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	NAB1921754897
District RP	2RP-5553
Facility ID	
Application ID	pAB1921754701

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)* NAB1921754897
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.343260° Longitude -103.829906°
(NAD 83 in decimal degrees to 5 decimal places)

Site Name James Ranch Unit #034	Site Type Production Well Facility flow line
Date Release Discovered 7/10/2019	API# *(if applicable)* 30-015-31064

Unit Letter	Section	Township	Range	County
P	36	22S	30E	Eddy

Surface Owner: ☒ State ☐ Federal ☐ Tribal ☐ Private (*Name:* New Mexico)

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) 2.32	Volume Recovered (bbls) 0
☒ Produced Water	Volume Released (bbls) 20.87	Volume Recovered (bbls) 0
	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 weld failed on the poly flow line and fluids were released to the power line ROW. The section of line was repaired. Additional third party resources have been retained to assist with remediation.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NAB1921754897
District RP	2RP-5553
Facility ID	
Application ID	pAB1921754701

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:

No free fluids remained to be recovered.

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: 7/19/2019
email: Kyle_Littrell@xtoenergy.com
Telephone: 432-221-7331

OCD Only

Received by: Amalia Bustamante
Date: 8/5/2019

Incident ID	NAB1921754897
District RP	2RP- 5553
Facility ID	
Application ID	pAB pAB1921754701

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.

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	NAB1921754897
District RP	2RP- 5553
Facility ID	
Application ID	pAB pAB1921754701

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 Coordinator_____

Signature:_____ _____ Date: __9/28/2020_____

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

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	NAB1921754897
District RP	2RP- 5553
Facility ID	
Application ID	pAB pAB1921754701

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

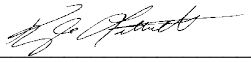
☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ 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: 9/28/2020

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: _____

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LT Environmental, Inc.
3300 North "A" Street
Building 1, Unit 222
Midland, Texas 79705
432.704.5178

September 28, 2020

New Mexico Oil Conservation Division
District 2
811 South First Street
Artesia, New Mexico 88210

RE: Closure Request Addendum
James Ranch Unit #034
Remediation Permit Number 2RP-5553
Incident Number NAB1921754897
Eddy County, New Mexico

To Whom It May Concern:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following addendum to an original Closure Request submitted March 3, 2020. This Addendum provides an update to the sampling activities at the James Ranch Unit #034 (Site), located in Unit P, Section 36, Township 22 South, Range 30 East, in Eddy County, New Mexico, in response to the denial of the Closure Request by the New Mexico Oil Conservation Division (NMOCD). In the denial, NMOCD requested that XTO collect excavation sidewall samples from a depth of ground surface to 4 feet below ground surface (bgs) to show compliance with the reclamation standards as outlined in 19.15.29.13 (NMAC). In response, XTO completed additional soil sampling activities to support the original Closure Request. Based on the additional sampling activities described below, XTO is requesting no further action (NFA) for Remediation Permit (RP) Number 2RP-5553 (Incident Number NAB1921754897).

BACKGROUND

On March 3, 2020, LTE submitted a Closure Request to the NMOCD for a release that occurred from a failed weld on a poly flow line. Approximately 20.87 barrels (bbls) of produced water and 2.32 bbls of crude oil were released onto the adjacent pasture in a powerline right-of-way (ROW). The flow line was repaired, and the impacted soil was excavated. LTE personnel were at the Site between August 2019 and January 2020 to oversee site assessment and excavation activities.

In addition, during January 2020, in an effort to confirm groundwater depth in the area, a borehole (BH01) was advanced to a depth of 110 feet bgs via truck-mounted sonic drill rig. The borehole was located approximately 0.38 miles northwest of the Site. The location of borehole BH01 is provided on Figure 1. An LTE geologist logged and described soils continuously. The borehole lithologic/soil sampling log is included in Attachment 1. The borehole was left open for over 72 hours to allow for potential slow infill of groundwater. After the 72-hour waiting period

without observing groundwater, it was confirmed that groundwater beneath the Site is greater than 110 feet. The borehole was properly abandoned with hydrated bentonite chips.

Laboratory analytical results for the excavation soil samples were compliant with the following Closure Criteria applied to the Site:

- Benzene: 10 milligrams per kilogram (mg/kg)
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg
- Total petroleum hydrocarbons (TPH): 2,500 mg/kg
- TPH-gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg
- Chloride: 20,000 mg/kg

On April 9, 2020, NMOCD denied closure, via email, for the following reasons:

The OCD has denied the submitted Closure Report C-141 for incident #NAB1921754897 for the following reasons:

- *A "Right of Way" is considered Off-Pad and is to be treated like it is in the pasture. Roads, Pasture, and "Right of Ways" are all considered Off-Pad and need to meet the strictest closure criteria for soil standards in the top 4' of soil/material (Equivalent: <50' depth to groundwater).*
- *All of the floor samples are 10' below ground surface and are compliant with Table 1. The problem with the sidewall samples is that they are from surface-10'. The OCD would need to see sidewall samples (surface-4') that are under (600 mg/kg Chlorides, 100 mg/kg TPH, etc.). The sidewall samples from (4'-10') would need to meet closure criteria (20,000 mg/kg Chlorides, 2,500 mg/kg TPH).*

ADDITIONAL EXCAVATION ACTIVITIES

To address the reason for denial, LTE oversaw additional excavation activities on August 26, 2020 to remove impacted soil to a depth 4 feet bgs in the areas around sidewall samples SW02 through SW05, and SW07, where chloride concentrations initially exceeded the reclamation standards. All other sidewall samples were either addressed during the original excavation (SW06) or met the Closure Criteria and reclamation standard (SW01, SW08, and SW09). To direct excavation activities, LTE screened soil for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach® chloride QuanTab® test strips, respectively. Upon completion of excavation activities, 5-point composite samples SW10 through SW14 were collected from the sidewalls of the excavation from a depth of ground surface to 4 feet bgs. The excavation extents and confirmation soil sample locations are depicted on Figure 1. Photographic documentation was conducted during excavation activities and photos are included in Attachment 2.

The confirmation soil samples were placed directly into pre-cleaned glass jars, labeled with location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were shipped at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Xenco Laboratories (Xenco) in Carlsbad, New Mexico, for analysis of benzene, toluene, ethylbenzene, and total xylenes (BTEX) following United States Environmental Protection Agency (EPA) Method 8021B; total petroleum hydrocarbons (TPH)-gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

The final excavation extent measured approximately 2,573 square feet in area. A total of approximately 864 cubic yards of soil were removed from the excavation. The impacted soil was transported and properly disposed of at the R360 landfill facility located in Hobbs, New Mexico.

SOIL ANALYTICAL RESULTS

Laboratory analytical results for sidewall samples SW10 through SW14, indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria, and compliant with the reclamation standards applied to the top 4 feet of the subsurface. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Attachment 3.

CLOSURE REQUEST

Site assessment and excavation activities were conducted at the Site to address the July 10, 2019, release of produced water and crude oil. Laboratory analytical results for the excavation soil samples, collected from the final excavation extent, indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Additionally, soil samples collected in the pasture from the top 4 feet of the subsurface were compliant with the reclamation standards. Based on the final excavation soil sample analytical results, no further remediation was required. XTO requests NFA for RP Number 2RP-5553 (Incident Number NAB1921754897).

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

Sincerely,

LT ENVIRONMENTAL, INC.

Fatima Smith
Staff Geologist

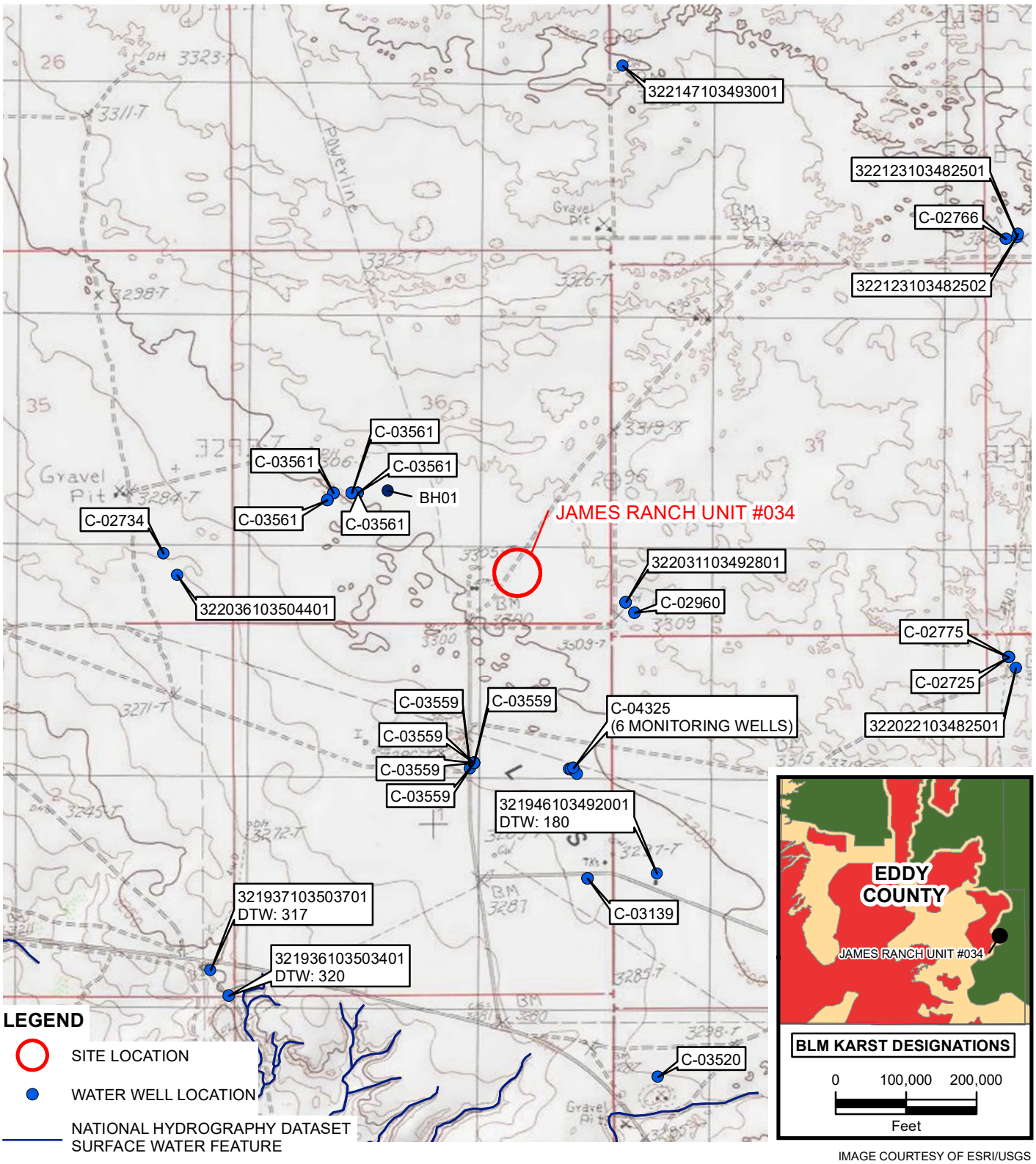
Ashley L. Ager, M.S., P.G.
Senior Geologist

cc: Kyle Littrell, XTO
Ryan Mann, State Land Office
Robert Hamlet, NMOCD
Victoria Venegas, NMOCD
Cristina Eads, NMOCD

Appendices:

Figure 1	Site Location Map
Figure 2	Excavation Soil Sample Locations
Table 1	Laboratory Analytical Results
Attachment 1	Referenced Well Records
Attachment 2	Photographic Log
Attachment 3	Laboratory Analytical Reports

FIGURES



LEGEND

- SITE LOCATION
- WATER WELL LOCATION
- NATIONAL HYDROGRAPHY DATASET SURFACE WATER FEATURE
- NATIONAL WETLANDS INVENTORY SURFACE WATER FEATURE
- LOW KARST
- MEDIUM KARST
- HIGH KARST

NOTE: REMEDIATION PERMIT NUMBER 2RP-5553
INCIDENT NUMBER NAB1921754897
DTW: DEPTH TO WATER IN FEET
BLM: BUREAU OF LAND MANAGEMENT

FIGURE 1
SITE LOCATION MAP
JAMES RANCH UNIT #034
UNIT P SEC 36 T22S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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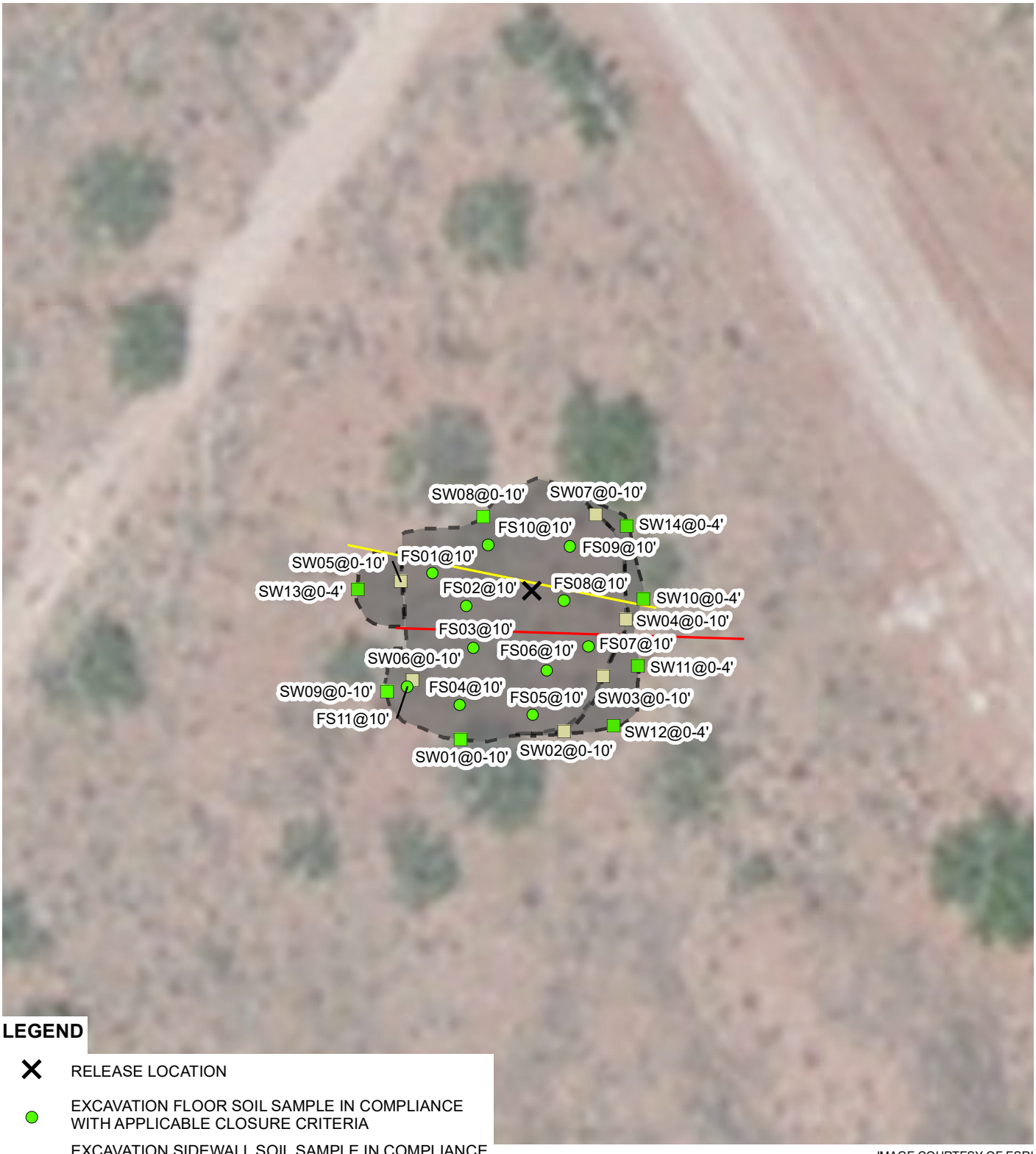
P:\XTO Energy\GIS\MXD\012919156_JRU 34\012919156_FIG01_RECEPTOR_SL_2020.mxd



LEGEND

- RELEASE LOCATION
- EXCAVATION FLOOR SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- EXCAVATION SIDEWALL SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- CONFIRMATION SAMPLE EXCEEDANCES THAT HAVE BEEN REMOVED
- ABOVEGROUND UTILITY LINE
- SURFACE FLOWLINE
- EXCAVATION EXTENT

