	07.24.2020 13:42	
m,p-Xylenes	<0.00399	0.200	0.197	99	0.190	95	70-135	4	35	mg/kg	07.24.2020 13:42	
o-Xylene	<0.00200	0.0998	0.0983	98	0.0946	95	71-133	4	35	mg/kg	07.24.2020 13:42	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	96		98		70-130	%	07.24.2020 13:42
4-Bromofluorobenzene	103		102		70-130	%	07.24.2020 13:42

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

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

Justise

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334

... Lubbock, TX (806) 794-1296 Crasabad, NM (432) 704-5440

Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000 West Palm Beach, FL (561) 689-6701

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Page 1 of 1

Project Manager:	JOSEPH HERNANDEZ	Bill to: (if different)	KYLE LITTELL
Company Name:	LT ENVIRONMENTAL	Company Name:	XTD ENERGY
Address:	3500 North A Street	Address:	3104 E. GREENE ST
City, State ZIP:	Midland, TX 79705	City, State ZIP:	CARLSBAD, NM 88220
Phone:	(432) 894-5641	Email:	abyers@ltenv.com

Work Order Comments
Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐ State of Project: Reporting Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐ Deliverables: EDD ☐ ADAPT ☐ Other:

Project Name:	JRU DI-1A CTB	Turn Around
Project Number:	Q12920081	Routine ☐
Project Location	EPDY COUNTY	Rush: 24HR
Sampler's Name:	ANNA BYERS	Due Date:
PO #:	NEM2015059528	Quote #:

SAMPLE RECEIPT	Temp Blank:	Yes ☒ No	Wet Ice:	Yes ☒ No
	Temperature (°C):	2.2 / 2.0	Thermometer ID	
	Received intact:	Yes ☒ No	T-N/A-004	
	Cooler Custody Seals:	Yes ☒ No	Correction Factor:	-0.2
	Sample Custody Seals:	Yes ☒ No	Total Containers:	1

ANALYSIS REQUEST										Preservative Codes
Pres. Code										MeOH: Me
										None: NO
										HNO ₃ : HN
										H ₂ SO ₄ : H2
										HCL: HL
										NaOH: Na
										Zn Acetate+ NaOH: Zn
TAT starts the day received by the lab, if										

[illegible]

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
TCLP/SPLP 6010: 8RCRA Sh As Ba BeCd Cr Co Cu Pb Mn Ni Cu As Ti Zn

1631 / 245.1 / 7470 / 7471 : Hg

notice, signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenoco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenoco 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 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.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>Ann Byers</i>	<i>[Signature]</i>	7/24/20 11:23			

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 07.24.2020 11.23.00 AM

Work Order #: 668156

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

Sample received in bulk container.

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

Analyst:

PH Device/Lot#:

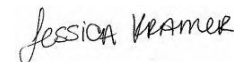
Checklist completed by:



Elizabeth McClellan

Date: 07.24.2020

Checklist reviewed by:



Jessica Kramer

Date: 07.24.2020

Certificate of Analysis Summary 668154



LT Environmental, Inc., Arvada, CO

Project Name: JRU DI -1A CTB

Project Id: 012920081
Contact: Joseph Hernandez
Project Location: Eddy County

Date Received in Lab: Fri 07.24.2020 11:23
Report Date: 07.27.2020 12:35
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	668154-001	668154-002	668154-003	668154-004	668154-005	
	<i>Field Id:</i>	FS01	FS02	FS03	FS04	FS05	
	<i>Depth:</i>	1-1.5 ft	1-1.5 ft	1- ft	1- ft	1- ft	
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	
	<i>Sampled:</i>	07.23.2020 09:38	07.23.2020 09:45	07.23.2020 11:33	07.23.2020 11:36	07.23.2020 11:40	
BTEX by EPA 8021B	<i>Extracted:</i>	07.24.2020 17:35	07.24.2020 17:35	07.24.2020 17:35	07.24.2020 17:35	07.24.2020 17:35	
	<i>Analyzed:</i>	07.24.2020 17:42	07.24.2020 18:02	07.24.2020 19:18	07.24.2020 19:38	07.24.2020 19:59	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Benzene		<0.00202 0.00202	<0.00198 0.00198	<0.00202 0.00202	<0.00202 0.00202	<0.00199 0.00199	
Toluene		<0.00202 0.00202	<0.00198 0.00198	<0.00202 0.00202	<0.00202 0.00202	<0.00199 0.00199	
Ethylbenzene		<0.00202 0.00202	<0.00198 0.00198	<0.00202 0.00202	<0.00202 0.00202	<0.00199 0.00199	
m,p-Xylenes		<0.00404 0.00404	<0.00397 0.00397	<0.00404 0.00404	<0.00404 0.00404	<0.00398 0.00398	
o-Xylene		<0.00202 0.00202	<0.00198 0.00198	<0.00202 0.00202	<0.00202 0.00202	<0.00199 0.00199	
Total Xylenes		<0.00202 0.00202	<0.00198 0.00198	<0.00202 0.00202	<0.00202 0.00202	<0.00199 0.00199	
Total BTEX		<0.00202 0.00202	<0.00198 0.00198	<0.00202 0.00202	<0.00202 0.00202	<0.00199 0.00199	
Chloride by EPA 300	<i>Extracted:</i>	07.24.2020 12:28	07.24.2020 12:28	07.24.2020 12:28	07.24.2020 12:28	07.24.2020 12:28	
	<i>Analyzed:</i>	07.24.2020 14:59	07.24.2020 16:06	07.24.2020 16:11	07.24.2020 17:02	07.24.2020 15:21	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		78.3 50.2	92.4 9.98	69.4 10.1	69.8 9.90	136 49.8	
TPH by SW8015 Mod	<i>Extracted:</i>	07.24.2020 12:15	07.24.2020 12:15	07.24.2020 12:15	07.24.2020 12:15	07.24.2020 12:15	
	<i>Analyzed:</i>	07.24.2020 12:28	07.24.2020 13:29	07.24.2020 13:49	07.24.2020 14:09	07.24.2020 14:31	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Gasoline Range Hydrocarbons (GRO)		<49.9 49.9	<50.2 50.2	<50.2 50.2	<49.9 49.9	<50.2 50.2	
Diesel Range Organics (DRO)		<49.9 49.9	<50.2 50.2	<50.2 50.2	<49.9 49.9	<50.2 50.2	
Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9	<50.2 50.2	<50.2 50.2	<49.9 49.9	<50.2 50.2	
Total GRO-DRO		<49.9 49.9	<50.2 50.2	<50.2 50.2	<49.9 49.9	<50.2 50.2	
Total TPH		<49.9 49.9	<50.2 50.2	<50.2 50.2	<49.9 49.9	<50.2 50.2	

