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	NAB1921756537
District RP	2RP-5554
Facility ID	
Application ID	pAB1921756160

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)* NAB1921756537
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.341337° Longitude -103.828325°
(NAD 83 in decimal degrees to 5 decimal places)

Site Name James Ranch Unit #146H	Site Type Production Well Facility flow line
Date Release Discovered 7/10/2019	API# *(if applicable)* 30-015-42756

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

Surface Owner: ☒ State ☐ Federal ☐ Tribal ☐ Private (*Name:* State (may also flow onto BLM))

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) 2.05	Volume Recovered (bbls) 0
☒ Produced Water	Volume Released (bbls) 3.80	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

In crossing a section of buried flex-pipe flow line at a pipeline ROW, a contracted roustabout truck sank a tire into the sand and damaged the flow line. Fluids were released to the pasture along the roadside. The well was shut in and the line is scheduled for repair. 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	NAB1921756537
District RP	2RP-5554
Facility ID	
Application ID	pAB1921756160

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

State of New Mexico
Oil Conservation Division

Incident ID	NAB1921756537
District RP	2RP-5554
Facility ID	
Application ID	pAB1921756160

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	NAB1921756537
District RP	2RP-5554
Facility ID	
Application ID	pAB1921756160

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: 03/03/2020

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

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	NAB1921756537
District RP	2RP-5554
Facility ID	
Application ID	pAB1921756160

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: 03/03/2020

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

March 3, 2020

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

RE: Closure Request
James Ranch Unit #146H
Remediation Permit Number 2RP-5554
Incident ID NAB1921756537
Eddy County, New Mexico

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following Closure Request detailing soil sampling and excavation activities at the James Ranch Unit #146H (Site) in Unit P, Section 36, Township 22 South, Range 30 East, in Eddy County, New Mexico (Figure 1). The purpose of the soil sampling and excavation activities was to address impacts to soil following the release of crude oil and produced water into a pipeline right-of-way (ROW) and to the pasture along the roadside. Based on the excavation activities and results of the soil sampling event, XTO is submitting this Closure Request describing remediation activities and respectfully requesting no further action (NFA) for Remediation Permit (RP) 2RP-5554.

RELEASE BACKGROUND

On July 10, 2019 a contracted roustabout truck damaged a section of the flowline at a pipeline ROW resulting in the release of 2.05 barrels (bbls) of crude oil and 3.80 bbls of produced water into a pipeline right-of-way (ROW) and to the pasture along the roadside. The section of the pipeline was repaired. No fluids were recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 (Form C-141) on July 19, 2019. NMOCD subsequently assigned Remediation Permit Number (RP) 2RP-5554.

SITE CHARACTERIZATION

LTE characterized the Site according to Table 1, *Closure Criteria for Soils Impacted by a Release*, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest water well data. The nearest permitted water well with depth to groundwater data is United States Geological Survey (USGS) well 321937103503701, located

approximately 1.13 miles southwest of the Site. The groundwater well has a depth to groundwater of 251 feet and a total depth of 317 feet. Ground surface elevation at the water well location is 3,268 feet above mean sea level (AMSL), which is approximately 32 feet lower in elevation than the Site. Several USGS and New Mexico Office of the State Engineer (NMOSE) wells are closer to the Site than USGS 321946103492001, however, those wells have no recorded DTW data.

The closest continuously flowing water or significant watercourse to the Site is dry wash located approximately 5,585 feet south of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is located in a medium potential karst area. The Site receptors are identified on Figure 1.

CLOSURE CRITERIA

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

Benzene: 10 milligrams per kilogram (mg/kg);

Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg;

TPH-gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg;

Total petroleum hydrocarbons (TPH): 2,500 mg/kg; and

Chloride: 20,000 mg/kg.

Additionally, the reclamation standard of 600 mg/kg chloride was applied to the undeveloped pasture that was impacted by the release, per NMAC 19.15.29.13.D (1) for the top four feet for areas to be reclaimed following remediation.

SITE ASSESSMENT AND EXCAVATION SOIL SAMPLING ACTIVITIES

On August 15, 2019, LTE personnel inspected the Site to evaluate the release based on information provided on the Form C-141 and visual observations. LTE personnel collected three preliminary soil samples (SS01 through SS03) near the release location from a depth of approximately 0.5 feet bgs to confirm the presence or absence of impacted soil. Soil samples were field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photoionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. The preliminary soil sample locations were mapped utilizing a handheld Global Positing System (GPS) unit and are depicted on Figure 2. All soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were shipped at or below 4 degrees Celsius (°C) under strict chain-of-

custody (COC) procedures to Xenco Laboratories (Xenco) in Carlsbad, New Mexico, for analysis of BTEX following United States Environmental Protection Agency (USEPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following USEPA Method 8015M/D; and chloride following USEPA Method 300.0.

Laboratory analytical results for preliminary soil sample SS01 through SS03 indicated that TPH-GRO TPH-DRO and TPH concentrations exceeded Closure Criteria. In addition to laboratory analytical results, field screenings and visual observations indicated that excavation of impacted soil appeared to be warranted.

Access to disturb soils in the pasture was requested through a Right of Entry (ROE) Permit submitted on September 24, 2019. Further remediation efforts were postponed, however, as approval for access from the State Land Office (SLO) was pending. Per 19.15.29.12.B.(1) NMAC, two extensions for submission of a Remediation Plan or Closure Request were granted. The initial extension was requested and approved on October 4, 2019, and the second was approved January 3, 2020, by the NMOCD District II office extending the deadline to March 4, 2020.

On January 30 through February 7, 2020, LTE personnel were at the Site to oversee excavation of impacted soil as indicated by visual observations and field screening results. To direct excavation activities, LTE screened soil for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach® chloride QuanTab® test strips, respectively. Based on field screening and laboratory analytical results, an estimated 122 cubic yards of impacted soil were removed. Following removal of impacted soil, LTE collected 5-point composite soil samples every 200 square feet from the sidewalls and floor of the excavation. The 5-point composite samples were collected by depositing five aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples SW01 through SW05 were collected from the sidewalls of the excavations at depths ranging from ground surface to three feet bgs. Composite soil samples FS02 through FS05 were collected from the floor of the excavations at a depth of three feet bgs and composite soil sample FS01 was collected from the floor of the excavation at a depth of approximately four feet bgs. The excavation soil samples were collected, handled, and analyzed as described above at Xenco in Carlsbad, New Mexico. The excavation extent and soil sample locations are depicted on Figure 3. Photographic documentation was conducted during excavation activities. Photographs are included in Attachment 1.

The total excavation extent measured approximately 1,092 square feet in area. A total of approximately 122 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.

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ANALYTICAL RESULTS

Laboratory analytical results for excavation sidewall samples SW01 through SW05, and excavation floor samples FS01 through FS05 indicated that benzene, BTEX, TPH-GRO, TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria and the reclamation standard in samples collected from the pasture. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Attachment 2.

CONCLUSIONS

Visual observations, field screening results, and laboratory analytical results for preliminary soil samples SS01 through SS03 indicated that TPH-GRO TPH-DRO and TPH concentrations were elevated near the point of release. As a result, excavation of impacted soil was conducted. A total of approximately 122 cubic yards of impacted soil were excavated, and laboratory analytical results for the confirmation soil samples collected from within the final excavation extent indicated that benzene, BTEX, TPH-GRO TPH-DRO, TPH, and chloride concentrations were compliant with the NMOCD Closure Criteria and the reclamation standard. XTO respectfully requests NFA for RP Number 2RP-5554.

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

Sincerely,

LT ENVIRONMENTAL, INC.

Kalei Jennings
Project Environmental Scientist

Ashley L. Ager, P.G.
Senior Geologist

cc: Kyle Littrell, XTO
Ryan Mann, SLO
Robert Hamlet, NMOCD
Victoria Venegas, NMOCD

Attachments:

Figure 1 Site Location Map
Figure 2 Preliminary Soil Sample Locations

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Figure 3 Excavation Soil Sample Locations
Table 1 Soil Analytical Reports
Attachment 1 Photographic Log
Attachment 2 Laboratory Analytical Reports