NOTE: REMEDIATION PERMIT NUMBER 2RP-5553
INCIDENT NUMBER NAB1921754897
SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)

IMAGE COURTESY OF ESRI

0 30 60
Feet

N

FIGURE 2
EXCAVATION SOIL SAMPLE LOCATIONS
JAMES RANCH UNIT #034
UNIT P SEC 36 T22S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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P:\XTO Energy\GIS\MXD\012919156_JRU 34\012919156_FIG03_EXCAVATION SS_2020.mxd

TABLES

TABLE 1
SOIL ANALYTICAL RESULTS

JAMES RANCH UNIT #034
REMEDIATION PERMIT NUMBER 2RP-5553
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	**1,000**	**2,500**	**20,000**
SS01	0.5	08/15/2019	<0.0199	0.651	0.837	3.94	5.43	1,040	23,900	1,400	**24,900**	**26,300**	1,820
SS02	0.5	08/15/2019	<0.00199	0.0112	0.0170	0.0682	0.0964	203	10,100	963	**10,300**	**11,300**	4,300
SS03	0.5	08/15/2019	<0.00200	<0.00200	0.00317	0.00462	0.00779	<125	10,700	1,240	**10,700**	**11,900**	950
SW01	0 - 10	12/17/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	<49.9	537
SW02	0 - 10	12/17/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	51.7	<50.0	51.7	51.7	3,300
SW03	0 - 10	12/17/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.1	<50.1	<50.1	<50.1	<50.1	3,150
SW04	0 - 10	12/17/2019	<0.00200	<0.00200	<0.00200	0.00248	0.00248	<50.2	544	59.0	544	603	2,420
SW05	0 - 10	12/17/2019	<0.00198	<0.00198	<0.00198	0.00519	0.00519	<50.0	<50.0	<50.0	<50.0	<50.0	4,230
SW06	0 - 10	12/17/2019	<0.00463	<0.0185	0.0527	0.191	0.243	93.0	3,450	345	**3,540**	**3,890**	4,590
SW07	0 - 10	12/17/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.2	<50.2	<50.2	<50.2	<50.2	2,560
SW08	0 - 10	12/17/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.1	<50.1	<50.1	<50.1	<50.1	525
SW09	0 - 10	01/27/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<49.9	<49.9	<49.9	<49.9	<49.9	136
SW10	0 - 4	08/26/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.2	<50.2	<50.2	<50.2	<50.2	295
SW11	0 - 4	08/26/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.0	<50.0	<50.0	<50.0	<50.0	152
SW12	0 - 4	08/26/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	85.2
SW13	0 - 4	08/26/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.2	<50.2	<50.2	<50.2	<50.2	54.3
SW14	0 - 4	08/26/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.1	<50.1	<50.1	<50.1	<50.1	302
FS01	10	12/17/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.1	<50.1	<50.1	<50.1	<50.1	2,660
FS02	10	12/17/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.0	<50.0	<50.0	<50.0	<50.0	6,240
FS03	10	12/17/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.1	<50.1	<50.1	<50.1	<50.1	1,260
FS04	10	12/17/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.1	<50.1	<50.1	<50.1	<50.1	89.7
FS05	10	12/17/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.3	<50.3	<50.3	<50.3	<50.3	207
FS06	10	12/17/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.3	<50.3	<50.3	<50.3	<50.3	382
FS07	10	12/17/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	123

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TABLE 1
SOIL ANALYTICAL RESULTS

JAMES RANCH UNIT #034
REMEDIATION PERMIT NUMBER 2RP-5553
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	**1,000**	**2,500**	**20,000**
FS08	10	12/17/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	<49.9	453
FS09	10	12/17/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	727
FS10	10	12/17/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	739
FS11	10	01/27/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	137

Notes:

bgs - below ground surface
BTEX - benzene, toluene, ethylbenzene, and total xylenes
DRO - diesel range organics
GRO - gasoline range organics
mg/kg - milligrams per kilogram
ORO - oil range organics
NMAC - New Mexico Administrative Code
NMOCD - New Mexico Oil Conservation Division
NE - not established
TPH - total petroleum hydrocarbons
TEXT - indicates soil that was removed
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

A proud member of WSP

ATTACHMENT 1: REFERENCED WELL LOGS

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

Identifier:	Date:
BH01	1/18 - 1/21/20
Project Name: JRU 29	**RP Number:** 2RP-3302, 2RP-3726, 2RP-4040, 2RP-3882
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: FS, WM / Method: SONIC
Lat/Long: / Field Screening: ~~CHLORIDES, PID~~	Hole Diameter: 4" / Total Depth: 110'

Comments: No field screenings just lithology remarks (borehole on pad)

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D			N		1	1'	CCHE	0-0.5' caliche, tan-off white, fill.
D			N		2	2'	SP-SM	0.5-5' reddish brwn, SAND, dry, poorly graded, fine-very fine, soft, no odor, no stain
					3			
					4			5-12.5' CALICHE, tan-off white, few subangular gravel, dry, trace fine sand, no odor, no stain
D			N		5	5'		
					6		CCHE	
					7			10' stringer, silty sand, reddish brwn, poorly graded, dry
					8			
					9			12' stringer, silty sand, reddish brwn, poorly graded, dry
					10			12.5-23' silty SAND, reddish-brwn, dry, poorly graded, fine grain, few tan-off white sub-angular gravel, no stain, no odor.
					11			
D			N		12	12.5'		
					13		SP-SM	15-18' trace caliche gravel
					14			18-23' caliche gravel absent
					15			
					16			23-58' SILTSTONE, moderately consolidated, reddish brwn, 2mm caliche inclusions, trace off-white sub-angular gravel, no stain, no odor.
					17			
					18			
					19			
					20			
					21			
					22			
D				N	23	23'		
					24		ML-S	
					25			

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

Identifier:	Date:
BH01	1/18 - 1/21/20
Project Name:	RP Number:
JRU 29	2RP-3702, 2RP-5726, 2RP-4040, 2RP-3082.
Logged By: FS, BB, WM	Method: sonic
Hole Diameter: 6"	Total Depth: 110'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:
Field Screening: CHLORIDES, PID.
Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D			N		26	26'	ML-S	23-58' SILTSTONE, reddish brwn, dry, moderately consolidated, 2mm caliche inclusions, trace caliche gravel, dry, no odor, no stain
					27			
					28			
					29			
					30			30' caliche gravel absent, well consolidated
					31			32' some caliche inclusions (0.5-1mm)
					32			35' moderate consolidation
					33			37.5' well consolidation
					34			39' tan-off white caliche stringer.
					35			
					36			
M				N	37	37'		
					38			
					39			
					40			
M				N	41	41'		
					42			1/18/20 @42' 1/21/20
					43			45-47.5 some caliche inclusions (1-2mm)
					44			
D				N	45	45'		47'-47.5' well consolidated, dark purple laminations
					46			
D				N	47	47'		47.5-50' some caliche inclusions (0.5-1mm)
					48			
					49			
D				N	50	50'		

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Identifier: BH01	Date: 1/18 - 1/21/20		
Project Name: JRU 29	RP Number: 2RP-3302, 2RP-3726, 2RP-4040, 2RP-3082,		
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: FS, BB, WM	Method: Sonic	
Lat/Long:	Field Screening: CHLORIDES, PID	Hole Diameter: 6"	Total Depth: 110'
Comments:			

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					51		ML-S	52.4 - 52.5' dolomite stringer, light grey - grey, well consolidated
					52			
D			N		53	52'		
					54			55-61' some open pore space (<0.5 mm), abundant silty dolomite inclusions (1-2 mm) w/ few dark purple laminations
D			N		55	55'		
					56			
					57			58'-102' CLAYSTONE, dry, reddish brwn, low plasticity, cohesive, well consolidated w/ some silty dolomite inclusions (1-2 mm), no stain, no odor.
					58			
					59		CL-S	
D			N		60	60'		
D			N		61	61'		72' some gypsum inclusions, white, small crystals
					62			
					63			
					64			
D			N		65	65'		
					66			
D			N		67	67'		
					68			
D			N		69	69'		
					70			
D			N		71	71'		
					72			
					73			
D			N		74	74'		
					75			

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Carlsbad, New Mexico 88220
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Identifier:	Date:
BH01	1/18 - 1/21/20
Project Name: JRU 29	**RP Number:** 2RP-5302, 2RP-3726, 2RP-4010, 2RP-3082.
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: FS, BB, WM / Method: Sonic
Lat/Long: / Field Screening: CHLORIDES, PID.	Hole Diameter: 6" / Total Depth: 110'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D			N		76		CL-S	79' trace dolomite inclusions (0.5-1 mm)
D			N		77	77'		
D			N		78			81'. few fine crystalline gypsum inclusions
D			N		79	79'		
D			N		80			86' abundant dolomite inclusions (1-2 mm)
D			N		81	81'		
D			N		82			99.3-99.5' stringer, dolomite, light grey - grey
D			N		83	83'		
D			N		84			
D			N		85	85'		
D			N		86			
D			N		87			
D			N		88	88'		
D			N		89			
D			N		90	90'		
D			N		91	91'		
D			N		92			
D			N		93			
D			N		94	94'		
D			N		95			
D			N		96	96'		
D			N		97			
D			N		98	98'		
					99			
					100			

LT Environmental, Inc.
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Identifier: BH01	Date: 1/18 - 1/21/20
Project Name: JRU 29	RP Number: 2RP-3302, 2RP-3726, 2RP-4040, 2RP-3082.
Logged By: FS, BB, WM	Method: SONIC
Lat/Long:	Field Screening: CHLORIDES, PID.
Hole Diameter: 6"	Total Depth: 110'

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					101		CL-S	102'-110' SILTSTONE, moist, reddish brwn, no plasticity, non cohesive, poorly consolidated, w/ some silty dolomite inclusions, grey - light grey, no stain, no odor.
					102			
					103		ML-S	
M			N		104	104'		
					105			107' stringer, silty dolomite, light grey - grey
M			N		106	106'		
					107			
M			N		108	108'		
					109			
M			N		110	110'		TD @ 110'
					111		TD @ 110'	
					112			
					113			
					114			
					115			
					116			
					117			
					118			
					119			
					120			
					121			
					122			
					123			
					124			
					125			

ATTACHMENT 2: PHOTOGRAPHIC LOG

PHOTOGRAPHIC LOG

Photograph 1: View south of excavation sidewall.

Photograph 2: View east of excavation sidewall.

PHOTOGRAPHIC LOG

Photograph 1: View East of Site following backfill procedures.

Photograph 2: View East of Site following backfill procedures.

ATTACHMENT 3: LABORATORY ANALYTICAL REPORTS

Analytical Report 650395

for

LT Environmental, Inc.

Project Manager: Dan Moir

JRU 34

012919156

28-JAN-20

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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

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

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

28-JAN-20

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

Reference: XENCO Report No(s): **650395**
JRU 34
Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 650395. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 650395 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

Sample Cross Reference 650395

LT Environmental, Inc., Arvada, CO

JRU 34

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW09	S	01-27-20 11:32	0 - 10 ft	650395-001
FS11	S	01-27-20 11:55	10 ft	650395-002

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: JRU 34

Project ID: *012919156*
Work Order Number(s): *650395*

Report Date: *28-JAN-20*
Date Received: *01/27/2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3114645 BTEX by EPA 8021B

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

Certificate of Analysis Summary 650395

LT Environmental, Inc., Arvada, CO

Project Name: JRU 34

Project Id: 012919156
Contact: Dan Moir
Project Location:

Date Received in Lab: Mon Jan-27-20 01:50 pm
Report Date: 28-JAN-20
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	650395-001		650395-002					
	Field Id:	SW09		FS11					
	Depth:	0-10 ft		10- ft					
	Matrix:	SOIL		SOIL					
	Sampled:	Jan-27-20 11:32		Jan-27-20 11:55					
BTEX by EPA 8021B	***Extracted:***	Jan-27-20 16:00		Jan-27-20 16:00					
	Analyzed:	Jan-27-20 18:39		Jan-27-20 19:00					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00201	0.00201	<0.00200	0.00200				
Toluene		<0.00201	0.00201	<0.00200	0.00200				
Ethylbenzene		<0.00201	0.00201	<0.00200	0.00200				
m,p-Xylenes		<0.00402	0.00402	<0.00400	0.00400				
o-Xylene		<0.00201	0.00201	<0.00200	0.00200				
Total Xylenes		<0.00201	0.00201	<0.00200	0.00200				
Total BTEX		<0.00201	0.00201	<0.00200	0.00200				
Chloride by EPA 300	***Extracted:***	Jan-27-20 18:10		Jan-27-20 18:10					
	Analyzed:	Jan-28-20 04:47		Jan-28-20 04:56					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		136	9.94	137	9.98				
TPH by SW8015 Mod	***Extracted:***	Jan-27-20 16:00		Jan-27-20 16:00					
	Analyzed:	Jan-27-20 17:28		Jan-27-20 17:49					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<49.9	49.9	<50.1	50.1				
Diesel Range Organics (DRO)		<49.9	49.9	<50.1	50.1				
Motor Oil Range Hydrocarbons (MRO)		<49.9	49.9	<50.1	50.1				
Total GRO-DRO		<49.9	49.9	<50.1	50.1				
Total TPH		<49.9	49.9	<50.1	50.1				

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

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analytical Results 650395

LT Environmental, Inc., Arvada, CO

JRU 34

Sample Id:	**SW09**	Matrix:	Soil	Date Received:	01.27.20 13.50
Lab Sample Id:	650395-001	Date Collected:	01.27.20 11.32	Sample Depth:	0 - 10 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.27.20 18.10	Basis:	Wet Weight
Seq Number:	3114643				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**136**	9.94	mg/kg	01.28.20 04.47		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.27.20 16.00	Basis:	Wet Weight
Seq Number:	3114633				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	01.27.20 17.28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	01.27.20 17.28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.27.20 17.28	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	01.27.20 17.28	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	01.27.20 17.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	01.27.20 17.28	
o-Terphenyl	84-15-1	102	%	70-135	01.27.20 17.28	

Certificate of Analytical Results 650395

LT Environmental, Inc., Arvada, CO

JRU 34

Sample Id:	**SW09**	Matrix:	Soil	Date Received:	01.27.20 13.50
Lab Sample Id:	650395-001	Date Collected:	01.27.20 11.32	Sample Depth:	0 - 10 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.27.20 16.00	Basis:	Wet Weight
Seq Number:	3114645				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.27.20 18.39	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.27.20 18.39	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.27.20 18.39	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.27.20 18.39	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.27.20 18.39	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	01.27.20 18.39	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.27.20 18.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	01.27.20 18.39	
4-Bromofluorobenzene	460-00-4	98	%	70-130	01.27.20 18.39	

Certificate of Analytical Results 650395

LT Environmental, Inc., Arvada, CO

JRU 34

Sample Id:	**FS11**	Matrix:	Soil	Date Received:	01.27.20 13.50
Lab Sample Id:	650395-002	Date Collected:	01.27.20 11.55	Sample Depth:	10 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.27.20 18.10	Basis:	Wet Weight
Seq Number:	3114643				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**137**	9.98	mg/kg	01.28.20 04.56		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.27.20 16.00	Basis:	Wet Weight
Seq Number:	3114633				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	01.27.20 17.49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	01.27.20 17.49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	01.27.20 17.49	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	01.27.20 17.49	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	01.27.20 17.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	01.27.20 17.49	
o-Terphenyl	84-15-1	100	%	70-135	01.27.20 17.49	

Certificate of Analytical Results 650395

LT Environmental, Inc., Arvada, CO

JRU 34

Sample Id:	**FS11**	Matrix:	Soil	Date Received:	01.27.20 13.50
Lab Sample Id:	650395-002	Date Collected:	01.27.20 11.55	Sample Depth:	10 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.27.20 16.00	Basis:	Wet Weight
Seq Number:	3114645				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.27.20 19.00	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.27.20 19.00	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.27.20 19.00	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.27.20 19.00	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.27.20 19.00	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.27.20 19.00	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.27.20 19.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	01.27.20 19.00	
4-Bromofluorobenzene	460-00-4	100	%	70-130	01.27.20 19.00	

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 650395

LT Environmental, Inc.