BRL - Below Reporting Limit

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



Analytical Report 668154

for

LT Environmental, Inc.

Project Manager: Joseph Hernandez

JRU DI -1A CTB

012920081

07.27.2020

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)



07.27.2020

Project Manager: **Joseph Hernandez**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: Eurofins Xenco, LLC Report No(s): **668154**

JRU DI -1A CTB

Project Address: Eddy County

Joseph Hernandez:

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) 668154. 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. 668154 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 668154****LT Environmental, Inc., Arvada, CO**

JRU DI -1A CTB

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	07.23.2020 09:38	1 - 1.5 ft	668154-001
FS02	S	07.23.2020 09:45	1 - 1.5 ft	668154-002
FS03	S	07.23.2020 11:33	1 ft	668154-003
FS04	S	07.23.2020 11:36	1 ft	668154-004
FS05	S	07.23.2020 11:40	1 ft	668154-005



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: JRU DI -1A CTB

Project ID: 012920081
Work Order Number(s): 668154

Report Date: 07.27.2020
Date Received: 07.24.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 668154

LT Environmental, Inc., Arvada, CO

JRU DI -1A CTB

Sample Id: **FS01** Matrix: Soil Date Received: 07.24.2020 11:23
 Lab Sample Id: 668154-001 Date Collected: 07.23.2020 09:38 Sample Depth: 1 - 1.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.24.2020 12:28 Basis: Wet Weight
 Seq Number: 3132658

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	78.3	50.2	mg/kg	07.24.2020 14:59		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.24.2020 12:15 Basis: Wet Weight
 Seq Number: 3132640

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	07.24.2020 12:28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	07.24.2020 12:28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	07.24.2020 12:28	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	07.24.2020 12:28	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	07.24.2020 12:28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	126	%	70-135	07.24.2020 12:28	
o-Terphenyl	84-15-1	128	%	70-135	07.24.2020 12:28	



Certificate of Analytical Results 668154

LT Environmental, Inc., Arvada, CO

JRU DI -1A CTB

Sample Id: **FS01**
Lab Sample Id: 668154-001

Matrix: Soil
Date Collected: 07.23.2020 09:38

Date Received: 07.24.2020 11:23
Sample Depth: 1 - 1.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.24.2020 17:35

Basis: Wet Weight

Seq Number: 3132662

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.24.2020 17:42	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.24.2020 17:42	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.24.2020 17:42	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	07.24.2020 17:42	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.24.2020 17:42	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.24.2020 17:42	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.24.2020 17:42	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	104	%	70-130	07.24.2020 17:42		
1,4-Difluorobenzene	540-36-3	102	%	70-130	07.24.2020 17:42		



Certificate of Analytical Results 668154

LT Environmental, Inc., Arvada, CO

JRU DI -1A CTB

Sample Id: **FS02** Matrix: Soil Date Received: 07.24.2020 11:23
 Lab Sample Id: 668154-002 Date Collected: 07.23.2020 09:45 Sample Depth: 1 - 1.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.24.2020 12:28 Basis: Wet Weight
 Seq Number: 3132658

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	92.4	9.98	mg/kg	07.24.2020 16:06		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.24.2020 12:15 Basis: Wet Weight
 Seq Number: 3132640

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	07.24.2020 13:29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	07.24.2020 13:29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	07.24.2020 13:29	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	07.24.2020 13:29	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	07.24.2020 13:29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	07.24.2020 13:29	
o-Terphenyl	84-15-1	102	%	70-135	07.24.2020 13:29	



Certificate of Analytical Results 668154

LT Environmental, Inc., Arvada, CO

JRU DI -1A CTB

Sample Id: **FS02**
Lab Sample Id: 668154-002

Matrix: Soil
Date Collected: 07.23.2020 09:45

Date Received: 07.24.2020 11:23
Sample Depth: 1 - 1.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.24.2020 17:35

Basis: Wet Weight

Seq Number: 3132662

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	07.24.2020 18:02	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.24.2020 18:02	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.24.2020 18:02	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	07.24.2020 18:02	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.24.2020 18:02	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	07.24.2020 18:02	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.24.2020 18:02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	70-130	07.24.2020 18:02	
1,4-Difluorobenzene	540-36-3	102	%	70-130	07.24.2020 18:02	