FIGURES

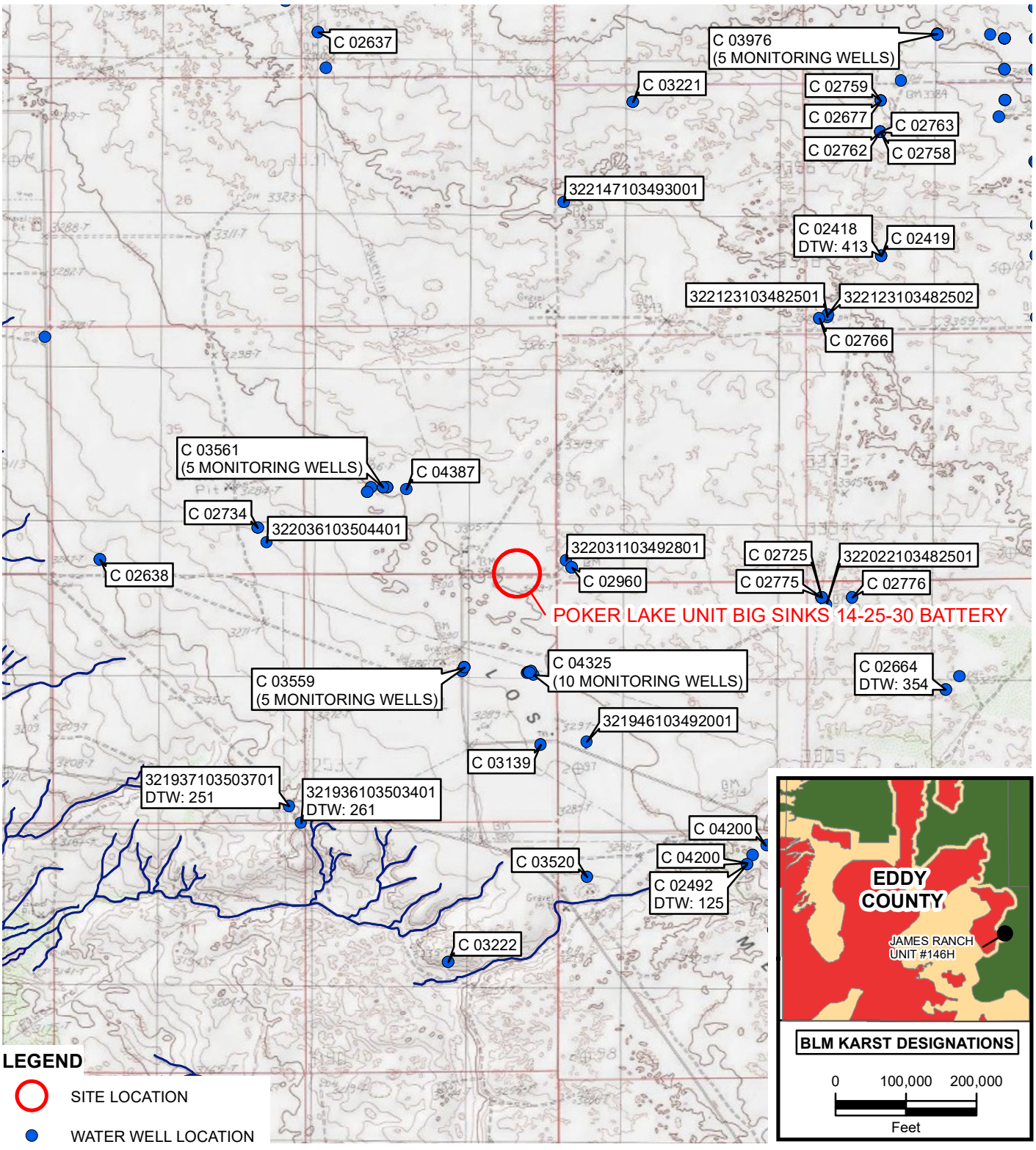
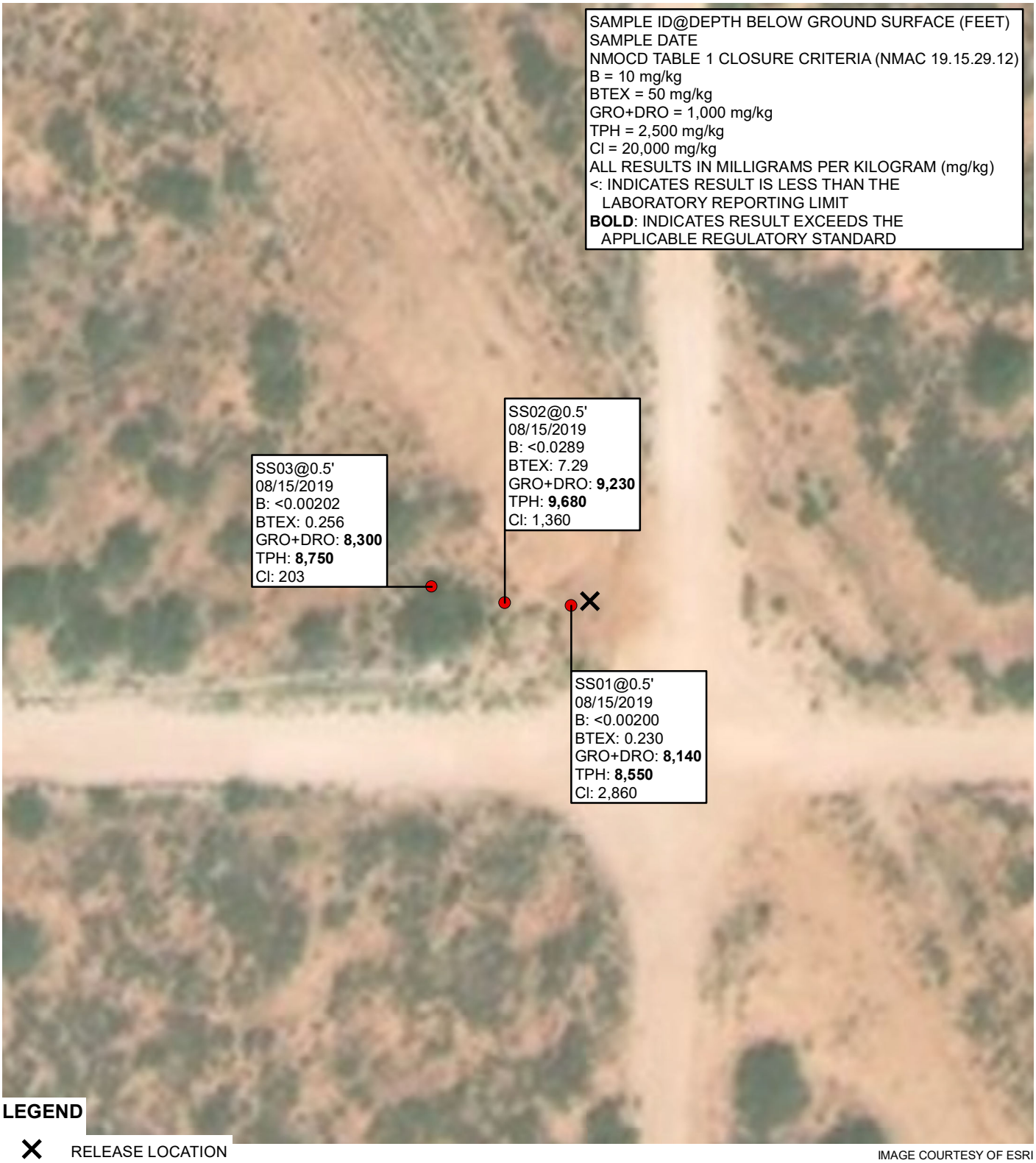


FIGURE 1
SITE LOCATION MAP
JAMES RANCH UNIT #146H
UNIT P SEC 36 T22S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

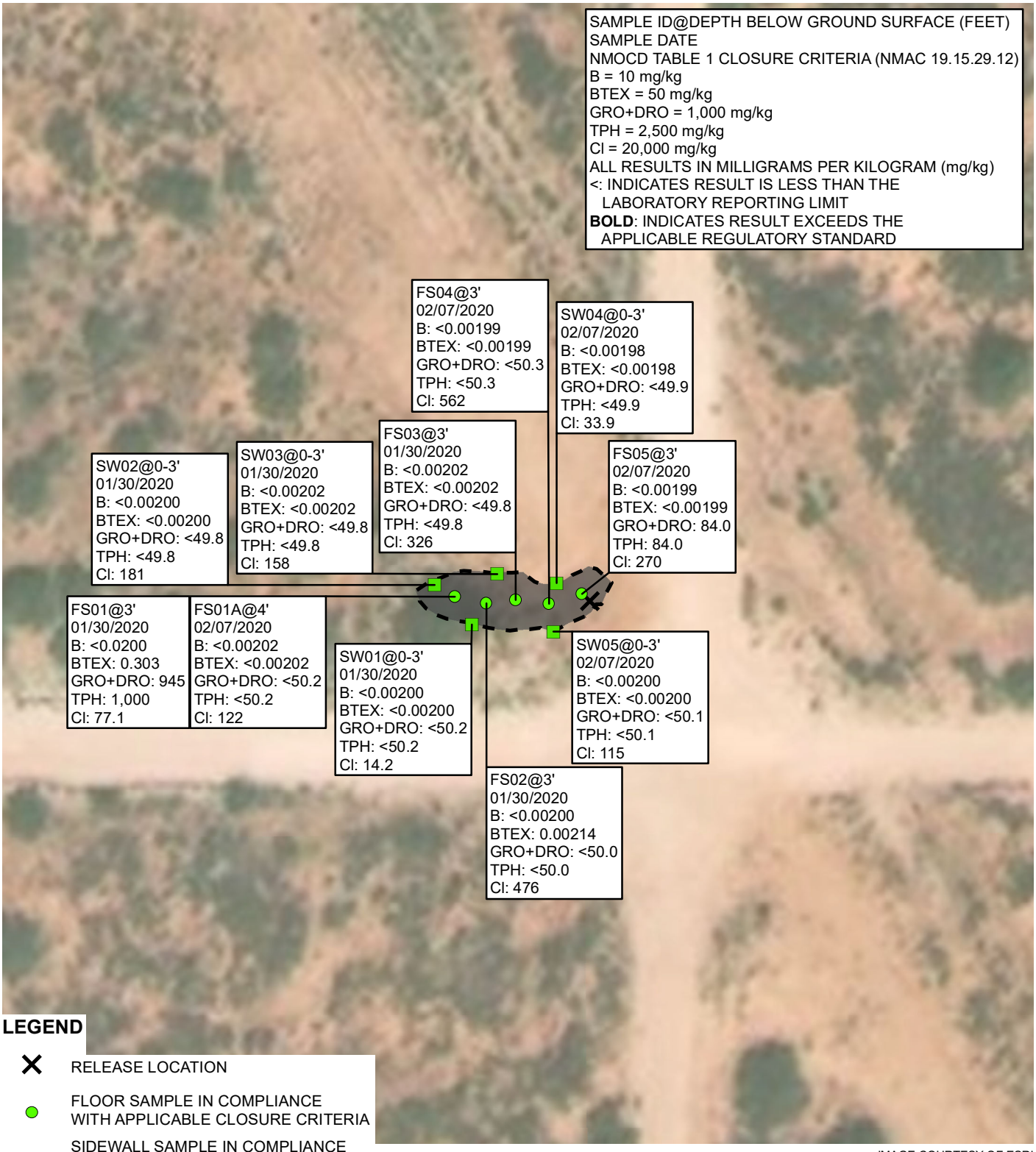
P:\XTO Energy\GIS\MXD\012919157_JRU 146\012919157_FIG01_SL_5554.mxd