JRU 34

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3114643 — Matrix: Solid — Date Prep: 01.27.20
MB Sample Id: 7695321-1-BLK — LCS Sample Id: 7695321-1-BKS — LCSD Sample Id: 7695321-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	256	102	257	103	90-110	0	20	mg/kg	01.28.20 03:07	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3114643 — Matrix: Soil — Date Prep: 01.27.20
Parent Sample Id: 650328-001 — MS Sample Id: 650328-001 S — MSD Sample Id: 650328-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	151	202	362	104	361	104	90-110	0	20	mg/kg	01.28.20 08:01	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3114643 — Matrix: Soil — Date Prep: 01.27.20
Parent Sample Id: 650336-003 — MS Sample Id: 650336-003 S — MSD Sample Id: 650336-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1.90	202	201	99	199	99	90-110	1	20	mg/kg	01.28.20 10:59	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3114633 — Matrix: Solid — Date Prep: 01.27.20
MB Sample Id: 7695260-1-BLK — LCS Sample Id: 7695260-1-BKS — LCSD Sample Id: 7695260-1-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	1290	129	1270	127	70-135	2	35	mg/kg	01.27.20 12:51	
Diesel Range Organics (DRO)	<11.5	1000	1230	123	1250	125	70-135	2	35	mg/kg	01.27.20 12:51	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	102		122		122		70-135	%	01.27.20 12:51
o-Terphenyl	100		111		113		70-135	%	01.27.20 12:51

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3114633 — Matrix: Solid — Date Prep: 01.27.20
MB Sample Id: 7695260-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	01.27.20 12:31	

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

QC Summary 650395

LT Environmental, Inc.

JRU 34

Analytical Method: TPH by SW8015 Mod | Prep Method: SW8015P
Seq Number: 3114633 | Matrix: Soil | Date Prep: 01.27.20
Parent Sample Id: 650328-001 | MS Sample Id: 650328-001 S | MSD Sample Id: 650328-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.3	1010	1180	117	1090	109	70-135	8	35	mg/kg	01.27.20 14:06	
Diesel Range Organics (DRO)	<50.3	1010	1190	118	1070	107	70-135	11	35	mg/kg	01.27.20 14:06	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	132		121		70-135	%	01.27.20 14:06
o-Terphenyl	121		115		70-135	%	01.27.20 14:06

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3114645 | Matrix: Solid | Date Prep: 01.27.20
MB Sample Id: 7695326-1-BLK | LCS Sample Id: 7695326-1-BKS | LCSD Sample Id: 7695326-1-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	0.0984	98	0.0979	98	70-130	1	35	mg/kg	01.27.20 16:57	
Toluene	<0.00200	0.100	0.0945	95	0.0933	93	70-130	1	35	mg/kg	01.27.20 16:57	
Ethylbenzene	<0.00200	0.100	0.0913	91	0.0896	90	71-129	2	35	mg/kg	01.27.20 16:57	
m,p-Xylenes	<0.00400	0.200	0.188	94	0.184	92	70-135	2	35	mg/kg	01.27.20 16:57	
o-Xylene	<0.00200	0.100	0.0945	95	0.0923	92	71-133	2	35	mg/kg	01.27.20 16:57	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		104		104		70-130	%	01.27.20 16:57
4-Bromofluorobenzene	97		97		98		70-130	%	01.27.20 16:57

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3114645 | Matrix: Soil | Date Prep: 01.27.20
Parent Sample Id: 650395-001 | MS Sample Id: 650395-001 S | MSD Sample Id: 650395-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0969	97	0.0859	86	70-130	12	35	mg/kg	01.27.20 17:38	
Toluene	<0.00200	0.100	0.0933	93	0.0836	84	70-130	11	35	mg/kg	01.27.20 17:38	
Ethylbenzene	<0.00200	0.100	0.0898	90	0.0808	81	71-129	11	35	mg/kg	01.27.20 17:38	
m,p-Xylenes	<0.00400	0.200	0.185	93	0.166	83	70-135	11	35	mg/kg	01.27.20 17:38	
o-Xylene	<0.00200	0.100	0.0916	92	0.0827	83	71-133	10	35	mg/kg	01.27.20 17:38	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		102		70-130	%	01.27.20 17:38
4-Bromofluorobenzene	95		98		70-130	%	01.27.20 17:38

MS/MSD Percent Recovery | [D] = 100*(C-A) / B | LCS = Laboratory Control Sample | MS = Matrix Spike
Relative Percent Difference | RPD = 200* | (C-E) / (C+E) | | A = Parent Result | B = Spike Added
LCS/LCSD Recovery | [D] = 100 * (C) / [B] | C = MS/LCS Result | D = MSD/LCSD % Rec
Log Difference | Log Diff. = Log(Sample Duplicate) - Log(Original Sample) | E = MSD/LCSD Result

Chain of Custody

Work Order No: 650395

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300, San Antonio, TX (210) 509-3334
Midland, TX (432) 704-5440, EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199, Phoenix, AZ (480) 355-0900
Tampa, FL (813) 620-2000, Tallahassee, FL (850) 756-0747, Delray Beach, FL (561) 689-6701
Atlanta, GA (770) 449-8800
www.xenco.com

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian Office	Company Name:	XTO Energy, Inc.
Address:	3300 North A Street	Address:	3104 E Greene St
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	fsmith@ltenv.com, dmoir@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 34	Turn Around	
Project Number:	012919156	Routine:	☐
PO #:	2RP-5553	Rush:	24 hrs
Sampler's Name:	Fatima Smith	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	2.6	Thermometer ID		
Received Intact:	(Yes) No		TNM001	
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes (No) N/A	Total Containers:	2	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
SW09	S	1/27/20	1132	0-10'	1	X	X	X
FS11	S	1/27/20	1155	10'	1	X	X	X

Work Order Notes

TAT starts the day recevied by the lab, if received by 4:30pm

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 Tl 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 Tl U **1631 / 245.1 / 7470 / 7471** : Hg

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		1/27/20 13:50	2		
3			4		
5			6		

Revised Date101419 Rev. 2019.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 01.27.2020 01.50.00 PM

Work Order #: 650395

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)?	2.6
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**
#5 Custody Seals intact on sample bottles?	**Yes**
#6*Custody Seals Signed and dated?	**Yes**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 01.27.2020

Checklist reviewed by: Jessica Kramer Date: 01.28.2020

Jessica Kramer

Analytical Report 634284

for

LT Environmental, Inc.

Project Manager: Dan Moir

JRU 34

21-AUG-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)

21-AUG-19

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

Reference: XENCO Report No(s): **634284**
JRU 34
Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 634284. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 634284 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

Sample Cross Reference 634284

LT Environmental, Inc., Arvada, CO

JRU 34

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	08-15-19 11:50	.5 ft	634284-001
SS02	S	08-15-19 12:00	.5 ft	634284-002
SS03	S	08-15-19 12:05	.5 ft	634284-003

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: JRU 34

Project ID:
Work Order Number(s): *634284*

Report Date: *21-AUG-19*
Date Received: *08/15/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3099158 BTEX by EPA 8021B
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 634291-001 S,634291-001 SD,634284-002,634284-003,634284-001.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 634284

LT Environmental, Inc., Arvada, CO

Project Name: JRU 34

Project Id:
Contact: Dan Moir
Project Location:

Date Received in Lab: Thu Aug-15-19 04:45 pm
Report Date: 21-AUG-19
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	634284-001		634284-002		634284-003				
	Field Id:	SS01		SS02		SS03				
	Depth:	.5- ft		.5- ft		.5- ft				
	Matrix:	SOIL		SOIL		SOIL				
	Sampled:	Aug-15-19 11:50		Aug-15-19 12:00		Aug-15-19 12:05				
BTEX by EPA 8021B SUB: T104704400-18-16	***Extracted:***	Aug-17-19 12:30		Aug-17-19 12:30		Aug-17-19 12:30				
	Analyzed:	Aug-20-19 05:53		Aug-20-19 06:13		Aug-20-19 06:33				
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL			
Benzene		<0.0199	0.0199	<0.00199	0.00199	<0.00200	0.00200			
Toluene		0.651	0.0199	0.0112	0.00199	<0.00200	0.00200			
Ethylbenzene		0.837	0.0199	0.0170	0.00199	0.00317	0.00200			
m,p-Xylenes		2.13	0.0398	0.0212	0.00398	<0.00399	0.00399			
o-Xylene		1.81	0.0199	0.0470	0.00199	0.00462	0.00200			
Total Xylenes		3.94	0.0199	0.0682	0.00199	0.00462	0.00200			
Total BTEX		5.43	0.0199	0.0964	0.00199	0.00779	0.00200			
Chloride by EPA 300 SUB: T104704400-18-16	***Extracted:***	Aug-19-19 11:50		Aug-19-19 11:50		Aug-19-19 11:50				
	Analyzed:	Aug-20-19 11:26		Aug-20-19 11:33		Aug-20-19 11:39				
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL			
Chloride		1820	24.8	4300	25.1	950	4.95			
TPH by SW8015 Mod SUB: T104704400-18-16	***Extracted:***	Aug-19-19 13:00		Aug-19-19 13:00		Aug-19-19 13:00				
	Analyzed:	Aug-20-19 07:27		Aug-20-19 07:46		Aug-20-19 08:06				
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL			
Gasoline Range Hydrocarbons (GRO)		1040	125	203	125	<125	125			
Diesel Range Organics (DRO)		23900	125	10100	125	10700	125			
Motor Oil Range Hydrocarbons (MRO)		1400	125	963	125	1240	125			
Total TPH		26300	125	11300	125	11900	125			
Total GRO-DRO		24900	125	10300	125	10700	125			

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

Version: 1.%

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analytical Results 634284

LT Environmental, Inc., Arvada, CO

JRU 34

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	08.15.19 16.45
Lab Sample Id:	634284-001	Date Collected:	08.15.19 11.50	Sample Depth:	.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.19.19 11.50	Basis:	Wet Weight
Seq Number:	3099041			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1820**	24.8	mg/kg	08.20.19 11.26		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.19.19 13.00	Basis:	Wet Weight
Seq Number:	3099047			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**1040**	125	mg/kg	08.20.19 07.27		5
Diesel Range Organics (DRO)	C10C28DRO	**23900**	125	mg/kg	08.20.19 07.27		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**1400**	125	mg/kg	08.20.19 07.27		5
Total TPH	PHC635	**26300**	125	mg/kg	08.20.19 07.27		5
Total GRO-DRO	PHC628	**24900**	125	mg/kg	08.20.19 07.27		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	08.20.19 07.27	
o-Terphenyl	84-15-1	89	%	70-135	08.20.19 07.27	

Certificate of Analytical Results 634284

LT Environmental, Inc., Arvada, CO

JRU 34

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	08.15.19 16.45
Lab Sample Id:	634284-001	Date Collected:	08.15.19 11.50	Sample Depth:	.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	AMB	Date Prep:	08.17.19 12.30	Basis:	Wet Weight
Seq Number:	3099158			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0199	0.0199	mg/kg	08.20.19 05.53	U	10
Toluene	108-88-3	**0.651**	0.0199	mg/kg	08.20.19 05.53		10
Ethylbenzene	100-41-4	**0.837**	0.0199	mg/kg	08.20.19 05.53		10
m,p-Xylenes	179601-23-1	**2.13**	0.0398	mg/kg	08.20.19 05.53		10
o-Xylene	95-47-6	**1.81**	0.0199	mg/kg	08.20.19 05.53		10
Total Xylenes	1330-20-7	**3.94**	0.0199	mg/kg	08.20.19 05.53		10
Total BTEX		**5.43**	0.0199	mg/kg	08.20.19 05.53		10

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	149	%	70-130	08.20.19 05.53	**
1,4-Difluorobenzene	540-36-3	114	%	70-130	08.20.19 05.53	

Certificate of Analytical Results 634284

LT Environmental, Inc., Arvada, CO

JRU 34

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	08.15.19 16.45
Lab Sample Id:	634284-002	Date Collected:	08.15.19 12.00	Sample Depth:	.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.19.19 11.50	Basis:	Wet Weight
Seq Number:	3099041			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**4300**	25.1	mg/kg	08.20.19 11.33		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.19.19 13.00	Basis:	Wet Weight
Seq Number:	3099047			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**203**	125	mg/kg	08.20.19 07.46		5
Diesel Range Organics (DRO)	C10C28DRO	**10100**	125	mg/kg	08.20.19 07.46		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**963**	125	mg/kg	08.20.19 07.46		5
Total TPH	PHC635	**11300**	125	mg/kg	08.20.19 07.46		5
Total GRO-DRO	PHC628	**10300**	125	mg/kg	08.20.19 07.46		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	122	%	70-135	08.20.19 07.46	
o-Terphenyl	84-15-1	123	%	70-135	08.20.19 07.46	

Certificate of Analytical Results 634284

LT Environmental, Inc., Arvada, CO

JRU 34

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	08.15.19 16.45
Lab Sample Id:	634284-002	Date Collected:	08.15.19 12.00	Sample Depth:	.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	AMB	Date Prep:	08.17.19 12.30	Basis:	Wet Weight
Seq Number:	3099158			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.20.19 06.13	U	1
Toluene	108-88-3	**0.0112**	0.00199	mg/kg	08.20.19 06.13		1
Ethylbenzene	100-41-4	**0.0170**	0.00199	mg/kg	08.20.19 06.13		1
m,p-Xylenes	179601-23-1	**0.0212**	0.00398	mg/kg	08.20.19 06.13		1
o-Xylene	95-47-6	**0.0470**	0.00199	mg/kg	08.20.19 06.13		1
Total Xylenes	1330-20-7	**0.0682**	0.00199	mg/kg	08.20.19 06.13		1
Total BTEX		**0.0964**	0.00199	mg/kg	08.20.19 06.13		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	157	%	70-130	08.20.19 06.13	**
1,4-Difluorobenzene	540-36-3	102	%	70-130	08.20.19 06.13	

Certificate of Analytical Results 634284

LT Environmental, Inc., Arvada, CO

JRU 34

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	08.15.19 16.45
Lab Sample Id:	634284-003	Date Collected:	08.15.19 12.05	Sample Depth:	.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.19.19 11.50	Basis:	Wet Weight
Seq Number:	3099041			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**950**	4.95	mg/kg	08.20.19 11.39		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.19.19 13.00	Basis:	Wet Weight
Seq Number:	3099047			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<125	125	mg/kg	08.20.19 08.06	U	5
Diesel Range Organics (DRO)	C10C28DRO	**10700**	125	mg/kg	08.20.19 08.06		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**1240**	125	mg/kg	08.20.19 08.06		5
Total TPH	PHC635	**11900**	125	mg/kg	08.20.19 08.06		5
Total GRO-DRO	PHC628	**10700**	125	mg/kg	08.20.19 08.06		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	08.20.19 08.06	
o-Terphenyl	84-15-1	121	%	70-135	08.20.19 08.06	

Certificate of Analytical Results 634284

LT Environmental, Inc., Arvada, CO

JRU 34

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	08.15.19 16.45
Lab Sample Id:	634284-003	Date Collected:	08.15.19 12.05	Sample Depth:	.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	AMB	Date Prep:	08.17.19 12.30	Basis:	Wet Weight
Seq Number:	3099158			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.20.19 06.33	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.20.19 06.33	U	1
Ethylbenzene	100-41-4	**0.00317**	0.00200	mg/kg	08.20.19 06.33		1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.20.19 06.33	U	1
o-Xylene	95-47-6	**0.00462**	0.00200	mg/kg	08.20.19 06.33		1
Total Xylenes	1330-20-7	**0.00462**	0.00200	mg/kg	08.20.19 06.33		1
Total BTEX		**0.00779**	0.00200	mg/kg	08.20.19 06.33		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	133	%	70-130	08.20.19 06.33	**
1,4-Difluorobenzene	540-36-3	98	%	70-130	08.20.19 06.33	

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 634284

LT Environmental, Inc.