Certificate of Analytical Results 668154

LT Environmental, Inc., Arvada, CO

JRU DI -1A CTB

Sample Id: **FS03** Matrix: Soil Date Received: 07.24.2020 11:23
 Lab Sample Id: 668154-003 Date Collected: 07.23.2020 11:33 Sample Depth: 1 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.24.2020 12:28 Basis: Wet Weight
 Seq Number: 3132658

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	69.4	10.1	mg/kg	07.24.2020 16:11		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.24.2020 12:15 Basis: Wet Weight
 Seq Number: 3132640

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	07.24.2020 13:49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	07.24.2020 13:49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	07.24.2020 13:49	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	07.24.2020 13:49	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	07.24.2020 13:49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	07.24.2020 13:49	
o-Terphenyl	84-15-1	104	%	70-135	07.24.2020 13:49	



Certificate of Analytical Results 668154

LT Environmental, Inc., Arvada, CO

JRU DI -1A CTB

Sample Id: **FS03**
Lab Sample Id: 668154-003

Matrix: Soil
Date Collected: 07.23.2020 11:33

Date Received: 07.24.2020 11:23
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.24.2020 17:35

Basis: Wet Weight

Seq Number: 3132662

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.24.2020 19:18	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.24.2020 19:18	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.24.2020 19:18	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	07.24.2020 19:18	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.24.2020 19:18	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.24.2020 19:18	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.24.2020 19:18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	107	%	70-130	07.24.2020 19:18	
1,4-Difluorobenzene	540-36-3	100	%	70-130	07.24.2020 19:18	



Certificate of Analytical Results 668154

LT Environmental, Inc., Arvada, CO

JRU DI -1A CTB

Sample Id: **FS04** Matrix: Soil Date Received: 07.24.2020 11:23
 Lab Sample Id: 668154-004 Date Collected: 07.23.2020 11:36 Sample Depth: 1 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.24.2020 12:28 Basis: Wet Weight
 Seq Number: 3132658

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	69.8	9.90	mg/kg	07.24.2020 17:02		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.24.2020 12:15 Basis: Wet Weight
 Seq Number: 3132640

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	07.24.2020 14:09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	07.24.2020 14:09	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	07.24.2020 14:09	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	07.24.2020 14:09	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	07.24.2020 14:09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	07.24.2020 14:09	
o-Terphenyl	84-15-1	101	%	70-135	07.24.2020 14:09	



Certificate of Analytical Results 668154

LT Environmental, Inc., Arvada, CO

JRU DI -1A CTB

Sample Id: **FS04**
Lab Sample Id: 668154-004

Matrix: Soil
Date Collected: 07.23.2020 11:36

Date Received: 07.24.2020 11:23
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.24.2020 17:35

Basis: Wet Weight

Seq Number: 3132662

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.24.2020 19:38	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.24.2020 19:38	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.24.2020 19:38	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	07.24.2020 19:38	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.24.2020 19:38	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.24.2020 19:38	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.24.2020 19:38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	70-130	07.24.2020 19:38	
1,4-Difluorobenzene	540-36-3	101	%	70-130	07.24.2020 19:38	



Certificate of Analytical Results 668154

LT Environmental, Inc., Arvada, CO

JRU DI -1A CTB

Sample Id: **FS05** Matrix: Soil Date Received: 07.24.2020 11:23
 Lab Sample Id: 668154-005 Date Collected: 07.23.2020 11:40 Sample Depth: 1 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.24.2020 12:28 Basis: Wet Weight
 Seq Number: 3132658

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	136	49.8	mg/kg	07.24.2020 15:21		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.24.2020 12:15 Basis: Wet Weight
 Seq Number: 3132640

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	07.24.2020 14:31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	07.24.2020 14:31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	07.24.2020 14:31	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	07.24.2020 14:31	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	07.24.2020 14:31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	07.24.2020 14:31	
o-Terphenyl	84-15-1	98	%	70-135	07.24.2020 14:31	



Certificate of Analytical Results 668154

LT Environmental, Inc., Arvada, CO

JRU DI -1A CTB

Sample Id: **FS05** Matrix: Soil Date Received: 07.24.2020 11:23
 Lab Sample Id: 668154-005 Date Collected: 07.23.2020 11:40 Sample Depth: 1 ft
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.24.2020 17:35 Basis: Wet Weight
 Seq Number: 3132662

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.24.2020 19:59	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.24.2020 19:59	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.24.2020 19:59	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.24.2020 19:59	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.24.2020 19:59	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.24.2020 19:59	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.24.2020 19:59	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	07.24.2020 19:59		
4-Bromofluorobenzene	460-00-4	106	%	70-130	07.24.2020 19:59		

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.

JRU DI -1A CTB

Analytical Method: Chloride by EPA 300

Seq Number: 3132658

MB Sample Id: 7708057-1-BLK

Matrix: Solid

LCS Sample Id: 7708057-1-BKS

Prep Method: E300P

Date Prep: 07.24.2020

LCSD Sample Id: 7708057-1-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	265	106	274	110	90-110	3	20	mg/kg	07.24.2020 13:40	

Analytical Method: Chloride by EPA 300

Seq Number: 3132658

Parent Sample Id: 668098-001

Matrix: Soil

MS Sample Id: 668098-001 S

Prep Method: E300P

Date Prep: 07.24.2020

MSD Sample Id: 668098-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	310	200	518	104	517	104	90-110	0	20	mg/kg	07.24.2020 13:57	

Analytical Method: Chloride by EPA 300

Seq Number: 3132658

Parent Sample Id: 668154-005

Matrix: Soil

MS Sample Id: 668154-005 S

Prep Method: E300P

Date Prep: 07.24.2020

MSD Sample Id: 668154-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	136	199	339	102	342	104	90-110	1	20	mg/kg	07.24.2020 15:27	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3132640