B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
GRO: GASOLINE RANGE ORGANICS
DRO: DIESEL RANGE ORGANICS
TPH: TOTAL PETROLEUM HYDROCARBONS
Cl: CHLORIDE
NMAC: NEW MEXICO ADMINISTRATIVE CODE
NMOCD: NEW MEXICO OIL CONSERVATION DIVISION
NOTE: REMEDIATION PERMIT NUMBER 2RP-5554

FIGURE 2
PRELIMINARY SOIL SAMPLE LOCATIONS
JAMES RANCH UNIT #146H
UNIT P SEC 36 T22S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012919157_JRU 146\012919157_FIG02_PRELIMINARY_5554.mxd



B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
GRO: GASOLINE RANGE ORGANICS
DRO: DIESEL RANGE ORGANICS
TPH: TOTAL PETROLEUM HYDROCARBONS
Cl: CHLORIDE
NMAC: NEW MEXICO ADMINISTRATIVE CODE
NMOCD: NEW MEXICO OIL CONSERVATION DIVISION
NOTE: REMEDIATION PERMIT NUMBER 2RP-5554

FIGURE 3
EXCAVATION SOIL SAMPLE LOCATIONS
JAMES RANCH UNIT #146H
UNIT P SEC 36 T22S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012919157_JRU 146\012919157_FIG03_EXCAVATION_5554.mxd

TABLES

TABLE 1
SOIL ANALYTICAL RESULTS

JAMES RANCH UNIT #146H
REMEDIATION PERMIT NUMBER 2RP-5554
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	<0.00200	0.0373	0.0180	0.174	0.230	221	7,920	413	**8,140**	**8,550**	2,860
SS02	0.5	08/15/2019	<0.0289	0.373	0.586	6.30	7.29	1,350	7,880	452	**9,230**	**9,680**	1,360
SS03	0.5	08/15/2019	<0.00202	0.00613	0.0425	0.208	0.256	490	7,810	451	**8,300**	**8,750**	203
FS01	3	01/30/2020	<0.0200	<0.0200	0.0343	0.269	0.303	79.9	865	58.6	945	1,000	77.1
FS01A	4	02/07/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.2	<50.2	<50.2	<50.2	<50.2	122
FS02	3	01/30/2020	<0.00200	<0.00200	<0.00200	0.00214	0.00214	<50.0	<50.0	<50.0	<50.0	<50.0	476
FS03	3	01/30/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.8	<49.8	<49.8	<49.8	<49.8	326
FS04	3	02/07/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.3	<50.3	<50.3	<50.3	<50.3	562
FS05	3	02/07/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.9	84.0	<49.9	84.0	84.0	270
SW01	0 - 3	01/30/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	14.2
SW02	0 - 3	01/30/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	181
SW03	0 - 3	01/30/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.8	<49.8	<49.8	<49.8	<49.8	158
SW04	0 - 3	02/07/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	<49.9	33.9
SW05	0 - 3	02/07/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	115

Notes:

bgs - below ground surface
BTEX - benzene, toluene, ethylbenzene, and total xylenes
DRO - diesel range organics
GRO - gasoline range organics
mg/kg - milligrams per kilogram
MRO - motor oil range organics
NMAC - New Mexico Administrative Code
NMOCD - New Mexico Oil Conservation Division
NE - not established
TPH - total petroleum hydrocarbons
Bold - indicates result exceeds the applicable regulatory standard
< - indicates result is below laboratory reporting limits
Table 1 - closure criteria for soils impacted by a release per NMAC 19.15.29 August 2018

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ATTACHMENT 1: PHOTOGRAPHIC LOG

PHOTOGRAPHIC LOG

Photograph 1: Eastern view of excavation extent.

Photograph 2: Southern view of excavation extent.

Photograph 3: Eastern view of full excavation extent.

Photograph 4: Western view of full excavation extent.

James Ranch Unit #146H
2RP-5554
Photographs Taken: January 30-February 7, 2020

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ATTACHMENT 2: LABORATORY ANALYTICAL RESULTS

Analytical Report 634291

for

LT Environmental, Inc.

Project Manager: Dan Moir

JRU 146

2RP-5554

22-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)

22-AUG-19

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

Reference: XENCO Report No(s): **634291**
JRU 146
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) 634291. 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. 634291 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

Sample Cross Reference 634291

LT Environmental, Inc., Arvada, CO

JRU 146

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS 01	S	08-15-19 12:40	.5 ft	634291-001
SS 02	S	08-15-19 12:45	.5 ft	634291-002
SS 03	S	08-15-19 12:55	.5 ft	634291-003

CASE NARRATIVE

Client Name: LT Environmental, Inc.
Project Name: JRU 146

Project ID: *2RP-5554*
Work Order Number(s): *634291*

Report Date: *22-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-3099047 TPH by SW8015 Mod
Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected.
Samples affected are: 634291-001,634291-003,634291-002.

Batch: LBA-3099158 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Lab Sample ID 634291-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD).
Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 634291-001, -002, -003.
The Laboratory Control Sample for Toluene, Benzene, m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.

Ethylbenzene Relative Percent Difference (RPD) between matrix spike and duplicate was above quality control limits.
Samples in the analytical batch are: 634291-001, -002, -003

Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 634291-002,634291-001 S,634291-001 SD,634291-003,634291-001.

Certificate of Analysis Summary 634291

LT Environmental, Inc., Arvada, CO

Project Name: JRU 146

Project Id: 2RP-5554
Contact: Dan Moir
Project Location:

Date Received in Lab: Thu Aug-15-19 04:45 pm
Report Date: 22-AUG-19
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	634291-001		634291-002		634291-003			
	Field Id:	SS 01		SS 02		SS 03			
	Depth:	.5- ft		.5- ft		.5- ft			
	Matrix:	SOIL		SOIL		SOIL			
	Sampled:	Aug-15-19 12:40		Aug-15-19 12:45		Aug-15-19 12:55			
BTEX by EPA 8021B	***Extracted:***	Aug-17-19 12:30		Aug-17-19 12:30		Aug-17-19 12:30			
SUB: T104704400-18-16	***Analyzed:***	Aug-20-19 04:53		Aug-20-19 05:13		Aug-20-19 05:33			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzene		<0.00200	0.00200	0.0289	0.00200	<0.00202	0.00202		
Toluene		0.0373	0.00200	0.373	0.00200	0.00613	0.00202		
Ethylbenzene		0.0180	0.00200	0.586 D	0.200	0.0425	0.00202		
m,p-Xylenes		0.0673	0.00400	3.57 D	0.401	0.0385	0.00403		
o-Xylene		0.107	0.00200	2.73 D	0.200	0.169	0.00202		
Total Xylenes		0.174	0.00200	6.30	0.200	0.208	0.00202		
Total BTEX		0.230	0.00200	7.29	0.00200	0.256	0.00202		
Chloride by EPA 300	***Extracted:***	Aug-19-19 11:50		Aug-19-19 11:50		Aug-19-19 11:50			
SUB: T104704400-18-16	***Analyzed:***	Aug-20-19 12:55		Aug-20-19 13:01		Aug-20-19 13:08			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		2860	25.1	1360	4.96	203	5.00		
TPH by SW8015 Mod	***Extracted:***	Aug-19-19 13:00		Aug-19-19 13:00		Aug-19-19 13:00			
SUB: T104704400-18-16	***Analyzed:***	Aug-20-19 08:25		Aug-20-19 08:45		Aug-20-19 09:04			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)		221	24.9	1350	25.0	490	25.0		
Diesel Range Organics (DRO)		7920	24.9	7880	25.0	7810	25.0		
Motor Oil Range Hydrocarbons (MRO)		413	24.9	452	25.0	451	25.0		
Total TPH		8550	24.9	9680	25.0	8750	25.0		
Total GRO-DRO		8140	24.9	9230	25.0	8300	25.0		