JRU 34

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3099041 — Matrix: Solid — Date Prep: 08.19.19
MB Sample Id: 7684479-1-BLK — LCS Sample Id: 7684479-1-BKS — LCSD Sample Id: 7684479-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	241	96	239	96	90-110	1	20	mg/kg	08.19.19 15:04	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3099041 — Matrix: Soil — Date Prep: 08.19.19
Parent Sample Id: 634286-003 — MS Sample Id: 634286-003 S — MSD Sample Id: 634286-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	15.4	249	282	107	283	107	90-110	0	20	mg/kg	08.20.19 11:58	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3099041 — Matrix: Soil — Date Prep: 08.19.19
Parent Sample Id: 634401-012 — MS Sample Id: 634401-012 S — MSD Sample Id: 634401-012 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	93.2	250	349	102	348	102	90-110	0	20	mg/kg	08.19.19 15:23	

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3099047 — Matrix: Solid — Date Prep: 08.19.19
MB Sample Id: 7684493-1-BLK — LCS Sample Id: 7684493-1-BKS — LCSD Sample Id: 7684493-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	959	96	936	94	70-135	2	20	mg/kg	08.20.19 04:33	
Diesel Range Organics (DRO)	<25.0	1000	1000	100	977	98	70-135	2	20	mg/kg	08.20.19 04:33	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	97		122		119		70-135	%	08.20.19 04:33
o-Terphenyl	100		103		100		70-135	%	08.20.19 04:33

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

QC Summary 634284

LT Environmental, Inc.

JRU 34

Analytical Method: TPH by SW8015 Mod | Prep Method: TX1005P
Seq Number: 3099047 | Matrix: Soil | Date Prep: 08.19.19
Parent Sample Id: 634301-001 | MS Sample Id: 634301-001 S | MSD Sample Id: 634301-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	998	973	97	976	98	70-135	0	20	mg/kg	08.20.19 05:30	
Diesel Range Organics (DRO)	<25.0	998	1020	102	1030	103	70-135	1	20	mg/kg	08.20.19 05:30	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	115		118		70-135	%	08.20.19 05:30
o-Terphenyl	105		106		70-135	%	08.20.19 05:30

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3099158 | Matrix: Solid | Date Prep: 08.17.19
MB Sample Id: 7684441-1-BLK | LCS Sample Id: 7684441-1-BKS | LCSD Sample Id: 7684441-1-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	0.0898	90	0.0909	91	70-130	1	35	mg/kg	08.20.19 02:53	
Toluene	<0.000456	0.100	0.0945	95	0.0982	98	70-130	4	35	mg/kg	08.20.19 02:53	
Ethylbenzene	<0.00200	0.100	0.0946	95	0.102	102	70-130	8	35	mg/kg	08.20.19 02:53	
m,p-Xylenes	<0.00101	0.200	0.181	91	0.196	98	70-130	8	35	mg/kg	08.20.19 02:53	
o-Xylene	<0.000344	0.100	0.0951	95	0.103	103	70-130	8	35	mg/kg	08.20.19 02:53	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	96		95		95		70-130	%	08.20.19 02:53
4-Bromofluorobenzene	102		107		109		70-130	%	08.20.19 02:53

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3099158 | Matrix: Soil | Date Prep: 08.17.19
Parent Sample Id: 634291-001 | MS Sample Id: 634291-001 S | MSD Sample Id: 634291-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	0.00139	0.0998	0.0611	60	0.0563	55	70-130	8	35	mg/kg	08.20.19 03:33	X
Toluene	0.0373	0.0998	0.0644	27	0.0547	17	70-130	16	35	mg/kg	08.20.19 03:33	X
Ethylbenzene	0.0180	0.0998	0.0518	34	0.0291	11	70-130	56	35	mg/kg	08.20.19 03:33	XF
m,p-Xylenes	0.0673	0.200	0.0652	0	0.0640	0	70-130	2	35	mg/kg	08.20.19 03:33	X
o-Xylene	0.107	0.0998	0.118	11	0.111	4	70-130	6	35	mg/kg	08.20.19 03:33	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		103		70-130	%	08.20.19 03:33
4-Bromofluorobenzene	186	**	207	**	70-130	%	08.20.19 03:33

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

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

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

Chain of Custody

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

Work Order No: 634284

Page 1 of 1

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Midland, Tx 79705
Phone:	432.704.5178	Email:	ggreen@ltenv.com ; dmoir@ltenv.com

Work Order Comments

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

Project Name:	JRU 34	Turn Around	
Project Number:		Routine	☑
P.O. Number:	ZR3553	Rush:	
Sampler's Name:	Garrett Green	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	1.0	Thermometer ID	
Received Intact:	(Yes) No	T-NM-007	
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	3

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
SS01	S	08/15/19	1150	.5	1	X	X	X
SS02	S	↓	1200	↓	1	↓	↓	↓
SS03	S	↓	1205	↓	1	↓	↓	↓

Work Order Notes

TAT starts the day recevied by the lab, if received by 4:30pm

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 Tl 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 Tl U **1631 / 245.1 / 7470 / 7471** : Hg

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Garrett Green	Cortez	8/15/19 16:45	2		
			4		
			6		

Revised Date 051418 Rev. 2018.1

Inter-Office Shipment

IOS Number **46432**

Date/Time: 08/16/19 10:39
Lab# From: **Carlsbad**
Lab# To: **Midland**

Created by: Elizabeth Mcclellan
Delivery Priority:
Air Bill No.: 7760 0892 0480

Please send report to: Jessica Kramer
Address: 1089 N Canal Street
E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
634284-001	S	SS01	08/15/19 11:50	SW8021B	BTEX by EPA 8021B	08/21/19	08/29/19	JKR	BR4FBZ BZ BZME EBZ X	
634284-001	S	SS01	08/15/19 11:50	E300_CL	Chloride by EPA 300	08/21/19	02/11/20	JKR	CL	
634284-001	S	SS01	08/15/19 11:50	SW8015MOD_NM	TPH by SW8015 Mod	08/21/19	08/29/19	JKR	GRO-DRO PHCC10C28 PI	
634284-002	S	SS02	08/15/19 12:00	E300_CL	Chloride by EPA 300	08/21/19	02/11/20	JKR	CL	
634284-002	S	SS02	08/15/19 12:00	SW8021B	BTEX by EPA 8021B	08/21/19	08/29/19	JKR	BR4FBZ BZ BZME EBZ X	
634284-002	S	SS02	08/15/19 12:00	SW8015MOD_NM	TPH by SW8015 Mod	08/21/19	08/29/19	JKR	GRO-DRO PHCC10C28 PI	
634284-003	S	SS03	08/15/19 12:05	SW8021B	BTEX by EPA 8021B	08/21/19	08/29/19	JKR	BR4FBZ BZ BZME EBZ X	
634284-003	S	SS03	08/15/19 12:05	E300_CL	Chloride by EPA 300	08/21/19	02/11/20	JKR	CL	
634284-003	S	SS03	08/15/19 12:05	SW8015MOD_NM	TPH by SW8015 Mod	08/21/19	08/29/19	JKR	GRO-DRO PHCC10C28 PI	

Inter Office Shipment or Sample Comments:

Relinquished By: Elizabeth McClellan

Date Relinquished: 08/16/2019

Received By: Katie Lowe

Date Received: 08/17/2019 12:15

Cooler Temperature: 3.8

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 46432

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

Sent By: Elizabeth McClellan **Date Sent:** 08/16/2019 10:39 AM

Received By: Katie Lowe **Date Received:** 08/17/2019 12:15 PM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	3.8	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received with appropriate temperature?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**	
#5 *Custody Seals Signed and dated for Containers/coolers	**N/A**	
#6 *IOS present?	**Yes**	
#7 Any missing/extra samples?	**No**	
#8 IOS agrees with sample label(s)/matrix?	**Yes**	
#9 Sample matrix/ properties agree with IOS?	**Yes**	
#10 Samples in proper container/ bottle?	**Yes**	
#11 Samples properly preserved?	**Yes**	
#12 Sample container(s) intact?	**Yes**	
#13 Sufficient sample amount for indicated test(s)?	**Yes**	
#14 All samples received within hold time?	**Yes**	

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ **Contacted by :** _____ **Date:** _____

Checklist reviewed by: Katie Lowe Date: 08/17/2019

Katie Lowe

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 08/15/2019 04:45:00 PM

Work Order #: 634284

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

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	1.6	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**No**	
#5 Custody Seals intact on sample bottles?	**No**	
#6*Custody Seals Signed and dated?	**N/A**	
#7 *Chain of Custody present?	**Yes**	
#8 Any missing/extra samples?	**No**	
#9 Chain of Custody signed when relinquished/ received?	**Yes**	
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**	
#11 Container label(s) legible and intact?	**Yes**	
#12 Samples in proper container/ bottle?	**Yes**	
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**Yes**	Subbed to Xenco Midland.
#18 Water VOC samples have zero headspace?	**N/A**	

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 08/16/2019

Checklist reviewed by: Jessica Kramer Date: 08/20/2019

Jessica Kramer

Analytical Report 646843

for

LT Environmental, Inc.

Project Manager: Dan Moir

JRU 34

012919156

20-DEC-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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

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

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

20-DEC-19

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

Reference: XENCO Report No(s): **646843**
JRU 34
Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 646843. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 646843 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

Sample Cross Reference 646843

LT Environmental, Inc., Arvada, CO

JRU 34

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW02	S	12-17-19 08:58	0 - 10 ft	646843-001
SW03	S	12-17-19 09:20	0 - 10 ft	646843-002
SW04	S	12-17-19 09:35	0 - 10 ft	646843-003
SW05	S	12-17-19 09:56	0 - 10 ft	646843-004
SW06	S	12-17-19 10:01	0 - 10 ft	646843-005
SW07	S	12-17-19 12:39	0 - 10 ft	646843-006
SW08	S	12-17-19 12:42	0 - 10 ft	646843-007
SW01	S	12-17-19 13:47	0 - 10 ft	646843-008
FS01	S	12-17-19 14:02	10 ft	646843-009
FS02	S	12-17-19 14:11	10 ft	646843-010
FS03	S	12-17-19 14:28	10 ft	646843-011
FS04	S	12-17-19 14:37	10 ft	646843-012
FS05	S	12-17-19 15:32	10 ft	646843-013
FS06	S	12-17-19 15:36	10 ft	646843-014
FS07	S	12-17-19 15:53	10 ft	646843-015
FS08	S	12-17-19 15:57	10 ft	646843-016
FS09	S	12-17-19 16:09	10 ft	646843-017
FS10	S	12-17-19 16:11	10 ft	646843-018

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: JRU 34

Project ID: *012919156*
Work Order Number(s): *646843*

Report Date: *20-DEC-19*
Date Received: *12/18/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3111020 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3111022 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3111023 Chloride by EPA 300
Lab Sample ID 646843-005 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 646843-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013, -014.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3111033 Chloride by EPA 300
Lab Sample ID 646846-007 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 646843-015, -016, -017, -018.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3111059 TPH by SW8015 Mod
Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 646843-013.

Certificate of Analysis Summary 646843

LT Environmental, Inc., Arvada, CO

Project Name: JRU 34

Project Id: 012919156
Contact: Dan Moir
Project Location:

Date Received in Lab: Wed Dec-18-19 12:58 pm
Report Date: 20-DEC-19
Project Manager: Jessica Kramer

Analysis Requested		646843-001		646843-002		646843-003		646843-004		646843-005		646843-006	
	Field Id:	SW02		SW03		SW04		SW05		SW06		SW07	
	Depth:	0-10 ft		0-10 ft		0-10 ft		0-10 ft		0-10 ft		0-10 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-17-19 08:58		Dec-17-19 09:20		Dec-17-19 09:35		Dec-17-19 09:56		Dec-17-19 10:01		Dec-17-19 12:39	
BTEX by EPA 8021B	*Extracted:*	Dec-18-19 14:00		Dec-18-19 14:00		Dec-18-19 14:00		Dec-18-19 14:00		Dec-18-19 14:00		Dec-18-19 14:00	
	Analyzed:	Dec-18-19 17:59		Dec-18-19 19:03		Dec-18-19 19:22		Dec-18-19 19:41		Dec-19-19 05:53		Dec-18-19 20:19	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00198	0.00198	<0.00463	0.00463	<0.00198	0.00198
Toluene		<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00198	0.00198	<0.0185	0.0185	<0.00198	0.00198
Ethylbenzene		<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00198	0.00198	0.0527	0.0185	<0.00198	0.00198
m,p-Xylenes		<0.00401	0.00401	<0.00397	0.00397	<0.00401	0.00401	0.00519	0.00397	0.0797	0.0370	<0.00396	0.00396
o-Xylene		<0.00200	0.00200	<0.00198	0.00198	0.00248	0.00200	<0.00198	0.00198	0.111	0.0185	<0.00198	0.00198
Total Xylenes		<0.00200	0.00200	<0.00198	0.00198	0.00248	0.00200	0.00519	0.00198	0.191	0.0185	<0.00198	0.00198
Total BTEX		<0.00200	0.00200	<0.00198	0.00198	0.00248	0.00200	0.00519	0.00198	0.243	0.00463	<0.00198	0.00198
Chloride by EPA 300	*Extracted:*	Dec-18-19 14:30		Dec-18-19 14:30		Dec-18-19 14:30		Dec-18-19 14:30		Dec-18-19 14:30		Dec-18-19 14:30	
	Analyzed:	Dec-18-19 17:44		Dec-18-19 17:49		Dec-18-19 17:55		Dec-18-19 18:01		Dec-18-19 18:07		Dec-18-19 18:36	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		3300	9.96	3150	9.98	2420	10.0	4230 D	100	4590 D	99.8	2560	9.98
TPH by SW8015 Mod	*Extracted:*	Dec-18-19 14:20		Dec-18-19 14:20		Dec-18-19 14:20		Dec-18-19 14:20		Dec-18-19 14:20		Dec-18-19 14:20	
	Analyzed:	Dec-18-19 14:42		Dec-18-19 15:02		Dec-18-19 15:02		Dec-18-19 15:21		Dec-18-19 15:21		Dec-18-19 15:41	
	Units/RL:	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	<50.2	50.2	<50.0	50.0	93.0	50.3	<50.2	50.2
Diesel Range Organics (DRO)		51.7	50.0	<50.1	50.1	544	50.2	<50.0	50.0	3450	50.3	<50.2	50.2
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<50.1	50.1	59.0	50.2	<50.0	50.0	345	50.3	<50.2	50.2
Total GRO-DRO		51.7	50.0	<50.1	50.1	544	50.2	<50.0	50.0	3540	50.3	<50.2	50.2
Total TPH		51.7	50.0	<50.1	50.1	603	50.2	<50.0	50.0	3890	50.3	<50.2	50.2

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Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 646843

LT Environmental, Inc., Arvada, CO

Project Name: JRU 34

Project Id: 012919156
Contact: Dan Moir
Project Location:

Date Received in Lab: Wed Dec-18-19 12:58 pm
Report Date: 20-DEC-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	646843-007		646843-008		646843-009		646843-010		646843-011		646843-012	
	Field Id:	SW08		SW01		FS01		FS02		FS03		FS04	
	Depth:	0-10 ft		0-10 ft		10- ft		10- ft		10- ft		10- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-17-19 12:42		Dec-17-19 13:47		Dec-17-19 14:02		Dec-17-19 14:11		Dec-17-19 14:28		Dec-17-19 14:37	
BTEX by EPA 8021B	*Extracted:*	Dec-18-19 14:00		Dec-18-19 14:00		Dec-18-19 14:00		Dec-18-19 14:00		Dec-18-19 14:00		Dec-18-19 15:00	
	Analyzed:	Dec-18-19 20:38		Dec-18-19 20:58		Dec-18-19 21:17		Dec-18-19 21:36		Dec-18-19 21:55		Dec-18-19 18:08	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00198	0.00198	<0.00198	0.00198	<0.00199	0.00199	<0.00198	0.00198	<0.00198	0.00198	<0.00199	0.00199
Toluene		<0.00198	0.00198	<0.00198	0.00198	<0.00199	0.00199	<0.00198	0.00198	<0.00198	0.00198	<0.00199	0.00199
Ethylbenzene		<0.00198	0.00198	<0.00198	0.00198	<0.00199	0.00199	<0.00198	0.00198	<0.00198	0.00198	<0.00199	0.00199
m,p-Xylenes		<0.00396	0.00396	<0.00396	0.00396	<0.00398	0.00398	<0.00396	0.00396	<0.00396	0.00396	<0.00398	0.00398
o-Xylene		<0.00198	0.00198	<0.00198	0.00198	<0.00199	0.00199	<0.00198	0.00198	<0.00198	0.00198	<0.00199	0.00199
Total Xylenes		<0.00198	0.00198	<0.00198	0.00198	<0.00199	0.00199	<0.00198	0.00198	<0.00198	0.00198	<0.00199	0.00199
Total BTEX		<0.00198	0.00198	<0.00198	0.00198	<0.00199	0.00199	<0.00198	0.00198	<0.00198	0.00198	<0.00199	0.00199
Chloride by EPA 300	*Extracted:*	Dec-18-19 14:30		Dec-18-19 14:30		Dec-18-19 14:30		Dec-18-19 14:30		Dec-18-19 14:30		Dec-18-19 14:30	
	Analyzed:	Dec-18-19 18:41		Dec-18-19 18:47		Dec-18-19 18:53		Dec-18-19 18:59		Dec-18-19 19:04		Dec-18-19 19:10	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		525	10.0	537	10.0	2660	10.1	6240 D	100	1260	9.94	89.7	9.98
TPH by SW8015 Mod	*Extracted:*	Dec-18-19 14:20		Dec-18-19 14:20		Dec-18-19 14:20		Dec-18-19 14:20		Dec-18-19 14:20		Dec-18-19 15:00	
	Analyzed:	Dec-18-19 16:01		Dec-18-19 16:01		Dec-18-19 16:21		Dec-18-19 16:21		Dec-18-19 16:41		Dec-18-19 17:21	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.1	50.1	<49.9	49.9	<50.1	50.1	<50.0	50.0	<50.1	50.1	<50.1	50.1
Diesel Range Organics (DRO)		<50.1	50.1	<49.9	49.9	<50.1	50.1	<50.0	50.0	<50.1	50.1	<50.1	50.1
Motor Oil Range Hydrocarbons (MRO)		<50.1	50.1	<49.9	49.9	<50.1	50.1	<50.0	50.0	<50.1	50.1	<50.1	50.1
Total GRO-DRO		<50.1	50.1	<49.9	49.9	<50.1	50.1	<50.0	50.0	<50.1	50.1	<50.1	50.1
Total TPH		<50.1	50.1	<49.9	49.9	<50.1	50.1	<50.0	50.0	<50.1	50.1	<50.1	50.1