MB Sample Id: 7708099-1-BLK

Matrix: Solid

LCS Sample Id: 7708099-1-BKS

Prep Method: SW8015P

Date Prep: 07.24.2020

LCSD Sample Id: 7708099-1-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	1030	103	1100	110	70-135	7	35	mg/kg	07.24.2020 11:29	
Diesel Range Organics (DRO)	<50.0	1000	1180	118	1240	124	70-135	5	35	mg/kg	07.24.2020 11:29	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	121		128		127		70-135	%	07.24.2020 11:29
o-Terphenyl	123		123		130		70-135	%	07.24.2020 11:29

Analytical Method: TPH by SW8015 Mod

Seq Number: 3132640

Matrix: Solid

MB Sample Id: 7708099-1-BLK

Prep Method: SW8015P

Date Prep: 07.24.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	07.24.2020 11:09	

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 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.
 JRU DI -1A CTB
Analytical Method: TPH by SW8015 Mod

Seq Number: 3132640

Parent Sample Id: 668154-001

Matrix: Soil

MS Sample Id: 668154-001 S

Prep Method: SW8015P

Date Prep: 07.24.2020

MSD Sample Id: 668154-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.8	996	948	95	925	93	70-135	2	35	mg/kg	07.24.2020 12:48	
Diesel Range Organics (DRO)	<49.8	996	817	82	788	79	70-135	4	35	mg/kg	07.24.2020 12:48	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	116		113		70-135	%	07.24.2020 12:48
o-Terphenyl	109		105		70-135	%	07.24.2020 12:48

Analytical Method: BTEX by EPA 8021B

Seq Number: 3132662

MB Sample Id: 7708007-1-BLK

Matrix: Solid

LCS Sample Id: 7708007-1-BKS

Prep Method: SW5035A

Date Prep: 07.24.2020

LCSD Sample Id: 7708007-1-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	0.103	103	0.100	100	70-130	3	35	mg/kg	07.24.2020 11:45	
Toluene	<0.00200	0.100	0.0978	98	0.0947	95	70-130	3	35	mg/kg	07.24.2020 11:45	
Ethylbenzene	<0.00200	0.100	0.100	100	0.0978	98	71-129	2	35	mg/kg	07.24.2020 11:45	
m,p-Xylenes	<0.00400	0.200	0.202	101	0.197	99	70-135	3	35	mg/kg	07.24.2020 11:45	
o-Xylene	<0.00200	0.100	0.102	102	0.0994	99	71-133	3	35	mg/kg	07.24.2020 11:45	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		98		99		70-130	%	07.24.2020 11:45
4-Bromofluorobenzene	104		99		100		70-130	%	07.24.2020 11:45

Analytical Method: BTEX by EPA 8021B

Seq Number: 3132662

Parent Sample Id: 668056-011

Matrix: Soil

MS Sample Id: 668056-011 S

Prep Method: SW5035A

Date Prep: 07.24.2020

MSD Sample Id: 668056-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.100	100	0.0990	99	70-130	1	35	mg/kg	07.24.2020 13:42	
Toluene	<0.00200	0.0998	0.0944	95	0.0930	93	70-130	1	35	mg/kg	07.24.2020 13:42	
Ethylbenzene	<0.00200	0.0998	0.0984	99	0.0934	93	71-129	5	35	mg/kg	07.24.2020 13:42	
m,p-Xylenes	<0.00399	0.200	0.197	99	0.190	95	70-135	4	35	mg/kg	07.24.2020 13:42	
o-Xylene	<0.00200	0.0998	0.0983	98	0.0946	95	71-133	4	35	mg/kg	07.24.2020 13:42	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	96		98		70-130	%	07.24.2020 13:42
4-Bromofluorobenzene	103		102		70-130	%	07.24.2020 13:42

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

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

1008154

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334
 Midland, TX (432) 704-5440 El Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296
 Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000 West Palm Beach, FL (561) 689-6701

www.xenco.com

Page 1 of 1

Project Manager:	JOSEPH HERNADEZ	Bill to: (if different)	KYLE LITTELL
Company Name:	LT ENVIRONMENTAL	Company Name:	XTO ENERGY
Address:	3300 NORTH A STREET	Address:	3104 E. GREENE ST
City, State ZIP:	Midland, TX 79705	City, State ZIP:	CARLSBAD, NM 80220
Phone:	(432) 894-5041	Email:	abyers@xenco.com

Program: ☐ UST/PT ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting Level: ☐ Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: ☐ EDD ☐ ADAPT ☐ Other:

Project Name:	TRU DI-1A CTB	Turn Around	☐
Project Number:	012920081	Routine	☐
Project Location:	EDDY COUNTY	Rush:	24HR
Sampler's Name:	ANNA BYERS	Due Date:	
PO #:	W202015050528	Quote #:	

SAMPLE RECEIPT		Temp Blank:	Yes ☒ No ☐	Wet Ice:	Yes ☐ No ☒
Temperature (°C):	2.2/2.0	Thermometer ID	T-NUM-001		
Received Intact:	Yes ☒ No ☐	Correction Factor:	-0.2		
Cooler Custody Seals:	Yes ☒ No ☐	Total Containers:	5		
Sample Custody Seals:	Yes ☒ No ☐				