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analytical Results 634291

LT Environmental, Inc., Arvada, CO

JRU 146

Sample Id:	**SS 01**	Matrix:	Soil	Date Received:	08.15.19 16.45
Lab Sample Id:	634291-001	Date Collected:	08.15.19 12.40	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	**2860**	25.1	mg/kg	08.20.19 12.55		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	**221**	24.9	mg/kg	08.20.19 08.25		1
Diesel Range Organics (DRO)	C10C28DRO	**7920**	24.9	mg/kg	08.20.19 08.25		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**413**	24.9	mg/kg	08.20.19 08.25		1
Total TPH	PHC635	**8550**	24.9	mg/kg	08.20.19 08.25		1
Total GRO-DRO	PHC628	**8140**	24.9	mg/kg	08.20.19 08.25		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	120	%	70-135	08.20.19 08.25	
o-Terphenyl	84-15-1	202	%	70-135	08.20.19 08.25	**

Certificate of Analytical Results 634291

LT Environmental, Inc., Arvada, CO

JRU 146

Sample Id:	**SS 01**	Matrix:	Soil	Date Received:	08.15.19 16.45
Lab Sample Id:	634291-001	Date Collected:	08.15.19 12.40	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 04.53	U	1
Toluene	108-88-3	**0.0373**	0.00200	mg/kg	08.20.19 04.53		1
Ethylbenzene	100-41-4	**0.0180**	0.00200	mg/kg	08.20.19 04.53		1
m,p-Xylenes	179601-23-1	**0.0673**	0.00400	mg/kg	08.20.19 04.53		1
o-Xylene	95-47-6	**0.107**	0.00200	mg/kg	08.20.19 04.53		1
Total Xylenes	1330-20-7	**0.174**	0.00200	mg/kg	08.20.19 04.53		1
Total BTEX		**0.230**	0.00200	mg/kg	08.20.19 04.53		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	08.20.19 04.53	
4-Bromofluorobenzene	460-00-4	216	%	70-130	08.20.19 04.53	**

Certificate of Analytical Results 634291

LT Environmental, Inc., Arvada, CO

JRU 146

Sample Id:	**SS 02**	Matrix:	Soil	Date Received:	08.15.19 16.45
Lab Sample Id:	634291-002	Date Collected:	08.15.19 12.45	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	**1360**	4.96	mg/kg	08.20.19 13.01		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	**1350**	25.0	mg/kg	08.20.19 08.45		1
Diesel Range Organics (DRO)	C10C28DRO	**7880**	25.0	mg/kg	08.20.19 08.45		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**452**	25.0	mg/kg	08.20.19 08.45		1
Total TPH	PHC635	**9680**	25.0	mg/kg	08.20.19 08.45		1
Total GRO-DRO	PHC628	**9230**	25.0	mg/kg	08.20.19 08.45		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	08.20.19 08.45	
o-Terphenyl	84-15-1	230	%	70-135	08.20.19 08.45	**

Certificate of Analytical Results 634291

LT Environmental, Inc., Arvada, CO

JRU 146

Sample Id:	**SS 02**	Matrix:	Soil	Date Received:	08.15.19 16.45
Lab Sample Id:	634291-002	Date Collected:	08.15.19 12.45	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	**0.0289**	0.00200	mg/kg	08.20.19 05.13		1
Toluene	108-88-3	**0.373**	0.00200	mg/kg	08.20.19 05.13		1
Ethylbenzene	100-41-4	**0.586**	0.200	mg/kg	08.21.19 07.10	D	100
m,p-Xylenes	179601-23-1	**3.57**	0.401	mg/kg	08.21.19 07.10	D	100
o-Xylene	95-47-6	**2.73**	0.200	mg/kg	08.21.19 07.10	D	100
Total Xylenes	1330-20-7	**6.30**	0.200	mg/kg	08.21.19 07.10		100
Total BTEX		**7.29**	0.00200	mg/kg	08.21.19 07.10		100

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	321	%	70-130	08.20.19 05.13	**
1,4-Difluorobenzene	540-36-3	114	%	70-130	08.20.19 05.13	

Certificate of Analytical Results 634291

LT Environmental, Inc., Arvada, CO

JRU 146

Sample Id:	**SS 03**	Matrix:	Soil	Date Received:	08.15.19 16.45
Lab Sample Id:	634291-003	Date Collected:	08.15.19 12.55	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	**203**	5.00	mg/kg	08.20.19 13.08		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	**490**	25.0	mg/kg	08.20.19 09.04		1
Diesel Range Organics (DRO)	C10C28DRO	**7810**	25.0	mg/kg	08.20.19 09.04		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**451**	25.0	mg/kg	08.20.19 09.04		1
Total TPH	PHC635	**8750**	25.0	mg/kg	08.20.19 09.04		1
Total GRO-DRO	PHC628	**8300**	25.0	mg/kg	08.20.19 09.04		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	08.20.19 09.04	
o-Terphenyl	84-15-1	220	%	70-135	08.20.19 09.04	**

Certificate of Analytical Results 634291

LT Environmental, Inc., Arvada, CO

JRU 146

Sample Id:	**SS 03**	Matrix:	Soil	Date Received:	08.15.19 16.45
Lab Sample Id:	634291-003	Date Collected:	08.15.19 12.55	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	<0.00202	0.00202	mg/kg	08.20.19 05.33	U	1
Toluene	108-88-3	**0.00613**	0.00202	mg/kg	08.20.19 05.33		1
Ethylbenzene	100-41-4	**0.0425**	0.00202	mg/kg	08.20.19 05.33		1
m,p-Xylenes	179601-23-1	**0.0385**	0.00403	mg/kg	08.20.19 05.33		1
o-Xylene	95-47-6	**0.169**	0.00202	mg/kg	08.20.19 05.33		1
Total Xylenes	1330-20-7	**0.208**	0.00202	mg/kg	08.20.19 05.33		1
Total BTEX		**0.256**	0.00202	mg/kg	08.20.19 05.33		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	08.20.19 05.33	
4-Bromofluorobenzene	460-00-4	189	%	70-130	08.20.19 05.33	**

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 634291

LT Environmental, Inc.

JRU 146

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 634291

LT Environmental, Inc.

JRU 146

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 — 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: 634291

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

Page 1 of 1

Project Manager:	Dan Moir	Bill to: (if different)	Kyle 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 46	Turn Around	
Project Number:		Routine	☑
P.O. Number:	LRP-5554	Rush:	
Sampler's Name:	Garrett Green	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	1.6	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	

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	1240	.5'	1	X	X	X
SS02	S	↓	1245	↓	1	X	X	X
SS03	S	↓	1255	↓	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
		8/15/19 16:45	2		
			4		
			6		

Revised Date 051418 Rev. 2018.1

Inter-Office Shipment

IOS Number **46436**

Date/Time: 08/16/19 11:10
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
634291-001	S	SS 01	08/15/19 12:40	SW8021B	BTEX by EPA 8021B	08/21/19	08/29/19	JKR	BR4FBZ BZ BZME EBZ X	
634291-001	S	SS 01	08/15/19 12:40	SW8015MOD_NM	TPH by SW8015 Mod	08/21/19	08/29/19	JKR	GRO-DRO PHCC10C28 PI	
634291-001	S	SS 01	08/15/19 12:40	E300_CL	Chloride by EPA 300	08/21/19	02/11/20	JKR	CL	
634291-002	S	SS 02	08/15/19 12:45	SW8015MOD_NM	TPH by SW8015 Mod	08/21/19	08/29/19	JKR	GRO-DRO PHCC10C28 PI	
634291-002	S	SS 02	08/15/19 12:45	SW8021B	BTEX by EPA 8021B	08/21/19	08/29/19	JKR	BR4FBZ BZ BZME EBZ X	
634291-002	S	SS 02	08/15/19 12:45	E300_CL	Chloride by EPA 300	08/21/19	02/11/20	JKR	CL	
634291-003	S	SS 03	08/15/19 12:55	SW8015MOD_NM	TPH by SW8015 Mod	08/21/19	08/29/19	JKR	GRO-DRO PHCC10C28 PI	
634291-003	S	SS 03	08/15/19 12:55	SW8021B	BTEX by EPA 8021B	08/21/19	08/29/19	JKR	BR4FBZ BZ BZME EBZ X	
634291-003	S	SS 03	08/15/19 12:55	E300_CL	Chloride by EPA 300	08/21/19	02/11/20	JKR	CL	

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 #: 46436

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 11:10 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:  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 #: 634291

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?	___	
#3 *Samples received on ice?	___	
#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?	___	
#8 Any missing/extra samples?	**No**	
#9 Chain of Custody signed when relinquished/ received?	___	
#10 Chain of Custody agrees with sample labels/matrix?	___	
#11 Container label(s) legible and intact?	___	
#12 Samples in proper container/ bottle?	___	
#13 Samples properly preserved?	___	
#14 Sample container(s) intact?	___	
#15 Sufficient sample amount for indicated test(s)?	___	
#16 All samples received within hold time?	___	
#17 Subcontract of sample(s)?	___	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: 08/21/2019

Jessica Kramer

Analytical Report 651050

for

LT Environmental, Inc.