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Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 646843

LT Environmental, Inc., Arvada, CO

Project Name: JRU 34

Project Id: 012919156
Contact: Dan Moir
Project Location:

Date Received in Lab: Wed Dec-18-19 12:58 pm
Report Date: 20-DEC-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	646843-013		646843-014		646843-015		646843-016		646843-017		646843-018	
	Field Id:	FS05		FS06		FS07		FS08		FS09		FS10	
	Depth:	10- ft		10- ft		10- ft		10- ft		10- ft		10- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-17-19 15:32		Dec-17-19 15:36		Dec-17-19 15:53		Dec-17-19 15:57		Dec-17-19 16:09		Dec-17-19 16:11	
BTEX by EPA 8021B	*Extracted:*	Dec-18-19 15:00		Dec-18-19 15:00		Dec-18-19 15:00		Dec-18-19 15:00		Dec-18-19 15:00		Dec-18-19 15:00	
	Analyzed:	Dec-18-19 18:25		Dec-18-19 18:43		Dec-18-19 19:00		Dec-18-19 19:18		Dec-18-19 19:35		Dec-18-19 19:52	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200
Toluene		<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200
Ethylbenzene		<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200
m,p-Xylenes		<0.00399	0.00399	<0.00397	0.00397	<0.00399	0.00399	<0.00395	0.00395	<0.00399	0.00399	<0.00400	0.00400
o-Xylene		<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200
Total Xylenes		<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200
Total BTEX		<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200
Chloride by EPA 300	*Extracted:*	Dec-18-19 14:30		Dec-18-19 14:30		Dec-18-19 15:00		Dec-18-19 15:00		Dec-18-19 15:00		Dec-18-19 15:00	
	Analyzed:	Dec-18-19 19:16		Dec-18-19 19:22		Dec-18-19 19:57		Dec-18-19 20:15		Dec-18-19 20:21		Dec-18-19 20:27	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		207	9.90	382	9.98	123	9.98	453	10.0	727	9.98	739	9.94
TPH by SW8015 Mod	*Extracted:*	Dec-18-19 15:00		Dec-18-19 15:00		Dec-18-19 15:00		Dec-18-19 15:00		Dec-18-19 15:00		Dec-18-19 15:00	
	Analyzed:	Dec-18-19 18:00		Dec-18-19 18:00		Dec-18-19 18:20		Dec-18-19 18:20		Dec-18-19 18:40		Dec-18-19 18:40	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.3	50.3	<50.3	50.3	<50.1	50.1	<49.9	49.9	<50.2	50.2	<50.2	50.2
Diesel Range Organics (DRO)		<50.3	50.3	<50.3	50.3	<50.1	50.1	<49.9	49.9	<50.2	50.2	<50.2	50.2
Motor Oil Range Hydrocarbons (MRO)		<50.3	50.3	<50.3	50.3	<50.1	50.1	<49.9	49.9	<50.2	50.2	<50.2	50.2
Total GRO-DRO		<50.3	50.3	<50.3	50.3	<50.1	50.1	<49.9	49.9	<50.2	50.2	<50.2	50.2
Total TPH		<50.3	50.3	<50.3	50.3	<50.1	50.1	<49.9	49.9	<50.2	50.2	<50.2	50.2

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analytical Results 646843

LT Environmental, Inc., Arvada, CO

JRU 34

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	12.18.19 12.58
Lab Sample Id:	646843-001	Date Collected:	12.17.19 08.58	Sample Depth:	0 - 10 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.18.19 14.30	Basis:	Wet Weight
Seq Number:	3111023				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**3300**	9.96	mg/kg	12.18.19 17.44		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.18.19 14.20	Basis:	Wet Weight
Seq Number:	3111041				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.18.19 14.42	U	1
Diesel Range Organics (DRO)	C10C28DRO	**51.7**	50.0	mg/kg	12.18.19 14.42		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.18.19 14.42	U	1
Total GRO-DRO	PHC628	**51.7**	50.0	mg/kg	12.18.19 14.42		1
Total TPH	PHC635	**51.7**	50.0	mg/kg	12.18.19 14.42		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	12.18.19 14.42	
o-Terphenyl	84-15-1	97	%	70-135	12.18.19 14.42	

Certificate of Analytical Results 646843

LT Environmental, Inc., Arvada, CO

JRU 34

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	12.18.19 12.58
Lab Sample Id:	646843-001	Date Collected:	12.17.19 08.58	Sample Depth:	0 - 10 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.18.19 14.00	Basis:	Wet Weight
Seq Number:	3111020				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.18.19 17.59	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.18.19 17.59	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.18.19 17.59	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	12.18.19 17.59	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.18.19 17.59	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.18.19 17.59	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.18.19 17.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	12.18.19 17.59	
4-Bromofluorobenzene	460-00-4	122	%	70-130	12.18.19 17.59	

Certificate of Analytical Results 646843

LT Environmental, Inc., Arvada, CO

JRU 34

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	12.18.19 12.58
Lab Sample Id:	646843-002	Date Collected:	12.17.19 09.20	Sample Depth:	0 - 10 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.18.19 14.30	Basis:	Wet Weight
Seq Number:	3111023				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**3150**	9.98	mg/kg	12.18.19 17.49		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.18.19 14.20	Basis:	Wet Weight
Seq Number:	3111041				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	12.18.19 15.02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	12.18.19 15.02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	12.18.19 15.02	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	12.18.19 15.02	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	12.18.19 15.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	12.18.19 15.02	
o-Terphenyl	84-15-1	104	%	70-135	12.18.19 15.02	

Certificate of Analytical Results 646843

LT Environmental, Inc., Arvada, CO

JRU 34

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	12.18.19 12.58
Lab Sample Id:	646843-002	Date Collected:	12.17.19 09.20	Sample Depth:	0 - 10 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.18.19 14.00	Basis:	Wet Weight
Seq Number:	3111020				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.18.19 19.03	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	12.18.19 19.03	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	12.18.19 19.03	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	12.18.19 19.03	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	12.18.19 19.03	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	12.18.19 19.03	U	1
Total BTEX		<0.00198	0.00198	mg/kg	12.18.19 19.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	12.18.19 19.03	
4-Bromofluorobenzene	460-00-4	111	%	70-130	12.18.19 19.03	

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JRU 34

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	12.18.19 12.58
Lab Sample Id:	646843-003	Date Collected:	12.17.19 09.35	Sample Depth:	0 - 10 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.18.19 14.30	Basis:	Wet Weight
Seq Number:	3111023				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2420**	10.0	mg/kg	12.18.19 17.55		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.18.19 14.20	Basis:	Wet Weight
Seq Number:	3111041				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	12.18.19 15.02	U	1
Diesel Range Organics (DRO)	C10C28DRO	**544**	50.2	mg/kg	12.18.19 15.02		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**59.0**	50.2	mg/kg	12.18.19 15.02		1
Total GRO-DRO	PHC628	**544**	50.2	mg/kg	12.18.19 15.02		1
Total TPH	PHC635	**603**	50.2	mg/kg	12.18.19 15.02		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	12.18.19 15.02	
o-Terphenyl	84-15-1	101	%	70-135	12.18.19 15.02	

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JRU 34

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	12.18.19 12.58
Lab Sample Id:	646843-003	Date Collected:	12.17.19 09.35	Sample Depth:	0 - 10 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.18.19 14.00	Basis:	Wet Weight
Seq Number:	3111020				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.18.19 19.22	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.18.19 19.22	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.18.19 19.22	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	12.18.19 19.22	U	1
o-Xylene	95-47-6	**0.00248**	0.00200	mg/kg	12.18.19 19.22		1
Total Xylenes	1330-20-7	**0.00248**	0.00200	mg/kg	12.18.19 19.22		1
Total BTEX		**0.00248**	0.00200	mg/kg	12.18.19 19.22		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	12.18.19 19.22	
4-Bromofluorobenzene	460-00-4	120	%	70-130	12.18.19 19.22	

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JRU 34

Sample Id: **SW05** Matrix: Soil Date Received:12.18.19 12.58
Lab Sample Id: 646843-004 Date Collected: 12.17.19 09.56 Sample Depth:0 - 10 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 12.18.19 14.30 Basis: Wet Weight
Seq Number: 3111023

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**4230**	100	mg/kg	12.19.19 12.23	D	10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 12.18.19 14.20 Basis: Wet Weight
Seq Number: 3111041

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.18.19 15.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.18.19 15.21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.18.19 15.21	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	12.18.19 15.21	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	12.18.19 15.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	12.18.19 15.21	
o-Terphenyl	84-15-1	102	%	70-135	12.18.19 15.21	

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JRU 34

Sample Id:	**SW05**	Matrix:	Soil	Date Received:	12.18.19 12.58
Lab Sample Id:	646843-004	Date Collected:	12.17.19 09.56	Sample Depth:	0 - 10 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.18.19 14.00	Basis:	Wet Weight
Seq Number:	3111020				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.18.19 19.41	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	12.18.19 19.41	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	12.18.19 19.41	U	1
m,p-Xylenes	179601-23-1	**0.00519**	0.00397	mg/kg	12.18.19 19.41		1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	12.18.19 19.41	U	1
Total Xylenes	1330-20-7	**0.00519**	0.00198	mg/kg	12.18.19 19.41		1
Total BTEX		**0.00519**	0.00198	mg/kg	12.18.19 19.41		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	12.18.19 19.41	
4-Bromofluorobenzene	460-00-4	118	%	70-130	12.18.19 19.41	

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JRU 34

Sample Id:	**SW06**	Matrix:	Soil	Date Received:	12.18.19 12.58
Lab Sample Id:	646843-005	Date Collected:	12.17.19 10.01	Sample Depth:	0 - 10 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.18.19 14.30	Basis:	Wet Weight
Seq Number:	3111023				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**4590**	99.8	mg/kg	12.19.19 12.29	D	10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.18.19 14.20	Basis:	Wet Weight
Seq Number:	3111041				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**93.0**	50.3	mg/kg	12.18.19 15.21		1
Diesel Range Organics (DRO)	C10C28DRO	**3450**	50.3	mg/kg	12.18.19 15.21		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**345**	50.3	mg/kg	12.18.19 15.21		1
Total GRO-DRO	PHC628	**3540**	50.3	mg/kg	12.18.19 15.21		1
Total TPH	PHC635	**3890**	50.3	mg/kg	12.18.19 15.21		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	12.18.19 15.21	
o-Terphenyl	84-15-1	125	%	70-135	12.18.19 15.21	

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JRU 34

Sample Id:	**SW06**	Matrix:	Soil	Date Received:	12.18.19 12.58
Lab Sample Id:	646843-005	Date Collected:	12.17.19 10.01	Sample Depth:	0 - 10 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.18.19 14.00	Basis:	Wet Weight
Seq Number:	3111020				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00463	0.00463	mg/kg	12.19.19 05.53	U	1
Toluene	108-88-3	<0.0185	0.0185	mg/kg	12.19.19 05.53	U	1
Ethylbenzene	100-41-4	**0.0527**	0.0185	mg/kg	12.19.19 05.53		1
m,p-Xylenes	179601-23-1	**0.0797**	0.0370	mg/kg	12.19.19 05.53		1
o-Xylene	95-47-6	**0.111**	0.0185	mg/kg	12.19.19 05.53		1
Total Xylenes	1330-20-7	**0.191**	0.0185	mg/kg	12.19.19 05.53		1
Total BTEX		**0.243**	0.00463	mg/kg	12.19.19 05.53		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	117	%	70-130	12.19.19 05.53	
1,4-Difluorobenzene	540-36-3	99	%	70-130	12.19.19 05.53	

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JRU 34

Sample Id:	**SW07**	Matrix:	Soil	Date Received:	12.18.19 12.58
Lab Sample Id:	646843-006	Date Collected:	12.17.19 12.39	Sample Depth:	0 - 10 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.18.19 14.30	Basis:	Wet Weight
Seq Number:	3111023				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2560**	9.98	mg/kg	12.18.19 18.36		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.18.19 14.20	Basis:	Wet Weight
Seq Number:	3111041				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	12.18.19 15.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	12.18.19 15.41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	12.18.19 15.41	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	12.18.19 15.41	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	12.18.19 15.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	12.18.19 15.41	
o-Terphenyl	84-15-1	97	%	70-135	12.18.19 15.41	

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JRU 34

Sample Id:	**SW07**	Matrix:	Soil	Date Received:	12.18.19 12.58
Lab Sample Id:	646843-006	Date Collected:	12.17.19 12.39	Sample Depth:	0 - 10 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.18.19 14.00	Basis:	Wet Weight
Seq Number:	3111020				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.18.19 20.19	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	12.18.19 20.19	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	12.18.19 20.19	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	12.18.19 20.19	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	12.18.19 20.19	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	12.18.19 20.19	U	1
Total BTEX		<0.00198	0.00198	mg/kg	12.18.19 20.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	125	%	70-130	12.18.19 20.19	
1,4-Difluorobenzene	540-36-3	104	%	70-130	12.18.19 20.19	

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JRU 34

Sample Id:	**SW08**	Matrix:	Soil	Date Received:	12.18.19 12.58
Lab Sample Id:	646843-007	Date Collected:	12.17.19 12.42	Sample Depth:	0 - 10 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.18.19 14.30	Basis:	Wet Weight
Seq Number:	3111023				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**525**	10.0	mg/kg	12.18.19 18.41		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.18.19 14.20	Basis:	Wet Weight
Seq Number:	3111041				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	12.18.19 16.01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	12.18.19 16.01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	12.18.19 16.01	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	12.18.19 16.01	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	12.18.19 16.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	12.18.19 16.01	
o-Terphenyl	84-15-1	95	%	70-135	12.18.19 16.01	

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JRU 34

Sample Id:	**SW08**	Matrix:	Soil	Date Received:	12.18.19 12.58
Lab Sample Id:	646843-007	Date Collected:	12.17.19 12.42	Sample Depth:	0 - 10 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.18.19 14.00	Basis:	Wet Weight
Seq Number:	3111020				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.18.19 20.38	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	12.18.19 20.38	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	12.18.19 20.38	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	12.18.19 20.38	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	12.18.19 20.38	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	12.18.19 20.38	U	1
Total BTEX		<0.00198	0.00198	mg/kg	12.18.19 20.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	121	%	70-130	12.18.19 20.38	
1,4-Difluorobenzene	540-36-3	98	%	70-130	12.18.19 20.38	

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JRU 34

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	12.18.19 12.58
Lab Sample Id:	646843-008	Date Collected:	12.17.19 13.47	Sample Depth:	0 - 10 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.18.19 14.30	Basis:	Wet Weight
Seq Number:	3111023				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**537**	10.0	mg/kg	12.18.19 18.47		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.18.19 14.20	Basis:	Wet Weight
Seq Number:	3111041				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	12.18.19 16.01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	12.18.19 16.01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.18.19 16.01	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	12.18.19 16.01	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	12.18.19 16.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	12.18.19 16.01	
o-Terphenyl	84-15-1	91	%	70-135	12.18.19 16.01	