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	ANALYSIS REQUEST	Preservative Codes
FSQ1		S	7/23/08	0938	1-1.5'	1	TPH (EPA 8015)	MeOH: Me
FSQ2		S		0945	1-1.5'	1	BTEX (EPA 8021)	None: NO
FSQ3		S		1133	1'	1	Chloride (EPA 300.0)	HNO3: HN
FSQ4		S		1136	1'	1		H2SO4: H2
FSQ5		S		1140	1'	1		HCL: HL
								NaOH: Na
								Zn Acetate+ NaOH: Zn
								TAT starts the day received by the lab, if received by 4:00pm
								Sample 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 of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Anna Byers		7/24/2011 23			
		2			
		4			
		6			

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 07.24.2020 11.23.00 AM

Work Order #: 668154

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#:

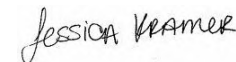
Checklist completed by:



Elizabeth McClellan

Date: 07.24.2020

Checklist reviewed by:



Jessica Kramer

Date: 07.24.2020

Certificate of Analysis Summary 668512

LT Environmental, Inc., Arvada, CO

Project Name: JRU DI 1A CTB

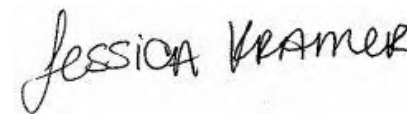
Project Id: 012920081
 Contact: Joseph Hernandez
 Project Location: Eddy County

Date Received in Lab: Wed 07.29.2020 11:28
 Report Date: 07.30.2020 09:56
 Project Manager: Jessica Kramer

Analysis Requested	Lab Id: 668512-001 Field Id: SW02 Depth: 0.5-1 ft Matrix: SOIL Sampled: 07.29.2020 09:35					
BTEX by EPA 8021B	Extracted: 07.29.2020 15:07 Analyzed: 07.29.2020 18:37 Units/RL: mg/kg RL					
Benzene	<0.00202 0.00202					
Toluene	<0.00202 0.00202					
Ethylbenzene	<0.00202 0.00202					
m,p-Xylenes	<0.00403 0.00403					
o-Xylene	<0.00202 0.00202					
Total Xylenes	<0.00202 0.00202					
Total BTEX	<0.00202 0.00202					
Chloride by EPA 300	Extracted: 07.29.2020 12:30 Analyzed: 07.29.2020 14:51 Units/RL: mg/kg RL					
Chloride	515 50.1					
TPH by SW8015 Mod	Extracted: 07.29.2020 13:00 Analyzed: 07.29.2020 14:36 Units/RL: mg/kg RL					
Gasoline Range Hydrocarbons (GRO)	<49.9 49.9					
Diesel Range Organics (DRO)	<49.9 49.9					
Motor Oil Range Hydrocarbons (MRO)	<49.9 49.9					
Total GRO-DRO	<49.9 49.9					
Total TPH	<49.9 49.9					

BRL - Below Reporting Limit

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





Analytical Report 668512

for

LT Environmental, Inc.

Project Manager: Joseph Hernandez

JRU DI 1A CTB

012920081

07.30.2020

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)



07.30.2020

Project Manager: **Joseph Hernandez**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: Eurofins Xenco, LLC Report No(s): **668512**

JRU DI 1A CTB

Project Address: Eddy County

Joseph Hernandez:

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) 668512. 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. 668512 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 668512

LT Environmental, Inc., Arvada, CO

JRU DI 1A CTB

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW02	S	07.29.2020 09:35	0.5 - 1 ft	668512-001



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *JRU DI 1A CTB*

Project ID: 012920081

Work Order Number(s): 668512

Report Date: 07.30.2020

Date Received: 07.29.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 668512

LT Environmental, Inc., Arvada, CO

JRU DI 1A CTB

Sample Id: **SW02** Matrix: Soil Date Received: 07.29.2020 11:28
 Lab Sample Id: 668512-001 Date Collected: 07.29.2020 09:35 Sample Depth: 0.5 - 1 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.29.2020 12:30 Basis: Wet Weight
 Seq Number: 3132962

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	515	50.1	mg/kg	07.29.2020 14:51		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.29.2020 13:00 Basis: Wet Weight
 Seq Number: 3132966

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	07.29.2020 14:36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	07.29.2020 14:36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	07.29.2020 14:36	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	07.29.2020 14:36	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	07.29.2020 14:36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	07.29.2020 14:36	
o-Terphenyl	84-15-1	101	%	70-135	07.29.2020 14:36	



Certificate of Analytical Results 668512

LT Environmental, Inc., Arvada, CO

JRU DI 1A CTB

Sample Id: **SW02**
Lab Sample Id: 668512-001

Matrix: Soil
Date Collected: 07.29.2020 09:35

Date Received: 07.29.2020 11:28
Sample Depth: 0.5 - 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3132984

Date Prep: 07.29.2020 15:07

Prep Method: SW5035A

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.29.2020 18:37	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.29.2020 18:37	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.29.2020 18:37	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	07.29.2020 18:37	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.29.2020 18:37	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.29.2020 18:37	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.29.2020 18:37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	07.29.2020 18:37	
4-Bromofluorobenzene	460-00-4	104	%	70-130	07.29.2020 18:37	

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.
JRU DI 1A CTB

Analytical Method: Chloride by EPA 300

Seq Number: 3132962

MB Sample Id: 7708307-1-BLK

Matrix: Solid

LCS Sample Id: 7708307-1-BKS

Prep Method: E300P

Date Prep: 07.29.2020

LCSD Sample Id: 7708307-1-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	269	108	265	106	90-110	1	20	mg/kg	07.29.2020 12:49	