Project Manager: Dan Moir

JRU 146H

012919157

03-FEB-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)

03-FEB-20

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

Reference: XENCO Report No(s): **651050**
JRU 146H
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) 651050. 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. 651050 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 651050

LT Environmental, Inc., Arvada, CO

JRU 146H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	01-30-20 12:55	3 ft	651050-001
FS02	S	01-30-20 12:50	3 ft	651050-002
FS03	S	01-30-20 12:05	3 ft	651050-003
SW01	S	01-30-20 12:51	0 - 3 ft	651050-004
SW02	S	01-30-20 12:53	0 - 3 ft	651050-005
SW03	S	01-30-20 12:55	0 - 3 ft	651050-006

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: JRU 146H

Project ID: *012919157*
Work Order Number(s): *651050*

Report Date: *03-FEB-20*
Date Received: *01/31/2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3115251 BTEX by EPA 8021B

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

Certificate of Analysis Summary 651050

LT Environmental, Inc., Arvada, CO

Project Name: JRU 146H

Project Id: 012919157
Contact: Dan Moir
Project Location:

Date Received in Lab: Fri Jan-31-20 04:03 pm
Report Date: 03-FEB-20
Project Manager: Jessica Kramer

Analysis Requested		651050-001		651050-002		651050-003		651050-004		651050-005		651050-006	
	Field Id:	FS01		FS02		FS03		SW01		SW02		SW03	
	Depth:	3- ft		3- ft		3- ft		0-3 ft		0-3 ft		0-3 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-30-20 12:55		Jan-30-20 12:50		Jan-30-20 12:05		Jan-30-20 12:51		Jan-30-20 12:53		Jan-30-20 12:55	
BTEX by EPA 8021B	*Extracted:*	Jan-31-20 20:00		Jan-31-20 20:00		Jan-31-20 20:00		Jan-31-20 20:00		Jan-31-20 20:00		Jan-31-20 20:00	
	Analyzed:	Feb-01-20 20:54		Feb-01-20 07:38		Feb-01-20 07:58		Feb-01-20 08:18		Feb-01-20 08:39		Feb-01-20 08:59	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.0200	0.0200	<0.00200	0.00200	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202
Toluene		<0.0200	0.0200	<0.00200	0.00200	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202
Ethylbenzene		0.0343	0.0200	<0.00200	0.00200	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202
m,p-Xylenes		0.148	0.0400	<0.00401	0.00401	<0.00404	0.00404	<0.00401	0.00401	<0.00399	0.00399	<0.00404	0.00404
o-Xylene		0.121	0.0200	0.00214	0.00200	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202
Total Xylenes		0.269	0.0200	0.00214	0.00200	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202
Total BTEX		0.303	0.0200	0.00214	0.00200	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202
Select Anions By EPA 300	*Extracted:*	Jan-31-20 18:00		Feb-01-20 07:00		Feb-01-20 07:00		Feb-01-20 07:00		Feb-01-20 07:00		Feb-01-20 07:00	
	Analyzed:	Feb-01-20 00:09		Feb-01-20 13:28		Feb-01-20 11:03		Feb-01-20 11:20		Feb-01-20 11:25		Feb-01-20 11:30	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		77.1	9.90	476	10.0	326	9.98	14.2	9.98	181	10.0	158	10.1
TPH by SW8015 Mod	*Extracted:*	Jan-31-20 17:30		Jan-31-20 17:30		Jan-31-20 17:30		Jan-31-20 17:30		Jan-31-20 17:30		Jan-31-20 17:30	
	Analyzed:	Feb-01-20 02:41		Feb-01-20 03:00		Feb-01-20 03:00		Feb-01-20 03:20		Feb-01-20 03:20		Feb-01-20 03:39	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		79.9	50.1	<50.0	50.0	<49.8	49.8	<50.2	50.2	<49.8	49.8	<49.8	49.8
Diesel Range Organics (DRO)		865	50.1	<50.0	50.0	<49.8	49.8	<50.2	50.2	<49.8	49.8	<49.8	49.8
Motor Oil Range Hydrocarbons (MRO)		58.6	50.1	<50.0	50.0	<49.8	49.8	<50.2	50.2	<49.8	49.8	<49.8	49.8
Total GRO-DRO		945	50.1	<50.0	50.0	<49.8	49.8	<50.2	50.2	<49.8	49.8	<49.8	49.8
Total TPH		1000	50.1	<50.0	50.0	<49.8	49.8	<50.2	50.2	<49.8	49.8	<49.8	49.8

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

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analytical Results 651050

LT Environmental, Inc., Arvada, CO

JRU 146H

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	01.31.20 16.03
Lab Sample Id:	651050-001	Date Collected:	01.30.20 12.55	Sample Depth:	3 ft

Analytical Method:	Select Anions By EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.31.20 18.00	Basis:	Wet Weight
Seq Number:	3115294				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**77.1**	9.90	mg/kg	02.01.20 00.09		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.31.20 17.30	Basis:	Wet Weight
Seq Number:	3115328				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**79.9**	50.1	mg/kg	02.01.20 02.41		1
Diesel Range Organics (DRO)	C10C28DRO	**865**	50.1	mg/kg	02.01.20 02.41		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**58.6**	50.1	mg/kg	02.01.20 02.41		1
Total GRO-DRO	PHC628	**945**	50.1	mg/kg	02.01.20 02.41		1
Total TPH	PHC635	**1000**	50.1	mg/kg	02.01.20 02.41		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	02.01.20 02.41	
o-Terphenyl	84-15-1	96	%	70-135	02.01.20 02.41	

Certificate of Analytical Results 651050

LT Environmental, Inc., Arvada, CO

JRU 146H

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	01.31.20 16.03
Lab Sample Id:	651050-001	Date Collected:	01.30.20 12.55	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.31.20 20.00	Basis:	Wet Weight
Seq Number:	3115251				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0200	0.0200	mg/kg	02.01.20 20.54	U	1
Toluene	108-88-3	<0.0200	0.0200	mg/kg	02.01.20 20.54	U	1
Ethylbenzene	100-41-4	**0.0343**	0.0200	mg/kg	02.01.20 20.54		1
m,p-Xylenes	179601-23-1	**0.148**	0.0400	mg/kg	02.01.20 20.54		1
o-Xylene	95-47-6	**0.121**	0.0200	mg/kg	02.01.20 20.54		1
Total Xylenes	1330-20-7	**0.269**	0.0200	mg/kg	02.01.20 20.54		1
Total BTEX		**0.303**	0.0200	mg/kg	02.01.20 20.54		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	02.01.20 20.54	
4-Bromofluorobenzene	460-00-4	104	%	70-130	02.01.20 20.54	

Certificate of Analytical Results 651050

LT Environmental, Inc., Arvada, CO

JRU 146H

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	01.31.20 16.03
Lab Sample Id:	651050-002	Date Collected:	01.30.20 12.50	Sample Depth:	3 ft

Analytical Method:	Select Anions By EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.01.20 07.00	Basis:	Wet Weight
Seq Number:	3115299				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**476**	10.0	mg/kg	02.01.20 13.28		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.31.20 17.30	Basis:	Wet Weight
Seq Number:	3115328				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	02.01.20 03.00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	02.01.20 03.00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	02.01.20 03.00	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	02.01.20 03.00	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	02.01.20 03.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	02.01.20 03.00	
o-Terphenyl	84-15-1	103	%	70-135	02.01.20 03.00	

Certificate of Analytical Results 651050

LT Environmental, Inc., Arvada, CO

JRU 146H

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	01.31.20 16.03
Lab Sample Id:	651050-002	Date Collected:	01.30.20 12.50	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.31.20 20.00	Basis:	Wet Weight
Seq Number:	3115251				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.01.20 07.38	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.01.20 07.38	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.01.20 07.38	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	02.01.20 07.38	U	1
o-Xylene	95-47-6	**0.00214**	0.00200	mg/kg	02.01.20 07.38		1
Total Xylenes	1330-20-7	**0.00214**	0.00200	mg/kg	02.01.20 07.38		1
Total BTEX		**0.00214**	0.00200	mg/kg	02.01.20 07.38		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	117	%	70-130	02.01.20 07.38	
1,4-Difluorobenzene	540-36-3	101	%	70-130	02.01.20 07.38	

Certificate of Analytical Results 651050

LT Environmental, Inc., Arvada, CO

JRU 146H

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	01.31.20 16.03
Lab Sample Id:	651050-003	Date Collected:	01.30.20 12.05	Sample Depth:	3 ft