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JRU 34

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	12.18.19 12.58
Lab Sample Id:	646843-008	Date Collected:	12.17.19 13.47	Sample Depth:	0 - 10 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.18.19 14.00	Basis:	Wet Weight
Seq Number:	3111020				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.18.19 20.58	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	12.18.19 20.58	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	12.18.19 20.58	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	12.18.19 20.58	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	12.18.19 20.58	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	12.18.19 20.58	U	1
Total BTEX		<0.00198	0.00198	mg/kg	12.18.19 20.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	12.18.19 20.58	
4-Bromofluorobenzene	460-00-4	121	%	70-130	12.18.19 20.58	

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Sample Id:	**FS01**	Matrix:	Soil	Date Received:	12.18.19 12.58
Lab Sample Id:	646843-009	Date Collected:	12.17.19 14.02	Sample Depth:	10 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.18.19 14.30	Basis:	Wet Weight
Seq Number:	3111023				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2660**	10.1	mg/kg	12.18.19 18.53		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.18.19 14.20	Basis:	Wet Weight
Seq Number:	3111041				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	12.18.19 16.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	12.18.19 16.21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	12.18.19 16.21	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	12.18.19 16.21	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	12.18.19 16.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	12.18.19 16.21	
o-Terphenyl	84-15-1	95	%	70-135	12.18.19 16.21	

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JRU 34

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	12.18.19 12.58
Lab Sample Id:	646843-009	Date Collected:	12.17.19 14.02	Sample Depth:	10 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.18.19 14.00	Basis:	Wet Weight
Seq Number:	3111020				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.18.19 21.17	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.18.19 21.17	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	12.18.19 21.17	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	12.18.19 21.17	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	12.18.19 21.17	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	12.18.19 21.17	U	1
Total BTEX		<0.00199	0.00199	mg/kg	12.18.19 21.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	12.18.19 21.17	
4-Bromofluorobenzene	460-00-4	122	%	70-130	12.18.19 21.17	

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LT Environmental, Inc., Arvada, CO

JRU 34

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	12.18.19 12.58
Lab Sample Id:	646843-010	Date Collected:	12.17.19 14.11	Sample Depth:	10 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.18.19 14.30	Basis:	Wet Weight
Seq Number:	3111023				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**6240**	100	mg/kg	12.19.19 12.35	D	10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.18.19 14.20	Basis:	Wet Weight
Seq Number:	3111041				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.18.19 16.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.18.19 16.21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.18.19 16.21	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	12.18.19 16.21	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	12.18.19 16.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	12.18.19 16.21	
o-Terphenyl	84-15-1	93	%	70-135	12.18.19 16.21	

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LT Environmental, Inc., Arvada, CO

JRU 34

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	12.18.19 12.58
Lab Sample Id:	646843-010	Date Collected:	12.17.19 14.11	Sample Depth:	10 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.18.19 14.00	Basis:	Wet Weight
Seq Number:	3111020				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.18.19 21.36	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	12.18.19 21.36	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	12.18.19 21.36	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	12.18.19 21.36	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	12.18.19 21.36	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	12.18.19 21.36	U	1
Total BTEX		<0.00198	0.00198	mg/kg	12.18.19 21.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	123	%	70-130	12.18.19 21.36	
1,4-Difluorobenzene	540-36-3	106	%	70-130	12.18.19 21.36	

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LT Environmental, Inc., Arvada, CO

JRU 34

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	12.18.19 12.58
Lab Sample Id:	646843-011	Date Collected:	12.17.19 14.28	Sample Depth:	10 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.18.19 14.30	Basis:	Wet Weight
Seq Number:	3111023				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1260**	9.94	mg/kg	12.18.19 19.04		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.18.19 14.20	Basis:	Wet Weight
Seq Number:	3111041				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	12.18.19 16.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	12.18.19 16.41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	12.18.19 16.41	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	12.18.19 16.41	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	12.18.19 16.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	12.18.19 16.41	
o-Terphenyl	84-15-1	100	%	70-135	12.18.19 16.41	

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JRU 34

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	12.18.19 12.58
Lab Sample Id:	646843-011	Date Collected:	12.17.19 14.28	Sample Depth:	10 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.18.19 14.00	Basis:	Wet Weight
Seq Number:	3111020				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.18.19 21.55	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	12.18.19 21.55	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	12.18.19 21.55	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	12.18.19 21.55	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	12.18.19 21.55	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	12.18.19 21.55	U	1
Total BTEX		<0.00198	0.00198	mg/kg	12.18.19 21.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	12.18.19 21.55	
4-Bromofluorobenzene	460-00-4	122	%	70-130	12.18.19 21.55	

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JRU 34

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	12.18.19 12.58
Lab Sample Id:	646843-012	Date Collected:	12.17.19 14.37	Sample Depth:	10 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.18.19 14.30	Basis:	Wet Weight
Seq Number:	3111023				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**89.7**	9.98	mg/kg	12.18.19 19.10		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.18.19 15.00	Basis:	Wet Weight
Seq Number:	3111059				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	12.18.19 17.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	12.18.19 17.21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	12.18.19 17.21	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	12.18.19 17.21	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	12.18.19 17.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	12.18.19 17.21	
o-Terphenyl	84-15-1	106	%	70-135	12.18.19 17.21	

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JRU 34

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	12.18.19 12.58
Lab Sample Id:	646843-012	Date Collected:	12.17.19 14.37	Sample Depth:	10 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.18.19 15.00	Basis:	Wet Weight
Seq Number:	3111022				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.18.19 18.08	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.18.19 18.08	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	12.18.19 18.08	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	12.18.19 18.08	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	12.18.19 18.08	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	12.18.19 18.08	U	1
Total BTEX		<0.00199	0.00199	mg/kg	12.18.19 18.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	12.18.19 18.08	
4-Bromofluorobenzene	460-00-4	100	%	70-130	12.18.19 18.08	

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JRU 34

Sample Id:	**FS05**	Matrix:	Soil	Date Received:	12.18.19 12.58
Lab Sample Id:	646843-013	Date Collected:	12.17.19 15.32	Sample Depth:	10 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.18.19 14.30	Basis:	Wet Weight
Seq Number:	3111023				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**207**	9.90	mg/kg	12.18.19 19.16		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.18.19 15.00	Basis:	Wet Weight
Seq Number:	3111059				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	12.18.19 18.00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	12.18.19 18.00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	12.18.19 18.00	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	12.18.19 18.00	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	12.18.19 18.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	127	%	70-135	12.18.19 18.00	
o-Terphenyl	84-15-1	140	%	70-135	12.18.19 18.00	**

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JRU 34

Sample Id:	**FS05**	Matrix:	Soil	Date Received:	12.18.19 12.58
Lab Sample Id:	646843-013	Date Collected:	12.17.19 15.32	Sample Depth:	10 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.18.19 15.00	Basis:	Wet Weight
Seq Number:	3111022				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.18.19 18.25	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.18.19 18.25	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.18.19 18.25	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	12.18.19 18.25	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.18.19 18.25	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.18.19 18.25	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.18.19 18.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	12.18.19 18.25	
1,4-Difluorobenzene	540-36-3	101	%	70-130	12.18.19 18.25	

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JRU 34

Sample Id:	**FS06**	Matrix:	Soil	Date Received:	12.18.19 12.58
Lab Sample Id:	646843-014	Date Collected:	12.17.19 15.36	Sample Depth:	10 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.18.19 14.30	Basis:	Wet Weight
Seq Number:	3111023				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**382**	9.98	mg/kg	12.18.19 19.22		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.18.19 15.00	Basis:	Wet Weight
Seq Number:	3111059				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	12.18.19 18.00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	12.18.19 18.00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	12.18.19 18.00	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	12.18.19 18.00	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	12.18.19 18.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	12.18.19 18.00	
o-Terphenyl	84-15-1	115	%	70-135	12.18.19 18.00	

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JRU 34

Sample Id:	**FS06**	Matrix:	Soil	Date Received:	12.18.19 12.58
Lab Sample Id:	646843-014	Date Collected:	12.17.19 15.36	Sample Depth:	10 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.18.19 15.00	Basis:	Wet Weight
Seq Number:	3111022				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.18.19 18.43	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	12.18.19 18.43	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	12.18.19 18.43	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	12.18.19 18.43	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	12.18.19 18.43	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	12.18.19 18.43	U	1
Total BTEX		<0.00198	0.00198	mg/kg	12.18.19 18.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	70-130	12.18.19 18.43	
4-Bromofluorobenzene	460-00-4	103	%	70-130	12.18.19 18.43	

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Sample Id:	**FS07**	Matrix:	Soil	Date Received:	12.18.19 12.58
Lab Sample Id:	646843-015	Date Collected:	12.17.19 15.53	Sample Depth:	10 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.18.19 15.00	Basis:	Wet Weight
Seq Number:	3111033				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**123**	9.98	mg/kg	12.18.19 19.57		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.18.19 15.00	Basis:	Wet Weight
Seq Number:	3111059				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	12.18.19 18.20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	12.18.19 18.20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	12.18.19 18.20	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	12.18.19 18.20	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	12.18.19 18.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	12.18.19 18.20	
o-Terphenyl	84-15-1	106	%	70-135	12.18.19 18.20	

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Sample Id:	**FS07**	Matrix:	Soil	Date Received:	12.18.19 12.58
Lab Sample Id:	646843-015	Date Collected:	12.17.19 15.53	Sample Depth:	10 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.18.19 15.00	Basis:	Wet Weight
Seq Number:	3111022				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.18.19 19.00	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.18.19 19.00	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.18.19 19.00	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	12.18.19 19.00	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.18.19 19.00	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.18.19 19.00	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.18.19 19.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	12.18.19 19.00	
4-Bromofluorobenzene	460-00-4	107	%	70-130	12.18.19 19.00	

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Sample Id:	**FS08**	Matrix:	Soil	Date Received:	12.18.19 12.58
Lab Sample Id:	646843-016	Date Collected:	12.17.19 15.57	Sample Depth:	10 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.18.19 15.00	Basis:	Wet Weight
Seq Number:	3111033				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**453**	10.0	mg/kg	12.18.19 20.15		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.18.19 15.00	Basis:	Wet Weight
Seq Number:	3111059				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	12.18.19 18.20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	12.18.19 18.20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.18.19 18.20	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	12.18.19 18.20	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	12.18.19 18.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	12.18.19 18.20	
o-Terphenyl	84-15-1	112	%	70-135	12.18.19 18.20	

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JRU 34

Sample Id:	**FS08**	Matrix:	Soil	Date Received:	12.18.19 12.58
Lab Sample Id:	646843-016	Date Collected:	12.17.19 15.57	Sample Depth:	10 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.18.19 15.00	Basis:	Wet Weight
Seq Number:	3111022				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.18.19 19.18	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	12.18.19 19.18	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	12.18.19 19.18	U	1
m,p-Xylenes	179601-23-1	<0.00395	0.00395	mg/kg	12.18.19 19.18	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	12.18.19 19.18	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	12.18.19 19.18	U	1
Total BTEX		<0.00198	0.00198	mg/kg	12.18.19 19.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	12.18.19 19.18	
1,4-Difluorobenzene	540-36-3	98	%	70-130	12.18.19 19.18	

Certificate of Analytical Results 646843

LT Environmental, Inc., Arvada, CO

JRU 34

Sample Id:	**FS09**	Matrix:	Soil	Date Received:	12.18.19 12.58
Lab Sample Id:	646843-017	Date Collected:	12.17.19 16.09	Sample Depth:	10 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.18.19 15.00	Basis:	Wet Weight
Seq Number:	3111033				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**727**	9.98	mg/kg	12.18.19 20.21		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.18.19 15.00	Basis:	Wet Weight
Seq Number:	3111059				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	12.18.19 18.40	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	12.18.19 18.40	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	12.18.19 18.40	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	12.18.19 18.40	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	12.18.19 18.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	12.18.19 18.40	
o-Terphenyl	84-15-1	103	%	70-135	12.18.19 18.40	

Certificate of Analytical Results 646843

LT Environmental, Inc., Arvada, CO

JRU 34

Sample Id:	**FS09**	Matrix:	Soil	Date Received:	12.18.19 12.58
Lab Sample Id:	646843-017	Date Collected:	12.17.19 16.09	Sample Depth:	10 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.18.19 15.00	Basis:	Wet Weight
Seq Number:	3111022				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.18.19 19.35	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.18.19 19.35	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.18.19 19.35	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	12.18.19 19.35	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.18.19 19.35	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.18.19 19.35	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.18.19 19.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	108	%	70-130	12.18.19 19.35	
1,4-Difluorobenzene	540-36-3	102	%	70-130	12.18.19 19.35	

Certificate of Analytical Results 646843

LT Environmental, Inc., Arvada, CO

JRU 34

Sample Id:	**FS10**	Matrix:	Soil	Date Received:	12.18.19 12.58
Lab Sample Id:	646843-018	Date Collected:	12.17.19 16.11	Sample Depth:	10 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.18.19 15.00	Basis:	Wet Weight
Seq Number:	3111033				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**739**	9.94	mg/kg	12.18.19 20.27		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.18.19 15.00	Basis:	Wet Weight
Seq Number:	3111059				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	12.18.19 18.40	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	12.18.19 18.40	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	12.18.19 18.40	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	12.18.19 18.40	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	12.18.19 18.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	121	%	70-135	12.18.19 18.40	
o-Terphenyl	84-15-1	122	%	70-135	12.18.19 18.40	

Certificate of Analytical Results 646843

LT Environmental, Inc., Arvada, CO

JRU 34

Sample Id:	**FS10**	Matrix:	Soil	Date Received:	12.18.19 12.58
Lab Sample Id:	646843-018	Date Collected:	12.17.19 16.11	Sample Depth:	10 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.18.19 15.00	Basis:	Wet Weight
Seq Number:	3111022				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.18.19 19.52	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.18.19 19.52	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.18.19 19.52	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.18.19 19.52	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.18.19 19.52	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.18.19 19.52	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.18.19 19.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	12.18.19 19.52	
4-Bromofluorobenzene	460-00-4	106	%	70-130	12.18.19 19.52	

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 646843

LT Environmental, Inc.

JRU 34

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3111023 — Matrix: Solid — Date Prep: 12.18.19
MB Sample Id: 7692734-1-BLK — LCS Sample Id: 7692734-1-BKS — LCSD Sample Id: 7692734-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	256	102	259	104	90-110	1	20	mg/kg	12.18.19 16:16	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3111033 — Matrix: Solid — Date Prep: 12.18.19
MB Sample Id: 7692767-1-BLK — LCS Sample Id: 7692767-1-BKS — LCSD Sample Id: 7692767-1-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	255	102	255	102	90-110	0	20	mg/kg	12.18.19 19:45	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3111023 — Matrix: Soil — Date Prep: 12.18.19
Parent Sample Id: 646770-001 — MS Sample Id: 646770-001 S — MSD Sample Id: 646770-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	36.5	199	259	112	259	111	90-110	0	20	mg/kg	12.18.19 16:40	X

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3111023 — Matrix: Soil — Date Prep: 12.18.19
Parent Sample Id: 646843-005 — MS Sample Id: 646843-005 S — MSD Sample Id: 646843-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	4590	200	5050	230	5050	231	90-110	0	20	mg/kg	12.18.19 18:12	X

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3111033 — Matrix: Soil — Date Prep: 12.18.19
Parent Sample Id: 646843-015 — MS Sample Id: 646843-015 S — MSD Sample Id: 646843-015 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	123	200	353	115	354	114	90-110	0	20	mg/kg	12.18.19 20:03	X

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

QC Summary 646843

LT Environmental, Inc.