Analytical Method: Chloride by EPA 300

Seq Number: 3132962

Parent Sample Id: 668503-001

Matrix: Soil

MS Sample Id: 668503-001 S

Prep Method: E300P

Date Prep: 07.29.2020

MSD Sample Id: 668503-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	24.6	199	231	104	232	104	90-110	0	20	mg/kg	07.29.2020 13:20	

Analytical Method: Chloride by EPA 300

Seq Number: 3132962

Parent Sample Id: 668533-001

Matrix: Soil

MS Sample Id: 668533-001 S

Prep Method: E300P

Date Prep: 07.29.2020

MSD Sample Id: 668533-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	47.1	200	245	99	243	99	90-110	1	20	mg/kg	07.29.2020 16:03	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3132966

MB Sample Id: 7708317-1-BLK

Matrix: Solid

LCS Sample Id: 7708317-1-BKS

Prep Method: SW8015P

Date Prep: 07.29.2020

LCSD Sample Id: 7708317-1-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	07.29.2020 12:55	
Diesel Range Organics (DRO)	<50.0	1000	1120	112	1130	113	70-135	1	35	mg/kg	07.29.2020 12:55	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	101		128		131		70-135	%	07.29.2020 12:55
o-Terphenyl	100		114		114		70-135	%	07.29.2020 12:55

Analytical Method: TPH by SW8015 Mod

Seq Number: 3132966

Matrix: Solid

MB Sample Id: 7708317-1-BLK

Prep Method: SW8015P

Date Prep: 07.29.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	07.29.2020 12:35	

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.

JRU DI 1A CTB

Analytical Method: TPH by SW8015 Mod

Seq Number: 3132966

Parent Sample Id: 668503-008

Matrix: Soil

MS Sample Id: 668503-008 S

Prep Method: SW8015P

Date Prep: 07.29.2020

MSD Sample Id: 668503-008 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	1030	103	1030	103	70-135	0	35	mg/kg	07.29.2020 13:56	
Diesel Range Organics (DRO)	<50.2	1000	1070	107	1070	107	70-135	0	35	mg/kg	07.29.2020 13:56	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	124		123		70-135	%	07.29.2020 13:56
o-Terphenyl	109		108		70-135	%	07.29.2020 13:56

Analytical Method: BTEX by EPA 8021B

Seq Number: 3132984

MB Sample Id: 7708310-1-BLK

Matrix: Solid

LCS Sample Id: 7708310-1-BKS

Prep Method: SW5035A

Date Prep: 07.29.2020

LCSD Sample Id: 7708310-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.104	104	0.101	101	70-130	3	35	mg/kg	07.29.2020 13:21	
Toluene	<0.00200	0.100	0.0978	98	0.0944	94	70-130	4	35	mg/kg	07.29.2020 13:21	
Ethylbenzene	<0.00200	0.100	0.103	103	0.0993	99	71-129	4	35	mg/kg	07.29.2020 13:21	
m,p-Xylenes	<0.00400	0.200	0.210	105	0.205	103	70-135	2	35	mg/kg	07.29.2020 13:21	
o-Xylene	<0.00200	0.100	0.105	105	0.102	102	71-133	3	35	mg/kg	07.29.2020 13:21	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		98		99		70-130	%	07.29.2020 13:21
4-Bromofluorobenzene	102		97		95		70-130	%	07.29.2020 13:21

Analytical Method: BTEX by EPA 8021B

Seq Number: 3132984

Parent Sample Id: 668503-008

Matrix: Soil

MS Sample Id: 668503-008 S

Prep Method: SW5035A

Date Prep: 07.29.2020

MSD Sample Id: 668503-008 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	0.116	116	0.115	115	70-130	1	35	mg/kg	07.29.2020 14:02	
Toluene	<0.00199	0.0996	0.108	108	0.110	110	70-130	2	35	mg/kg	07.29.2020 14:02	
Ethylbenzene	<0.00199	0.0996	0.114	114	0.112	112	71-129	2	35	mg/kg	07.29.2020 14:02	
m,p-Xylenes	<0.00398	0.199	0.230	116	0.228	114	70-135	1	35	mg/kg	07.29.2020 14:02	
o-Xylene	<0.00199	0.0996	0.112	112	0.114	114	71-133	2	35	mg/kg	07.29.2020 14:02	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	94		96		70-130	%	07.29.2020 14:02
4-Bromofluorobenzene	91		89		70-130	%	07.29.2020 14:02

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

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

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

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



Work Order No: 1008512

www.xenco.com Page 1 of 1

Project Name:						JEU D13A CTB											
Project Number:						912024081											
Project Location:						EDDY COUNTRY											
Sampler's Name:						ANNE BYER											
PO #:						PMW21505952A											
Quote #:																	
SAMPLE RECEIPT																	
Temperature (°C):						Temp Blank:		Yes		No		Wet Ice:		Yes		No	
Received Intact:						(Yes)		No				Thermometer ID		TNM007			
Cooler Custody Seals:						Yes		(X) No		N/A		Correction Factor:		-0.2			
Sample Custody Seals:						Yes		(X) No		N/A		Total Containers:		1			
Number of Containers																	
Pres. Code																	
ANALYSIS REQUEST																	
Preservative Codes						MeOH: Me		None: NO		HNO3: HN		H2SO4: H2		HCL: HL		NaOH: Na	
						Zn Acetate+ NaOH: Zn		TAT starts the day received by the lab, if received by 4:00pm									

[illegible]

Notice: Signature of this document and the valid relinquishment of samples constitutes a valid purchase order from client company to Xenoco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenoco 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 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.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 <i>Clare Bayes</i>		7/29/20 11:28	2		
3			4		
5			6		