Analytical Method:	Select Anions By EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.01.20 07.00	Basis:	Wet Weight
Seq Number:	3115299				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**326**	9.98	mg/kg	02.01.20 11.03		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.31.20 17.30	Basis:	Wet Weight
Seq Number:	3115328				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	02.01.20 03.00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	02.01.20 03.00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	02.01.20 03.00	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	02.01.20 03.00	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	02.01.20 03.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	02.01.20 03.00	
o-Terphenyl	84-15-1	91	%	70-135	02.01.20 03.00	

Certificate of Analytical Results 651050

LT Environmental, Inc., Arvada, CO

JRU 146H

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	01.31.20 16.03
Lab Sample Id:	651050-003	Date Collected:	01.30.20 12.05	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.31.20 20.00	Basis:	Wet Weight
Seq Number:	3115251				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	02.01.20 07.58	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	02.01.20 07.58	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	02.01.20 07.58	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	02.01.20 07.58	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	02.01.20 07.58	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	02.01.20 07.58	U	1
Total BTEX		<0.00202	0.00202	mg/kg	02.01.20 07.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	70-130	02.01.20 07.58	
1,4-Difluorobenzene	540-36-3	103	%	70-130	02.01.20 07.58	

Certificate of Analytical Results 651050

LT Environmental, Inc., Arvada, CO

JRU 146H

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	01.31.20 16.03
Lab Sample Id:	651050-004	Date Collected:	01.30.20 12.51	Sample Depth:	0 - 3 ft

Analytical Method:	Select Anions By EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.01.20 07.00	Basis:	Wet Weight
Seq Number:	3115299				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**14.2**	9.98	mg/kg	02.01.20 11.20		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.31.20 17.30	Basis:	Wet Weight
Seq Number:	3115328				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	02.01.20 03.20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	02.01.20 03.20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	02.01.20 03.20	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	02.01.20 03.20	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	02.01.20 03.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	02.01.20 03.20	
o-Terphenyl	84-15-1	102	%	70-135	02.01.20 03.20	

Certificate of Analytical Results 651050

LT Environmental, Inc., Arvada, CO

JRU 146H

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	01.31.20 16.03
Lab Sample Id:	651050-004	Date Collected:	01.30.20 12.51	Sample Depth:	0 - 3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.31.20 20.00	Basis:	Wet Weight
Seq Number:	3115251				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.01.20 08.18	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.01.20 08.18	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.01.20 08.18	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	02.01.20 08.18	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.01.20 08.18	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.01.20 08.18	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.01.20 08.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	02.01.20 08.18	
4-Bromofluorobenzene	460-00-4	99	%	70-130	02.01.20 08.18	

Certificate of Analytical Results 651050

LT Environmental, Inc., Arvada, CO

JRU 146H

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	01.31.20 16.03
Lab Sample Id:	651050-005	Date Collected:	01.30.20 12.53	Sample Depth:	0 - 3 ft

Analytical Method:	Select Anions By EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.01.20 07.00	Basis:	Wet Weight
Seq Number:	3115299				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**181**	10.0	mg/kg	02.01.20 11.25		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.31.20 17.30	Basis:	Wet Weight
Seq Number:	3115328				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	02.01.20 03.20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	02.01.20 03.20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	02.01.20 03.20	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	02.01.20 03.20	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	02.01.20 03.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	02.01.20 03.20	
o-Terphenyl	84-15-1	94	%	70-135	02.01.20 03.20	

Certificate of Analytical Results 651050

LT Environmental, Inc., Arvada, CO

JRU 146H

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	01.31.20 16.03
Lab Sample Id:	651050-005	Date Collected:	01.30.20 12.53	Sample Depth:	0 - 3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.31.20 20.00	Basis:	Wet Weight
Seq Number:	3115251				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.01.20 08.39	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.01.20 08.39	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.01.20 08.39	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.01.20 08.39	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.01.20 08.39	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.01.20 08.39	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.01.20 08.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	70-130	02.01.20 08.39	
1,4-Difluorobenzene	540-36-3	103	%	70-130	02.01.20 08.39	

Certificate of Analytical Results 651050

LT Environmental, Inc., Arvada, CO

JRU 146H

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	01.31.20 16.03
Lab Sample Id:	651050-006	Date Collected:	01.30.20 12.55	Sample Depth:	0 - 3 ft

Analytical Method:	Select Anions By EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.01.20 07.00	Basis:	Wet Weight
Seq Number:	3115299				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**158**	10.1	mg/kg	02.01.20 11.30		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.31.20 17.30	Basis:	Wet Weight
Seq Number:	3115328				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	02.01.20 03.39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	02.01.20 03.39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	02.01.20 03.39	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	02.01.20 03.39	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	02.01.20 03.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	02.01.20 03.39	
o-Terphenyl	84-15-1	106	%	70-135	02.01.20 03.39	

Certificate of Analytical Results 651050

LT Environmental, Inc., Arvada, CO

JRU 146H

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	01.31.20 16.03
Lab Sample Id:	651050-006	Date Collected:	01.30.20 12.55	Sample Depth:	0 - 3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.31.20 20.00	Basis:	Wet Weight
Seq Number:	3115251				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	02.01.20 08.59	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	02.01.20 08.59	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	02.01.20 08.59	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	02.01.20 08.59	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	02.01.20 08.59	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	02.01.20 08.59	U	1
Total BTEX		<0.00202	0.00202	mg/kg	02.01.20 08.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	96	%	70-130	02.01.20 08.59	
1,4-Difluorobenzene	540-36-3	101	%	70-130	02.01.20 08.59	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

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 651050

LT Environmental, Inc.

JRU 146H

Analytical Method: Select Anions By EPA 300 — Prep Method: E300P
Seq Number: 3115294 — Matrix: Solid — Date Prep: 01.31.20
MB Sample Id: 7695746-1-BLK — LCS Sample Id: 7695746-1-BKS — LCSD Sample Id: 7695746-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	254	102	255	102	90-110	0	20	mg/kg	01.31.20 21:21	

Analytical Method: Select Anions By EPA 300 — Prep Method: E300P
Seq Number: 3115299 — Matrix: Solid — Date Prep: 02.01.20
MB Sample Id: 7695747-1-BLK — LCS Sample Id: 7695747-1-BKS — LCSD Sample Id: 7695747-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	253	101	253	101	90-110	0	20	mg/kg	02.01.20 10:37	

Analytical Method: Select Anions By EPA 300 — Prep Method: E300P
Seq Number: 3115294 — Matrix: Soil — Date Prep: 01.31.20
Parent Sample Id: 651013-028 — MS Sample Id: 651013-028 S — MSD Sample Id: 651013-028 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	42.4	201	251	104	253	105	90-110	1	20	mg/kg	02.03.20 11:49	

Analytical Method: Select Anions By EPA 300 — Prep Method: E300P
Seq Number: 3115294 — Matrix: Soil — Date Prep: 01.31.20
Parent Sample Id: 651046-003 — MS Sample Id: 651046-003 S — MSD Sample Id: 651046-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	27.8	199	236	105	236	104	90-110	0	20	mg/kg	01.31.20 23:02	

Analytical Method: Select Anions By EPA 300 — Prep Method: E300P
Seq Number: 3115299 — Matrix: Soil — Date Prep: 02.01.20
Parent Sample Id: 651025-007 — MS Sample Id: 651025-007 S — MSD Sample Id: 651025-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1410	1010	2460	104	2460	105	90-110	0	20	mg/kg	02.01.20 12:24	

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 651050

LT Environmental, Inc.

JRU 146H

Analytical Method: Select Anions By EPA 300 — Prep Method: E300P
Seq Number: 3115299 — Matrix: Soil — Date Prep: 02.01.20
Parent Sample Id: 651050-003 — MS Sample Id: 651050-003 S — MSD Sample Id: 651050-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	326	198	530	103	532	104	90-110	0	20	mg/kg	02.01.20 11:09	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3115328 — Matrix: Solid — Date Prep: 01.31.20
MB Sample Id: 7695780-1-BLK — LCS Sample Id: 7695780-1-BKS — LCSD Sample Id: 7695780-1-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	1010	101	70-135	7	35	mg/kg	02.01.20 01:42	
Diesel Range Organics (DRO)	<50.0	1000	1100	110	1040	104	70-135	6	35	mg/kg	02.01.20 01:42	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	101		129		125		70-135	%	02.01.20 01:42
o-Terphenyl	99		130		119		70-135	%	02.01.20 01:42

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3115328 — Matrix: Solid — Date Prep: 01.31.20
MB Sample Id: 7695780-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	02.01.20 01:22	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3115328 — Matrix: Soil — Date Prep: 01.31.20
Parent Sample Id: 651049-005 — MS Sample Id: 651049-005 S — MSD Sample Id: 651049-005 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	1110	111	1200	120	70-135	8	35	mg/kg	02.01.20 02:01	
Diesel Range Organics (DRO)	<50.0	999	1120	112	1110	111	70-135	1	35	mg/kg	02.01.20 02:01	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	121		128		70-135	%	02.01.20 02:01
o-Terphenyl	108		119		70-135	%	02.01.20 02:01

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 651050

LT Environmental, Inc.