JRU 34

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3111033 Matrix: Soil Date Prep: 12.18.19
Parent Sample Id: 646846-007 MS Sample Id: 646846-007 S MSD Sample Id: 646846-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	4070	200	4150	40	4140	35	90-110	0	20	mg/kg	12.18.19 21:59	X

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3111041 Matrix: Solid Date Prep: 12.18.19
MB Sample Id: 7692768-1-BLK LCS Sample Id: 7692768-1-BKS LCSD Sample Id: 7692768-1-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	941	94	921	92	70-135	2	35	mg/kg	12.18.19 12:10	
Diesel Range Organics (DRO)	<50.0	1000	820	82	791	79	70-135	4	35	mg/kg	12.18.19 12:10	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	85		94		106		70-135	%	12.18.19 12:10
o-Terphenyl	87		93		91		70-135	%	12.18.19 12:10

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3111059 Matrix: Solid Date Prep: 12.18.19
MB Sample Id: 7692774-1-BLK LCS Sample Id: 7692774-1-BKS LCSD Sample Id: 7692774-1-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	1080	108	1130	113	70-135	5	35	mg/kg	12.18.19 17:01	
Diesel Range Organics (DRO)	<50.0	1000	1110	111	1190	119	70-135	7	35	mg/kg	12.18.19 17:01	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	116		125		129		70-135	%	12.18.19 17:01
o-Terphenyl	127		122		135		70-135	%	12.18.19 17:01

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3111041 Matrix: Solid Date Prep: 12.18.19
MB Sample Id: 7692768-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	12.18.19 11:51	

MS/MSD Percent Recovery [D] = 100*(C-A) / B LCS = Laboratory Control Sample MS = Matrix Spike
Relative Percent Difference RPD = 200* | (C-E) / (C+E) | A = Parent Result B = Spike Added
LCS/LCSD Recovery [D] = 100 * (C) / [B] C = MS/LCS Result D = MSD/LCSD % Rec
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample) E = MSD/LCSD Result

QC Summary 646843

LT Environmental, Inc.

JRU 34

Analytical Method: TPH by SW8015 Mod
Seq Number: 3111059
Matrix: Solid
MB Sample Id: 7692774-1-BLK
Prep Method: SW8015P
Date Prep: 12.18.19

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	12.18.19 17:01	

Analytical Method: TPH by SW8015 Mod
Seq Number: 3111041
Parent Sample Id: 646770-001
Matrix: Water
MS Sample Id: 646770-001 S
MSD Sample Id: 646770-001 SD
Prep Method: SW8015P
Date Prep: 12.18.19

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	995	903	91	1000	100	70-135	10	35	mg/kg	12.18.19 12:30	
Diesel Range Organics (DRO)	<49.8	995	777	78	885	89	70-135	13	35	mg/kg	12.18.19 12:30	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	113		111		70-135	%	12.18.19 12:30
o-Terphenyl	100		111		70-135	%	12.18.19 12:30

Analytical Method: TPH by SW8015 Mod
Seq Number: 3111059
Parent Sample Id: 646843-012
Matrix: Soil
MS Sample Id: 646843-012 S
MSD Sample Id: 646843-012 SD
Prep Method: SW8015P
Date Prep: 12.18.19

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	819	82	889	88	70-135	8	35	mg/kg	12.18.19 17:41	
Diesel Range Organics (DRO)	<50.2	1000	723	72	738	73	70-135	2	35	mg/kg	12.18.19 17:41	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	90		115		70-135	%	12.18.19 17:41
o-Terphenyl	91		99		70-135	%	12.18.19 17:41

MS/MSD Percent Recovery	[D] = 100*(C-A) / B	LCS = Laboratory Control Sample	MS = Matrix Spike
Relative Percent Difference	RPD = 200* | (C-E) / (C+E) |	A = Parent Result	B = Spike Added
LCS/LCSD Recovery	[D] = 100 * (C) / [B]	C = MS/LCS Result	D = MSD/LCSD % Rec
Log Difference	Log Diff. = Log(Sample Duplicate) - Log(Original Sample)	E = MSD/LCSD Result	

QC Summary 646843

LT Environmental, Inc.

JRU 34

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3111020 — Matrix: Solid — Date Prep: 12.18.19
MB Sample Id: 7692736-1-BLK — LCS Sample Id: 7692736-1-BKS — LCSD Sample Id: 7692736-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0939	94	0.0936	94	70-130	0	35	mg/kg	12.18.19 13:06	
Toluene	<0.00200	0.100	0.0973	97	0.0972	97	70-130	0	35	mg/kg	12.18.19 13:06	
Ethylbenzene	<0.00200	0.100	0.0969	97	0.0968	97	71-129	0	35	mg/kg	12.18.19 13:06	
m,p-Xylenes	<0.00400	0.200	0.207	104	0.206	103	70-135	0	35	mg/kg	12.18.19 13:06	
o-Xylene	<0.00200	0.100	0.104	104	0.104	104	71-133	0	35	mg/kg	12.18.19 13:06	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		102		102		70-130	%	12.18.19 13:06
4-Bromofluorobenzene	116		118		117		70-130	%	12.18.19 13:06

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3111022 — Matrix: Solid — Date Prep: 12.18.19
MB Sample Id: 7692770-1-BLK — LCS Sample Id: 7692770-1-BKS — LCSD Sample Id: 7692770-1-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	0.0969	97	0.0885	89	70-130	9	35	mg/kg	12.18.19 16:24	
Toluene	<0.00200	0.100	0.0981	98	0.0896	90	70-130	9	35	mg/kg	12.18.19 16:24	
Ethylbenzene	<0.00200	0.100	0.0973	97	0.0889	89	71-129	9	35	mg/kg	12.18.19 16:24	
m,p-Xylenes	<0.00400	0.200	0.202	101	0.184	92	70-135	9	35	mg/kg	12.18.19 16:24	
o-Xylene	<0.00200	0.100	0.0981	98	0.0896	90	71-133	9	35	mg/kg	12.18.19 16:24	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	97		100		97		70-130	%	12.18.19 16:24
4-Bromofluorobenzene	96		100		97		70-130	%	12.18.19 16:24

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3111020 — Matrix: Soil — Date Prep: 12.18.19
Parent Sample Id: 646770-001 — MS Sample Id: 646770-001 S — MSD Sample Id: 646770-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0808	81	0.0991	99	70-130	20	35	mg/kg	12.18.19 13:44	
Toluene	<0.00200	0.100	0.0832	83	0.103	103	70-130	21	35	mg/kg	12.18.19 13:44	
Ethylbenzene	<0.00200	0.100	0.0822	82	0.102	102	71-129	21	35	mg/kg	12.18.19 13:44	
m,p-Xylenes	<0.00400	0.200	0.174	87	0.217	109	70-135	22	35	mg/kg	12.18.19 13:44	
o-Xylene	<0.00200	0.100	0.0874	87	0.110	110	71-133	23	35	mg/kg	12.18.19 13:44	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		103		70-130	%	12.18.19 13:44
4-Bromofluorobenzene	120		125		70-130	%	12.18.19 13:44

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

QC Summary 646843

LT Environmental, Inc.

JRU 34

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B

Seq Number: 3111022 Matrix: Soil Date Prep: 12.18.19

Parent Sample Id: 646843-012 MS Sample Id: 646843-012 S MSD Sample Id: 646843-012 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	0.0940	94	0.0942	94	70-130	0	35	mg/kg	12.18.19 16:59	
Toluene	<0.00200	0.100	0.0948	95	0.0933	93	70-130	2	35	mg/kg	12.18.19 16:59	
Ethylbenzene	<0.00200	0.100	0.0935	94	0.0907	91	71-129	3	35	mg/kg	12.18.19 16:59	
m,p-Xylenes	<0.000754	0.200	0.195	98	0.188	94	70-135	4	35	mg/kg	12.18.19 16:59	
o-Xylene	<0.00200	0.100	0.0953	95	0.0923	92	71-133	3	35	mg/kg	12.18.19 16:59	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		102		70-130	%	12.18.19 16:59
4-Bromofluorobenzene	105		102		70-130	%	12.18.19 16:59

MS/MSD Percent Recovery	[D] = 100*(C-A) / B	LCS = Laboratory Control Sample	MS = Matrix Spike
Relative Percent Difference	RPD = 200* | (C-E) / (C+E) |	A = Parent Result	B = Spike Added
LCS/LCSD Recovery	[D] = 100 * (C) / [B]	C = MS/LCS Result	D = MSD/LCSD % Rec
Log Difference	Log Diff. = Log(Sample Duplicate) - Log(Original Sample)	E = MSD/LCSD Result	

Chain of Custody

Work Order No: 1046843

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300, San Antonio, TX (210) 509-3334
Midland, TX (432) 704-5440, EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199, Phoenix, AZ (480) 355-0900
Tampa, FL (813) 620-2000, Tallahassee, FL (850) 756-0747, Delray Beach, FL (561) 689-6701
Atlanta, GA (770) 449-8800
www.xenco.com

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian Office	Company Name:	XTO Energy, Inc.
Address:	3300 North A Street	Address:	3104 E Greene St
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	fsmith@ltenv.com, dmoir@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 34	Turn Around	
Project Number:	012919156	Routine: ☐	
PO #:	2RP-5553	Rush: 24 hrs	
Sampler's Name:	Fatima Smith	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No	
Temperature (°C):	2.0	Thermometer ID		
Received Intact:	(Yes) No	T-NM-007		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes (No) N/A	Total Containers:	18	

ANALYSIS REQUEST

Work Order Notes

TAT starts the day recevied by the lab, if received by 4:30pm

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
SW02	S	12/17/19	0858	0-10	1	X	X	X
SW03	S		0920	0-10				
SW04	S		0935	0-10				
SW05	S		0956	0-10				
SW06	S		1001	0-10				
SW07	S		1239	0-10				
SW08	S		1242	0-10				
SW01	S		1347	0-10				
FS01	S		1402	10				
FS02	S	↓	1411	10	↓	↓	↓	↓

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 Tl 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 Tl U **1631 / 245.1 / 7470 / 7471** : Hg

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		12/18/19 12:58	2		
3			4		
5			6		

Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300, San Antonio, TX (210) 509-3334
Midland, TX (432) 704-5440, EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199, Phoenix, AZ (480) 355-0900
Tampa, FL (813) 620-2000, Tallahassee, FL (850) 756-0747, Delray Beach, FL (561) 689-6701
Atlanta, GA (770) 449-8800

Work Order No: 1046843

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Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian Office	Company Name:	XTO Energy, Inc.
Address:	3300 North A Street	Address:	3104 E Greene St
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	fsmith@ltenv.com, dmoir@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 34	Turn Around	
Project Number:	012919156	Routine: ☐	
PO #:	2RP-5553	Rush: 24 hrs	
Sampler's Name:	Fatima Smith	Due Date:	

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
FS03	S	12/17/19	1428	10	1	X	X	X
FS04	S		1437	10				
FS05	S		1532	10				
FS06	S		1536	10				
FS07	S		1553	10				
FS08	S		1557	10				
FS09	S		1609	10				
FS10	S		1611	10				

ANALYSIS REQUEST

Work Order Notes

TAT starts the day recevied by the lab, if received by 4:30pm

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 Tl 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 Tl U **1631 / 245.1 / 7470 / 7471** : Hg

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions 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
1		12/18/19 12:53	2		
3			4		
5			6		

Revised Date101419 Rev. 2019.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 12/18/2019 12:58:00 PM

Work Order #: 646843

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**

*** 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: 12/18/2019

Checklist reviewed by: Jessica Kramer Date: 12/19/2019

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Certificate of Analysis Summary 671092

LT Environmental, Inc., Arvada, CO

Project Name: JRU 34

Project Id: 012919156
Contact: Dan Moir
Project Location: Eddy County

Date Received in Lab: Wed 08.26.2020 12:55
Report Date: 08.31.2020 10:03
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	671092-001		671092-002		671092-003		671092-004		671092-005	
	Field Id:	SW09		SW10		SW11		SW12		SW13	
	Depth:	0-4 ft		0-4 ft		0-4 ft		0-4 ft		0-4 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	08.26.2020 09:23		08.26.2020 09:58		08.26.2020 10:00		08.26.2020 10:21		08.26.2020 11:28	
BTEX by EPA 8021B	***Extracted:***	08.27.2020 12:30		08.27.2020 12:30		08.27.2020 12:30		08.27.2020 12:30		08.27.2020 12:30	
	Analyzed:	08.27.2020 15:30		08.27.2020 15:50		08.27.2020 16:10		08.27.2020 16:31		08.27.2020 16:51	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200	<0.00198	0.00198	<0.00202	0.00202
Toluene		<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200	<0.00198	0.00198	<0.00202	0.00202
Ethylbenzene		<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200	<0.00198	0.00198	<0.00202	0.00202
m,p-Xylenes		<0.00398	0.00398	<0.00403	0.00403	<0.00399	0.00399	<0.00397	0.00397	<0.00403	0.00403
o-Xylene		<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200	<0.00198	0.00198	<0.00202	0.00202
Total Xylenes		<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200	<0.00198	0.00198	<0.00202	0.00202
Total BTEX		<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200	<0.00198	0.00198	<0.00202	0.00202
Chloride by EPA 300	***Extracted:***	08.26.2020 16:54		08.26.2020 16:54		08.27.2020 13:02		08.27.2020 13:02		08.27.2020 13:02	
	Analyzed:	08.27.2020 03:09		08.27.2020 03:14		08.27.2020 13:05		08.27.2020 13:22		08.27.2020 13:27	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		295	10.0	152	9.90	85.2	9.92	54.3	9.92	302	10.0
TPH by SW8015 Mod	***Extracted:***	08.26.2020 16:30		08.26.2020 16:30		08.26.2020 16:30		08.26.2020 16:30		08.26.2020 16:30	
	Analyzed:	08.26.2020 22:27		08.26.2020 23:28		08.26.2020 23:48		08.27.2020 00:09		08.27.2020 00:29	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.2	50.2	<50.0	50.0	<50.2	50.2	<50.2	50.2	<50.1	50.1
Diesel Range Organics (DRO)		<50.2	50.2	<50.0	50.0	<50.2	50.2	<50.2	50.2	<50.1	50.1
Motor Oil Range Hydrocarbons (MRO)		<50.2	50.2	<50.0	50.0	<50.2	50.2	<50.2	50.2	<50.1	50.1
Total GRO-DRO		<50.2	50.2	<50.0	50.0	<50.2	50.2	<50.2	50.2	<50.1	50.1
Total TPH		<50.2	50.2	<50.0	50.0	<50.2	50.2	<50.2	50.2	<50.1	50.1

BRL - Below Reporting Limit

Jessica Kramer

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Certificate of Analysis Summary 671092

LT Environmental, Inc., Arvada, CO

Project Name: JRU 34

Project Id: 012919156
Contact: Dan Moir
Project Location: Eddy County

Date Received in Lab: Wed 08.26.2020 12:55
Report Date: 09.24.2020 10:32
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	671092-001		671092-002		671092-003		671092-004		671092-005	
	Field Id:	SW10		SW11		SW12		SW13		SW14	
	Depth:	0-4 ft		0-4 ft		0-4 ft		0-4 ft		0-4 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	08.26.2020 09:23		08.26.2020 09:58		08.26.2020 10:00		08.26.2020 10:21		08.26.2020 11:28	
BTEX by EPA 8021B	***Extracted:***	08.27.2020 12:30		08.27.2020 12:30		08.27.2020 12:30		08.27.2020 12:30		08.27.2020 12:30	
	Analyzed:	08.27.2020 15:30		08.27.2020 15:50		08.27.2020 16:10		08.27.2020 16:31		08.27.2020 16:51	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200	<0.00198	0.00198	<0.00202	0.00202
Toluene		<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200	<0.00198	0.00198	<0.00202	0.00202
Ethylbenzene		<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200	<0.00198	0.00198	<0.00202	0.00202
m,p-Xylenes		<0.00398	0.00398	<0.00403	0.00403	<0.00399	0.00399	<0.00397	0.00397	<0.00403	0.00403
o-Xylene		<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200	<0.00198	0.00198	<0.00202	0.00202
Total Xylenes		<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200	<0.00198	0.00198	<0.00202	0.00202
Total BTEX		<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200	<0.00198	0.00198	<0.00202	0.00202
Chloride by EPA 300	***Extracted:***	08.26.2020 16:54		08.26.2020 16:54		08.27.2020 13:02		08.27.2020 13:02		08.27.2020 13:02	
	Analyzed:	08.27.2020 03:09		08.27.2020 03:14		08.27.2020 13:05		08.27.2020 13:22		08.27.2020 13:27	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		295	10.0	152	9.90	85.2	9.92	54.3	9.92	302	10.0
TPH by SW8015 Mod	***Extracted:***	08.26.2020 16:30		08.26.2020 16:30		08.26.2020 16:30		08.26.2020 16:30		08.26.2020 16:30	
	Analyzed:	08.26.2020 22:27		08.26.2020 23:28		08.26.2020 23:48		08.27.2020 00:09		08.27.2020 00:29	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.2	50.2	<50.0	50.0	<50.2	50.2	<50.2	50.2	<50.1	50.1
Diesel Range Organics (DRO)		<50.2	50.2	<50.0	50.0	<50.2	50.2	<50.2	50.2	<50.1	50.1
Motor Oil Range Hydrocarbons (MRO)		<50.2	50.2	<50.0	50.0	<50.2	50.2	<50.2	50.2	<50.1	50.1
Total GRO-DRO		<50.2	50.2	<50.0	50.0	<50.2	50.2	<50.2	50.2	<50.1	50.1
Total TPH		<50.2	50.2	<50.0	50.0	<50.2	50.2	<50.2	50.2	<50.1	50.1

BRL - Below Reporting Limit

Jessica Kramer

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Analytical Report 671092

for

LT Environmental, Inc.