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 07.29.2020 11.28.00 AM

Work Order #: 668512

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

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

Sample received in bulk container

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

Analyst:

PH Device/Lot#:

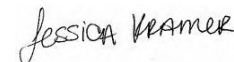
Checklist completed by:



Elizabeth McClellan

Date: 07.29.2020

Checklist reviewed by:



Jessica Kramer

Date: 07.29.2020

Certificate of Analysis Summary 668513

LT Environmental, Inc., Arvada, CO

Project Name: JRU DI 1A CTB

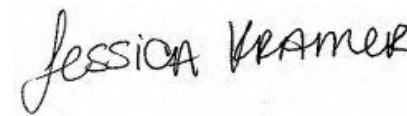
Project Id: 012920081
 Contact: Joseph Hernandez
 Project Location: Eddy County

Date Received in Lab: Wed 07.29.2020 11:28
 Report Date: 07.30.2020 09:55
 Project Manager: Jessica Kramer

Analysis Requested	Lab Id: 668513-001 Field Id: FS06 Depth: 1- ft Matrix: SOIL Sampled: 07.29.2020 09:30					
BTEX by EPA 8021B	Extracted: 07.29.2020 15:07 Analyzed: 07.29.2020 18:58 Units/RL: mg/kg RL					
Benzene	<0.00202 0.00202					
Toluene	<0.00202 0.00202					
Ethylbenzene	<0.00202 0.00202					
m,p-Xylenes	<0.00403 0.00403					
o-Xylene	<0.00202 0.00202					
Total Xylenes	<0.00202 0.00202					
Total BTEX	<0.00202 0.00202					
Chloride by EPA 300	Extracted: 07.29.2020 12:30 Analyzed: 07.29.2020 15:52 Units/RL: mg/kg RL					
Chloride	72.6 9.98					
TPH by SW8015 Mod	Extracted: 07.29.2020 13:00 Analyzed: 07.29.2020 14:56 Units/RL: mg/kg RL					
Gasoline Range Hydrocarbons (GRO)	<50.3 50.3					
Diesel Range Organics (DRO)	<50.3 50.3					
Motor Oil Range Hydrocarbons (MRO)	<50.3 50.3					
Total GRO-DRO	<50.3 50.3					
Total TPH	<50.3 50.3					

BRL - Below Reporting Limit

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





Analytical Report 668513

for

LT Environmental, Inc.

Project Manager: Joseph Hernandez

JRU DI 1A CTB

012920081

07.30.2020

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)



07.30.2020

Project Manager: **Joseph Hernandez**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: Eurofins Xenco, LLC Report No(s): **668513**

JRU DI 1A CTB

Project Address: Eddy County

Joseph Hernandez:

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) 668513. 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. 668513 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 668513

LT Environmental, Inc., Arvada, CO

JRU DI 1A CTB

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS06	S	07.29.2020 09:30	1 ft	668513-001



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *JRU DI 1A CTB*

Project ID: 012920081
Work Order Number(s): 668513

Report Date: 07.30.2020
Date Received: 07.29.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 668513

LT Environmental, Inc., Arvada, CO

JRU DI 1A CTB

Sample Id: **FS06** Matrix: Soil Date Received: 07.29.2020 11:28
 Lab Sample Id: 668513-001 Date Collected: 07.29.2020 09:30 Sample Depth: 1 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.29.2020 12:30 Basis: Wet Weight
 Seq Number: 3132962

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	72.6	9.98	mg/kg	07.29.2020 15:52		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.29.2020 13:00 Basis: Wet Weight
 Seq Number: 3132966

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	07.29.2020 14:56	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	07.29.2020 14:56	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	07.29.2020 14:56	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	07.29.2020 14:56	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	07.29.2020 14:56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	07.29.2020 14:56	
o-Terphenyl	84-15-1	100	%	70-135	07.29.2020 14:56	



Certificate of Analytical Results 668513

LT Environmental, Inc., Arvada, CO

JRU DI 1A CTB

Sample Id: **FS06**
Lab Sample Id: 668513-001

Matrix: Soil
Date Collected: 07.29.2020 09:30

Date Received: 07.29.2020 11:28
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.29.2020 15:07

Basis: Wet Weight

Seq Number: 3132984

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.29.2020 18:58	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.29.2020 18:58	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.29.2020 18:58	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	07.29.2020 18:58	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.29.2020 18:58	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.29.2020 18:58	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.29.2020 18:58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	70-130	07.29.2020 18:58	
1,4-Difluorobenzene	540-36-3	102	%	70-130	07.29.2020 18:58	

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.
JRU DI 1A CTB

Analytical Method: Chloride by EPA 300

Seq Number: 3132962

MB Sample Id: 7708307-1-BLK

Matrix: Solid

LCS Sample Id: 7708307-1-BKS

Prep Method: E300P

Date Prep: 07.29.2020

LCSD Sample Id: 7708307-1-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	269	108	265	106	90-110	1	20	mg/kg	07.29.2020 12:49	

Analytical Method: Chloride by EPA 300

Seq Number: 3132962

Parent Sample Id: 668503-001

Matrix: Soil

MS Sample Id: 668503-001 S

Prep Method: E300P

Date Prep: 07.29.2020

MSD Sample Id: 668503-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	24.6	199	231	104	232	104	90-110	0	20	mg/kg	07.29.2020 13:20	