JRU 146H

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

Seq Number: 3115251 Matrix: Solid Date Prep: 01.31.20

MB Sample Id: 7695742-1-BLK LCS Sample Id: 7695742-1-BKS LCSD Sample Id: 7695742-1-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	0.0920	92	0.102	102	70-130	10	35	mg/kg	02.01.20 01:10	
Toluene	<0.00200	0.100	0.0892	89	0.0987	99	70-130	10	35	mg/kg	02.01.20 01:10	
Ethylbenzene	<0.00200	0.100	0.0859	86	0.0950	95	71-129	10	35	mg/kg	02.01.20 01:10	
m,p-Xylenes	<0.00400	0.200	0.176	88	0.195	98	70-135	10	35	mg/kg	02.01.20 01:10	
o-Xylene	<0.00200	0.100	0.0884	88	0.0978	98	71-133	10	35	mg/kg	02.01.20 01:10	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		102		104		70-130	%	02.01.20 01:10
4-Bromofluorobenzene	95		95		95		70-130	%	02.01.20 01:10

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

Seq Number: 3115251 Matrix: Soil Date Prep: 01.31.20

Parent Sample Id: 651046-001 MS Sample Id: 651046-001 S MSD Sample Id: 651046-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.0755	76	0.0870	88	70-130	14	35	mg/kg	02.01.20 01:51	
Toluene	<0.00199	0.0994	0.0785	79	0.0754	76	70-130	4	35	mg/kg	02.01.20 01:51	
Ethylbenzene	0.00507	0.0994	0.0815	77	0.0804	76	71-129	1	35	mg/kg	02.01.20 01:51	
m,p-Xylenes	0.0134	0.199	0.190	89	0.187	88	70-135	2	35	mg/kg	02.01.20 01:51	
o-Xylene	0.0126	0.0994	0.0865	74	0.0903	78	71-133	4	35	mg/kg	02.01.20 01:51	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		102		70-130	%	02.01.20 01:51
4-Bromofluorobenzene	114		123		70-130	%	02.01.20 01:51

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

XENCO LABORATORIES

Chain of Custody

Work Order No: 451050

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296
Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000) www.xenco.com Page 1 of 1

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrel
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO-Energy
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM
Phone:	432.704.5178 Email:		dmoir@ltenv.com rmcafee@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 146H	Turn Around	
Project Number:	012919157	Routine ☐	
P.O. Number:		Rush: 3 day	
Sampler's Name:	Robert McAfee	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	1.2	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:	6	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)	Sample Comments
FS01	S	01/30/20	1255	3'	1	X	X	X	composite
FS02			1250	3'		X	X	X	
FS03			1205	3'		X	X	X	
SW01			1251	0-3'		X	X	X	
SW02			1253	0-3'		X	X	X	
SW03			1255	0-3'		X	X	X	

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Robert McAfee		1/31/20 16:03	2		
			4		
			6		

Revised Date 051418 Rev. 2018.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 01.31.2020 04.03.00 PM

Work Order #: 651050

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)?	1.2
#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: 01.31.2020

Checklist reviewed by: Jessica Kramer Date: 02.03.2020

Jessica Kramer

Analytical Report 651894

for

LT Environmental, Inc.

Project Manager: Dan Moir

JRU 146H

11-FEB-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)

11-FEB-20

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

Reference: XENCO Report No(s): **651894**
JRU 146H
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) 651894. 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. 651894 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

Sample Cross Reference 651894

LT Environmental, Inc., Arvada, CO

JRU 146H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS04	S	02-07-20 10:10	3 ft	651894-001
FS05	S	02-07-20 10:15	3 ft	651894-002
SW04	S	02-07-20 10:20	0 - 3 ft	651894-003
SW05	S	02-07-20 10:25	0 - 3 ft	651894-004
FS01A	S	02-07-20 11:25	4 ft	651894-005

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: JRU 146H

Project ID:
Work Order Number(s): *651894*

Report Date: *11-FEB-20*
Date Received: *02/10/2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3116094 BTEX by EPA 8021B

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

Certificate of Analysis Summary 651894

LT Environmental, Inc., Arvada, CO

Project Name: JRU 146H

Project Id:
Contact: Dan Moir
Project Location:

Date Received in Lab: Mon Feb-10-20 04:40 pm
Report Date: 11-FEB-20
Project Manager: Jessica Kramer

Analysis Requested																	
	Lab Id:	651894-001		651894-002		651894-003		651894-004		651894-005							
	Field Id:	FS04		FS05		SW04		SW05		FS01A							
	Depth:	3- ft		3- ft		0-3 ft		0-3 ft		4- ft							
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL							
	Sampled:	Feb-07-20 10:10		Feb-07-20 10:15		Feb-07-20 10:20		Feb-07-20 10:25		Feb-07-20 11:25							
BTEX by EPA 8021B	***Extracted:***	Feb-10-20 18:00		Feb-10-20 18:00		Feb-10-20 18:00		Feb-10-20 18:00		** ** ** **							
	Analyzed:	Feb-11-20 02:16		Feb-11-20 02:37		Feb-11-20 02:57		Feb-11-20 03:18		Feb-11-20 03:38							
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL						
Benzene		<0.00199	0.00199	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200	<0.00202	0.00202						
Toluene		<0.00199	0.00199	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200	<0.00202	0.00202						
Ethylbenzene		<0.00199	0.00199	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200	<0.00202	0.00202						
m,p-Xylenes		<0.00398	0.00398	<0.00398	0.00398	<0.00396	0.00396	<0.00399	0.00399	<0.00404	0.00404						
o-Xylene		<0.00199	0.00199	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200	<0.00202	0.00202						
Total Xylenes		<0.00199	0.00199	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200	<0.00202	0.00202						
Total BTEX		<0.00199	0.00199	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200	<0.00202	0.00202						
Chloride by EPA 300	***Extracted:***	Feb-10-20 17:30		Feb-10-20 17:30		Feb-10-20 17:30		Feb-10-20 17:30		Feb-10-20 17:30							
	Analyzed:	Feb-10-20 20:28		Feb-10-20 20:35		Feb-10-20 20:41		Feb-10-20 21:00		Feb-10-20 21:06							
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL						
Chloride		562	9.92	270	9.92	33.9	9.96	115	10.0	122	9.98						
TPH by SW8015 Mod	***Extracted:***	Feb-10-20 17:40		Feb-10-20 17:40		Feb-10-20 17:40		Feb-10-20 17:40		Feb-10-20 17:40							
	Analyzed:	Feb-10-20 19:33		Feb-10-20 19:53		Feb-10-20 20:14		Feb-10-20 20:14		Feb-10-20 20:34							
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL						
Gasoline Range Hydrocarbons (GRO)		<50.3	50.3	<49.9	49.9	<49.9	49.9	<50.1	50.1	<50.2	50.2						
Diesel Range Organics (DRO)		<50.3	50.3	84.0	49.9	<49.9	49.9	<50.1	50.1	<50.2	50.2						
Motor Oil Range Hydrocarbons (MRO)		<50.3	50.3	<49.9	49.9	<49.9	49.9	<50.1	50.1	<50.2	50.2						
Total GRO-DRO		<50.3	50.3	84.0	49.9	<49.9	49.9	<50.1	50.1	<50.2	50.2						
Total TPH		<50.3	50.3	84.0	49.9	<49.9	49.9	<50.1	50.1	<50.2	50.2						

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

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analytical Results 651894

LT Environmental, Inc., Arvada, CO

JRU 146H

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	02.10.20 16.40
Lab Sample Id:	651894-001	Date Collected:	02.07.20 10.10	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.10.20 17.30	Basis:	Wet Weight
Seq Number:	3116095				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**562**	9.92	mg/kg	02.10.20 20.28		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	02.10.20 17.40	Basis:	Wet Weight
Seq Number:	3116117				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	02.10.20 19.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	02.10.20 19.33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	02.10.20 19.33	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	02.10.20 19.33	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	02.10.20 19.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-135	02.10.20 19.33	
o-Terphenyl	84-15-1	115	%	70-135	02.10.20 19.33	

Certificate of Analytical Results 651894

LT Environmental, Inc., Arvada, CO

JRU 146H

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	02.10.20 16.40
Lab Sample Id:	651894-001	Date Collected:	02.07.20 10.10	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.10.20 18.00	Basis:	Wet Weight
Seq Number:	3116094				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.11.20 02.16	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.11.20 02.16	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.11.20 02.16	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.11.20 02.16	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.11.20 02.16	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	02.11.20 02.16	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.11.20 02.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	70-130	02.11.20 02.16	
1,4-Difluorobenzene	540-36-3	101	%	70-130	02.11.20 02.16	

Certificate of Analytical Results 651894

LT Environmental, Inc., Arvada, CO

JRU 146H

Sample Id:	**FS05**	Matrix:	Soil	Date Received:	02.10.20 16.40
Lab Sample Id:	651894-002	Date Collected:	02.07.20 10.15	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.10.20 17.30	Basis:	Wet Weight
Seq Number:	3116095				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**270**	9.92	mg/kg	02.10.20 20.35		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	02.10.20 17.40	Basis:	Wet Weight
Seq Number:	3116117				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	02.10.20 19.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	**84.0**	49.9	mg/kg	02.10.20 19.53		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	02.10.20 19.53	U	1
Total GRO-DRO	PHC628	**84.0**	49.9	mg/kg	02.10.20 19.53		1
Total TPH	PHC635	**84.0**	49.9	mg/kg	02.10.20 19.53		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	132	%	70-135	02.10.20 19.53	
o-Terphenyl	84-15-1	133	%	70-135	02.10.20 19.53	