Project Manager: Dan Moir

JRU 34

012919156

09.24.2020

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)

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09.24.2020

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

Reference: Eurofins Xenco, LLC Report No(s): **671092**
JRU 34
Project Address: Eddy County

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 671092. 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. 671092 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,

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

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Sample Cross Reference 671092

LT Environmental, Inc., Arvada, CO

JRU 34

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW10	S	08.26.2020 09:23	0 - 4 ft	671092-001
SW11	S	08.26.2020 09:58	0 - 4 ft	671092-002
SW12	S	08.26.2020 10:00	0 - 4 ft	671092-003
SW13	S	08.26.2020 10:21	0 - 4 ft	671092-004
SW14	S	08.26.2020 11:28	0 - 4 ft	671092-005

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CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: JRU 34

Project ID: *012919156*
Work Order Number(s): *671092*

Report Date: *09.24.2020*
Date Received: *08.26.2020*

Sample receipt non conformances and comments:

V1.001 Revision - Corrected sample IDs

Sample receipt non conformances and comments per sample:

None

eurofins | Environment Testing Xenco

Certificate of Analytical Results 671092

LT Environmental, Inc., Arvada, CO

JRU 34

Sample Id:	**SW10**	Matrix:	Soil	Date Received:	08.26.2020 12:55
Lab Sample Id:	671092-001	Date Collected:	08.26.2020 09:23	Sample Depth:	0 - 4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.26.2020 16:54	Basis:	Wet Weight
Seq Number:	3135675				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**295**	10.0	mg/kg	08.27.2020 03:09		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.26.2020 16:30	Basis:	Wet Weight
Seq Number:	3135658				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	08.26.2020 22:27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	08.26.2020 22:27	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	08.26.2020 22:27	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	08.26.2020 22:27	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	08.26.2020 22:27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	08.26.2020 22:27	
o-Terphenyl	84-15-1	109	%	70-135	08.26.2020 22:27	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 671092

LT Environmental, Inc., Arvada, CO

JRU 34

Sample Id:	**SW10**	Matrix:	Soil	Date Received:	08.26.2020 12:55
Lab Sample Id:	671092-001	Date Collected:	08.26.2020 09:23	Sample Depth:	0 - 4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.27.2020 12:30	Basis:	Wet Weight
Seq Number:	3135786				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.27.2020 15:30	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.27.2020 15:30	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.27.2020 15:30	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.27.2020 15:30	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.27.2020 15:30	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.27.2020 15:30	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.27.2020 15:30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	08.27.2020 15:30	
4-Bromofluorobenzene	460-00-4	105	%	70-130	08.27.2020 15:30	

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LT Environmental, Inc., Arvada, CO

JRU 34

Sample Id:	**SW11**	Matrix:	Soil	Date Received:	08.26.2020 12:55
Lab Sample Id:	671092-002	Date Collected:	08.26.2020 09:58	Sample Depth:	0 - 4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.26.2020 16:54	Basis:	Wet Weight
Seq Number:	3135675				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**152**	9.90	mg/kg	08.27.2020 03:14		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.26.2020 16:30	Basis:	Wet Weight
Seq Number:	3135658				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.26.2020 23:28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.26.2020 23:28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.26.2020 23:28	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	08.26.2020 23:28	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.26.2020 23:28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	08.26.2020 23:28	
o-Terphenyl	84-15-1	110	%	70-135	08.26.2020 23:28	

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LT Environmental, Inc., Arvada, CO

JRU 34

Sample Id:	**SW11**	Matrix:	Soil	Date Received:	08.26.2020 12:55
Lab Sample Id:	671092-002	Date Collected:	08.26.2020 09:58	Sample Depth:	0 - 4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.27.2020 12:30	Basis:	Wet Weight
Seq Number:	3135786				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	08.27.2020 15:50	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	08.27.2020 15:50	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	08.27.2020 15:50	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	08.27.2020 15:50	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	08.27.2020 15:50	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	08.27.2020 15:50	U	1
Total BTEX		<0.00202	0.00202	mg/kg	08.27.2020 15:50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	08.27.2020 15:50	
4-Bromofluorobenzene	460-00-4	101	%	70-130	08.27.2020 15:50	

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JRU 34

Sample Id:	**SW12**	Matrix:	Soil	Date Received:	08.26.2020 12:55
Lab Sample Id:	671092-003	Date Collected:	08.26.2020 10:00	Sample Depth:	0 - 4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.27.2020 13:02	Basis:	Wet Weight
Seq Number:	3135806				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**85.2**	9.92	mg/kg	08.27.2020 13:05		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.26.2020 16:30	Basis:	Wet Weight
Seq Number:	3135658				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	08.26.2020 23:48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	08.26.2020 23:48	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	08.26.2020 23:48	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	08.26.2020 23:48	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	08.26.2020 23:48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	08.26.2020 23:48	
o-Terphenyl	84-15-1	104	%	70-135	08.26.2020 23:48	

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JRU 34

Sample Id:	**SW12**	Matrix:	Soil	Date Received:	08.26.2020 12:55
Lab Sample Id:	671092-003	Date Collected:	08.26.2020 10:00	Sample Depth:	0 - 4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.27.2020 12:30	Basis:	Wet Weight
Seq Number:	3135786				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.27.2020 16:10	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.27.2020 16:10	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.27.2020 16:10	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.27.2020 16:10	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.27.2020 16:10	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.27.2020 16:10	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.27.2020 16:10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	08.27.2020 16:10	
4-Bromofluorobenzene	460-00-4	108	%	70-130	08.27.2020 16:10	

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JRU 34

Sample Id:	**SW13**	Matrix:	Soil	Date Received:	08.26.2020 12:55
Lab Sample Id:	671092-004	Date Collected:	08.26.2020 10:21	Sample Depth:	0 - 4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.27.2020 13:02	Basis:	Wet Weight
Seq Number:	3135806				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**54.3**	9.92	mg/kg	08.27.2020 13:22		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.26.2020 16:30	Basis:	Wet Weight
Seq Number:	3135658				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	08.27.2020 00:09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	08.27.2020 00:09	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	08.27.2020 00:09	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	08.27.2020 00:09	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	08.27.2020 00:09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	08.27.2020 00:09	
o-Terphenyl	84-15-1	105	%	70-135	08.27.2020 00:09	

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JRU 34

Sample Id:	**SW13**	Matrix:	Soil	Date Received:	08.26.2020 12:55
Lab Sample Id:	671092-004	Date Collected:	08.26.2020 10:21	Sample Depth:	0 - 4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.27.2020 12:30	Basis:	Wet Weight
Seq Number:	3135786				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.27.2020 16:31	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.27.2020 16:31	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.27.2020 16:31	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	08.27.2020 16:31	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.27.2020 16:31	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.27.2020 16:31	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.27.2020 16:31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	08.27.2020 16:31	
4-Bromofluorobenzene	460-00-4	100	%	70-130	08.27.2020 16:31	

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LT Environmental, Inc., Arvada, CO

JRU 34

Sample Id:	**SW14**	Matrix:	Soil	Date Received:	08.26.2020 12:55
Lab Sample Id:	671092-005	Date Collected:	08.26.2020 11:28	Sample Depth:	0 - 4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.27.2020 13:02	Basis:	Wet Weight
Seq Number:	3135806				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**302**	10.0	mg/kg	08.27.2020 13:27		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.26.2020 16:30	Basis:	Wet Weight
Seq Number:	3135658				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	08.27.2020 00:29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	08.27.2020 00:29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	08.27.2020 00:29	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	08.27.2020 00:29	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	08.27.2020 00:29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	08.27.2020 00:29	
o-Terphenyl	84-15-1	106	%	70-135	08.27.2020 00:29	

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LT Environmental, Inc., Arvada, CO

JRU 34

Sample Id:	**SW14**	Matrix:	Soil	Date Received:	08.26.2020 12:55
Lab Sample Id:	671092-005	Date Collected:	08.26.2020 11:28	Sample Depth:	0 - 4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.27.2020 12:30	Basis:	Wet Weight
Seq Number:	3135786				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	08.27.2020 16:51	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	08.27.2020 16:51	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	08.27.2020 16:51	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	08.27.2020 16:51	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	08.27.2020 16:51	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	08.27.2020 16:51	U	1
Total BTEX		<0.00202	0.00202	mg/kg	08.27.2020 16:51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	107	%	70-130	08.27.2020 16:51	
1,4-Difluorobenzene	540-36-3	102	%	70-130	08.27.2020 16:51	

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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

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QC Summary 671092

LT Environmental, Inc.

JRU 34

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3135675 — Matrix: Solid — Date Prep: 08.26.2020
MB Sample Id: 7710238-1-BLK — LCS Sample Id: 7710238-1-BKS — LCSD Sample Id: 7710238-1-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	262	105	265	106	90-110	1	20	mg/kg	08.27.2020 00:33	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3135806 — Matrix: Solid — Date Prep: 08.27.2020
MB Sample Id: 7710280-1-BLK — LCS Sample Id: 7710280-1-BKS — LCSD Sample Id: 7710280-1-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	263	105	265	106	90-110	1	20	mg/kg	08.27.2020 12:54	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3135675 — Matrix: Soil — Date Prep: 08.26.2020
Parent Sample Id: 671099-001 — MS Sample Id: 671099-001 S — MSD Sample Id: 671099-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	45.6	200	237	96	231	93	90-110	3	20	mg/kg	08.27.2020 00:49	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3135675 — Matrix: Soil — Date Prep: 08.26.2020
Parent Sample Id: 671099-011 — MS Sample Id: 671099-011 S — MSD Sample Id: 671099-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	177	199	364	94	365	94	90-110	0	20	mg/kg	08.27.2020 02:08	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3135806 — Matrix: Soil — Date Prep: 08.27.2020
Parent Sample Id: 671092-003 — MS Sample Id: 671092-003 S — MSD Sample Id: 671092-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	85.2	199	290	103	289	102	90-110	0	20	mg/kg	08.27.2020 13:11	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3135806 — Matrix: Soil — Date Prep: 08.27.2020
Parent Sample Id: 671112-008 — MS Sample Id: 671112-008 S — MSD Sample Id: 671112-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	8.29	199	210	101	210	101	90-110	0	20	mg/kg	08.27.2020 14:29	

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

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QC Summary 671092

LT Environmental, Inc.

JRU 34

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3135658 — Matrix: Solid — Date Prep: 08.26.2020
MB Sample Id: 7710230-1-BLK — LCS Sample Id: 7710230-1-BKS — LCSD Sample Id: 7710230-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1000	100	1000	100	70-135	0	35	mg/kg	08.26.2020 21:46	
Diesel Range Organics (DRO)	<50.0	1000	1040	104	1050	105	70-135	1	35	mg/kg	08.26.2020 21:46	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	90		119		118		70-135	%	08.26.2020 21:46
o-Terphenyl	88		107		105		70-135	%	08.26.2020 21:46

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3135658 — Matrix: Solid — Date Prep: 08.26.2020
MB Sample Id: 7710230-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	08.26.2020 21:26	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3135658 — Matrix: Soil — Date Prep: 08.26.2020
Parent Sample Id: 671092-001 — MS Sample Id: 671092-001 S — MSD Sample Id: 671092-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	999	865	87	914	92	70-135	6	35	mg/kg	08.26.2020 22:47	
Diesel Range Organics (DRO)	<50.0	999	924	92	975	98	70-135	5	35	mg/kg	08.26.2020 22:47	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	122		128		70-135	%	08.26.2020 22:47
o-Terphenyl	112		117		70-135	%	08.26.2020 22:47

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5035A
Seq Number: 3135786 — Matrix: Solid — Date Prep: 08.27.2020
MB Sample Id: 7710267-1-BLK — LCS Sample Id: 7710267-1-BKS — LCSD Sample Id: 7710267-1-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	08.27.2020 11:30	
Toluene	<0.00200	0.100	0.100	100	0.0974	97	70-130	3	35	mg/kg	08.27.2020 11:30	
Ethylbenzene	<0.00200	0.100	0.106	106	0.102	102	71-129	4	35	mg/kg	08.27.2020 11:30	
m,p-Xylenes	<0.00400	0.200	0.213	107	0.209	105	70-135	2	35	mg/kg	08.27.2020 11:30	
o-Xylene	<0.00200	0.100	0.105	105	0.102	102	71-133	3	35	mg/kg	08.27.2020 11:30	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		98		97		70-130	%	08.27.2020 11:30
4-Bromofluorobenzene	111		99		98		70-130	%	08.27.2020 11:30

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

eurofins | Environment Testing Xenco

QC Summary 671092

LT Environmental, Inc.

JRU 34

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A

Seq Number: 3135786 Matrix: Soil Date Prep: 08.27.2020

Parent Sample Id: 671126-001 MS Sample Id: 671126-001 S MSD Sample Id: 671126-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.111	111	0.0960	96	70-130	14	35	mg/kg	08.27.2020 12:32	
Toluene	<0.00199	0.0996	0.104	104	0.0924	93	70-130	12	35	mg/kg	08.27.2020 12:32	
Ethylbenzene	<0.00199	0.0996	0.110	110	0.0957	96	71-129	14	35	mg/kg	08.27.2020 12:32	
m,p-Xylenes	<0.00398	0.199	0.220	111	0.195	98	70-135	12	35	mg/kg	08.27.2020 12:32	
o-Xylene	<0.00199	0.0996	0.108	108	0.0967	97	71-133	11	35	mg/kg	08.27.2020 12:32	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		98		70-130	%	08.27.2020 12:32
4-Bromofluorobenzene	101		102		70-130	%	08.27.2020 12:32

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference 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: 671092

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 Craslbad, 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
www.xenco.com

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian Office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Greene St
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad NM 88220
Phone:	(432)236-3849	Email:	fsmith@ltenv.com, dmoir@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 34	Turn Around	
Project Number:	012919156	Routine	☑
Project Location	Eddy county	Rush:	
Sampler's Name:	Fatima Smith	Due Date:	
PO #:		Quote #:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	1.0/0.8	Thermometer ID	TNM007
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	5

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA O=8021)	Chloride (EPA 300.0)	Sample Comments
	SW09	S	8/26/20	0923	0-4'	1	X	X	X	
	SW10	S		0958						
	SW11	S		1000						
	SW12	S		1021						
	SW13	S		1128		1	X	X	X	

ANALYSIS REQUEST

Preservative Codes

MeOH: Me
None: NO
HNO3: HN
H2S04: H2
HCL: HL
NaOH: Na
Zn Acetate+ NaOH: Zn

TAT starts the day recevied by the lab, if received by 4:00pm

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 Tl 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 Tl U 1631 / 245.1 / 7470 / 7471 : Hg

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions 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
		8/26/20 12:55	2		
			4		
			6		

Revised Date 022619 Rev. 2019.1

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 08.26.2020 12.55.00 PM

Work Order #: 671092

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Cloe Clifton Date: 08.26.2020

Checklist reviewed by: Jessica Kramer Date: 08.28.2020

Jessica Kramer

Form C-141
Page 6

State of New Mexico
Oil Conservation Division

Incident ID	NAB1921754897
District RP	2RP- 5553
Facility ID	
Application ID	pAB pAB1921754701

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: 9/28/2020

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

OCD Only

Received by: Robert Hamlet Date: 3/9/2021

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: Robert Hamlet Date: 3/9/2021

Printed Name: Robert Hamlet Title: Environmental Specialist - Advanced

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 10400

CONDITIONS OF APPROVAL

Operator:	OGRID:	Action Number:	Action Type:
XTO ENERGY, INC 6401 Holiday Hill Road Building #5 Midland, TX79707	5380	10400	C-141

OCD Reviewer	Condition
rhamlet	We have received your closure report and final C-141 for Incident #NAB1921754897 JAMES RANCH UNIT #034, thank you. This closure is approved.