Analytical Method: Chloride by EPA 300

Seq Number: 3132962

Parent Sample Id: 668533-001

Matrix: Soil

MS Sample Id: 668533-001 S

Prep Method: E300P

Date Prep: 07.29.2020

MSD Sample Id: 668533-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	47.1	200	245	99	243	99	90-110	1	20	mg/kg	07.29.2020 16:03	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3132966

MB Sample Id: 7708317-1-BLK

Matrix: Solid

LCS Sample Id: 7708317-1-BKS

Prep Method: SW8015P

Date Prep: 07.29.2020

LCSD Sample Id: 7708317-1-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	07.29.2020 12:55	
Diesel Range Organics (DRO)	<50.0	1000	1120	112	1130	113	70-135	1	35	mg/kg	07.29.2020 12:55	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	101		128		131		70-135	%	07.29.2020 12:55
o-Terphenyl	100		114		114		70-135	%	07.29.2020 12:55

Analytical Method: TPH by SW8015 Mod

Seq Number: 3132966

Matrix: Solid

MB Sample Id: 7708317-1-BLK

Prep Method: SW8015P

Date Prep: 07.29.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	07.29.2020 12:35	

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.
JRU DI 1A CTB

Analytical Method: TPH by SW8015 Mod

Seq Number: 3132966

Parent Sample Id: 668503-008

Matrix: Soil

MS Sample Id: 668503-008 S

Prep Method: SW8015P

Date Prep: 07.29.2020

MSD Sample Id: 668503-008 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	1030	103	1030	103	70-135	0	35	mg/kg	07.29.2020 13:56	
Diesel Range Organics (DRO)	<50.2	1000	1070	107	1070	107	70-135	0	35	mg/kg	07.29.2020 13:56	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	124		123		70-135	%	07.29.2020 13:56
o-Terphenyl	109		108		70-135	%	07.29.2020 13:56

Analytical Method: BTEX by EPA 8021B

Seq Number: 3132984

MB Sample Id: 7708310-1-BLK

Matrix: Solid

LCS Sample Id: 7708310-1-BKS

Prep Method: SW5035A

Date Prep: 07.29.2020

LCSD Sample Id: 7708310-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.104	104	0.101	101	70-130	3	35	mg/kg	07.29.2020 13:21	
Toluene	<0.00200	0.100	0.0978	98	0.0944	94	70-130	4	35	mg/kg	07.29.2020 13:21	
Ethylbenzene	<0.00200	0.100	0.103	103	0.0993	99	71-129	4	35	mg/kg	07.29.2020 13:21	
m,p-Xylenes	<0.00400	0.200	0.210	105	0.205	103	70-135	2	35	mg/kg	07.29.2020 13:21	
o-Xylene	<0.00200	0.100	0.105	105	0.102	102	71-133	3	35	mg/kg	07.29.2020 13:21	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		98		99		70-130	%	07.29.2020 13:21
4-Bromofluorobenzene	102		97		95		70-130	%	07.29.2020 13:21

Analytical Method: BTEX by EPA 8021B

Seq Number: 3132984

Parent Sample Id: 668503-008

Matrix: Soil

MS Sample Id: 668503-008 S

Prep Method: SW5035A

Date Prep: 07.29.2020

MSD Sample Id: 668503-008 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	0.116	116	0.115	115	70-130	1	35	mg/kg	07.29.2020 14:02	
Toluene	<0.00199	0.0996	0.108	108	0.110	110	70-130	2	35	mg/kg	07.29.2020 14:02	
Ethylbenzene	<0.00199	0.0996	0.114	114	0.112	112	71-129	2	35	mg/kg	07.29.2020 14:02	
m,p-Xylenes	<0.00398	0.199	0.230	116	0.228	114	70-135	1	35	mg/kg	07.29.2020 14:02	
o-Xylene	<0.00199	0.0996	0.112	112	0.114	114	71-133	2	35	mg/kg	07.29.2020 14:02	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	94		96		70-130	%	07.29.2020 14:02
4-Bromofluorobenzene	91		89		70-130	%	07.29.2020 14:02

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

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

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

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



Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334

Chain of Custody

Work Order No: 1028513

Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 448-8800 Tampa, FL (813) 620-2000 West Palm Beach, FL (561) 689-6766
Midland, TX (432) 704-5440 El Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1266 Crasibad, NM (432) 704-5440

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Project Manager:	JOSEPH HERNADEZ	Bill to: (if different)	KYLE LITTELL
Company Name:	LT ENVIRONMENTAL	Company Name:	XTO ENERGY
Address:	3300 NORTH A STREET	Address:	3104 E. GREAVE ST
City, State ZIP:	MIDLAND, TX 79705	City, State ZIP:	CARLSBAD, NM 88226
Phone:	(432) 894-5641	Email:	adgeres@xten.com

Work Order Comments
Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐ State of Project: Reporting Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐ Deliverables: EDD ☐ ADAPT ☐ Other:

[illegible]

Total	200.7 / 6010	200.8 / 6020.
Circle Method(s) and Metals)	to be analyzed	
TCLP / SPLP	6010:	8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U
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	
1631 / 245.1 / 7470 / 7471 :	Hg	

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xencio, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xencio 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 Xencio. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xencio, 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>Debra Byers</i>	<i>[Signature]</i>	7/29/20 11:28			

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 07.29.2020 11.28.00 AM

Work Order #: 668513

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

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

Sample received in bulk container.

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

Analyst:

PH Device/Lot#:

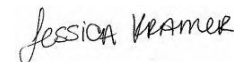
Checklist completed by:



Elizabeth McClellan

Date: 07.29.2020

Checklist reviewed by:



Jessica Kramer

Date: 07.29.2020