Certificate of Analytical Results 651894

LT Environmental, Inc., Arvada, CO

JRU 146H

Sample Id:	**FS05**	Matrix:	Soil	Date Received:	02.10.20 16.40
Lab Sample Id:	651894-002	Date Collected:	02.07.20 10.15	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.10.20 18.00	Basis:	Wet Weight
Seq Number:	3116094				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.11.20 02.37	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.11.20 02.37	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.11.20 02.37	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.11.20 02.37	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.11.20 02.37	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	02.11.20 02.37	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.11.20 02.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	96	%	70-130	02.11.20 02.37	
4-Bromofluorobenzene	460-00-4	90	%	70-130	02.11.20 02.37	

Certificate of Analytical Results 651894

LT Environmental, Inc., Arvada, CO

JRU 146H

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	02.10.20 16.40
Lab Sample Id:	651894-003	Date Collected:	02.07.20 10.20	Sample Depth:	0 - 3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.10.20 17.30	Basis:	Wet Weight
Seq Number:	3116095				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**33.9**	9.96	mg/kg	02.10.20 20.41		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	02.10.20 17.40	Basis:	Wet Weight
Seq Number:	3116117				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	02.10.20 20.14	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	02.10.20 20.14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	02.10.20 20.14	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	02.10.20 20.14	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	02.10.20 20.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	130	%	70-135	02.10.20 20.14	
o-Terphenyl	84-15-1	129	%	70-135	02.10.20 20.14	

Certificate of Analytical Results 651894

LT Environmental, Inc., Arvada, CO

JRU 146H

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	02.10.20 16.40
Lab Sample Id:	651894-003	Date Collected:	02.07.20 10.20	Sample Depth:	0 - 3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.10.20 18.00	Basis:	Wet Weight
Seq Number:	3116094				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	02.11.20 02.57	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	02.11.20 02.57	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	02.11.20 02.57	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	02.11.20 02.57	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	02.11.20 02.57	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	02.11.20 02.57	U	1
Total BTEX		<0.00198	0.00198	mg/kg	02.11.20 02.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	95	%	70-130	02.11.20 02.57	
4-Bromofluorobenzene	460-00-4	95	%	70-130	02.11.20 02.57	

Certificate of Analytical Results 651894

LT Environmental, Inc., Arvada, CO

JRU 146H

Sample Id:	**SW05**	Matrix:	Soil	Date Received:	02.10.20 16.40
Lab Sample Id:	651894-004	Date Collected:	02.07.20 10.25	Sample Depth:	0 - 3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.10.20 17.30	Basis:	Wet Weight
Seq Number:	3116095				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**115**	10.0	mg/kg	02.10.20 21.00		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	02.10.20 17.40	Basis:	Wet Weight
Seq Number:	3116117				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	02.10.20 20.14	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	02.10.20 20.14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	02.10.20 20.14	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	02.10.20 20.14	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	02.10.20 20.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	122	%	70-135	02.10.20 20.14	
o-Terphenyl	84-15-1	113	%	70-135	02.10.20 20.14	

Certificate of Analytical Results 651894

LT Environmental, Inc., Arvada, CO

JRU 146H

Sample Id:	**SW05**	Matrix:	Soil	Date Received:	02.10.20 16.40
Lab Sample Id:	651894-004	Date Collected:	02.07.20 10.25	Sample Depth:	0 - 3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.10.20 18.00	Basis:	Wet Weight
Seq Number:	3116094				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.11.20 03.18	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.11.20 03.18	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.11.20 03.18	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.11.20 03.18	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.11.20 03.18	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.11.20 03.18	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.11.20 03.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	70-130	02.11.20 03.18	
1,4-Difluorobenzene	540-36-3	104	%	70-130	02.11.20 03.18	

Certificate of Analytical Results 651894

LT Environmental, Inc., Arvada, CO

JRU 146H

Sample Id:	**FS01A**	Matrix:	Soil	Date Received:	02.10.20 16.40
Lab Sample Id:	651894-005	Date Collected:	02.07.20 11.25	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.10.20 17.30	Basis:	Wet Weight
Seq Number:	3116095				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**122**	9.98	mg/kg	02.10.20 21.06		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	02.10.20 17.40	Basis:	Wet Weight
Seq Number:	3116117				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	02.10.20 20.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	02.10.20 20.34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	02.10.20 20.34	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	02.10.20 20.34	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	02.10.20 20.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	134	%	70-135	02.10.20 20.34	
o-Terphenyl	84-15-1	132	%	70-135	02.10.20 20.34	

Certificate of Analytical Results 651894

LT Environmental, Inc., Arvada, CO

JRU 146H

Sample Id:	**FS01A**	Matrix:	Soil	Date Received:	02.10.20 16.40
Lab Sample Id:	651894-005	Date Collected:	02.07.20 11.25	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.10.20 16.00	Basis:	Wet Weight
Seq Number:	3116094				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	02.11.20 03.38	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	02.11.20 03.38	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	02.11.20 03.38	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	02.11.20 03.38	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	02.11.20 03.38	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	02.11.20 03.38	U	1
Total BTEX		<0.00202	0.00202	mg/kg	02.11.20 03.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	02.11.20 03.38	
4-Bromofluorobenzene	460-00-4	98	%	70-130	02.11.20 03.38	

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 651894

LT Environmental, Inc.

JRU 146H

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3116095 — Matrix: Solid — Date Prep: 02.10.20
MB Sample Id: 7696354-1-BLK — LCS Sample Id: 7696354-1-BKS — LCSD Sample Id: 7696354-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	257	103	257	103	90-110	0	20	mg/kg	02.10.20 19:03	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3116095 — Matrix: Soil — Date Prep: 02.10.20
Parent Sample Id: 651882-010 — MS Sample Id: 651882-010 S — MSD Sample Id: 651882-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	117	201	333	107	332	107	90-110	0	20	mg/kg	02.10.20 19:22	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3116095 — Matrix: Soil — Date Prep: 02.10.20
Parent Sample Id: 651894-003 — MS Sample Id: 651894-003 S — MSD Sample Id: 651894-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	33.9	201	253	109	255	110	90-110	1	20	mg/kg	02.10.20 20:47	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3116117 — Matrix: Solid — Date Prep: 02.10.20
MB Sample Id: 7696356-1-BLK — LCS Sample Id: 7696356-1-BKS — LCSD Sample Id: 7696356-1-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	972	97	991	99	70-135	2	35	mg/kg	02.10.20 17:33	
Diesel Range Organics (DRO)	<50.0	1000	870	87	1070	107	70-135	21	35	mg/kg	02.10.20 17:33	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	120		122		130		70-135	%	02.10.20 17:33
o-Terphenyl	114		114		117		70-135	%	02.10.20 17:33

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3116117 — Matrix: Solid — Date Prep: 02.10.20
MB Sample Id: 7696356-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	02.10.20 17:33	

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 651894

LT Environmental, Inc.

JRU 146H

Analytical Method: TPH by SW8015 Mod | Prep Method: SW8015P
Seq Number: 3116117 | Matrix: Soil | Date Prep: 02.10.20
Parent Sample Id: 651882-002 | MS Sample Id: 651882-002 S | MSD Sample Id: 651882-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.8	996	902	91	873	86	70-135	3	35	mg/kg	02.10.20 18:13	
Diesel Range Organics (DRO)	<49.8	996	801	80	960	95	70-135	18	35	mg/kg	02.10.20 18:13	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	111		132		70-135	%	02.10.20 18:13
o-Terphenyl	103		122		70-135	%	02.10.20 18:13

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3116094 | Matrix: Solid | Date Prep: 02.10.20
MB Sample Id: 7696355-1-BLK | LCS Sample Id: 7696355-1-BKS | LCSD Sample Id: 7696355-1-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	0.104	104	70-130	0	35	mg/kg	02.10.20 20:30	
Toluene	<0.00200	0.100	0.0977	98	0.0972	97	70-130	1	35	mg/kg	02.10.20 20:30	
Ethylbenzene	<0.00200	0.100	0.0918	92	0.0909	91	71-129	1	35	mg/kg	02.10.20 20:30	
m,p-Xylenes	<0.00400	0.200	0.187	94	0.184	92	70-135	2	35	mg/kg	02.10.20 20:30	
o-Xylene	<0.00200	0.100	0.0952	95	0.0950	95	71-133	0	35	mg/kg	02.10.20 20:30	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		105		105		70-130	%	02.10.20 20:30
4-Bromofluorobenzene	95		94		94		70-130	%	02.10.20 20:30

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3116094 | Matrix: Soil | Date Prep: 02.10.20
Parent Sample Id: 651882-001 | MS Sample Id: 651882-001 S | MSD Sample Id: 651882-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.0999	100	0.102	102	70-130	2	35	mg/kg	02.10.20 21:10	
Toluene	<0.00200	0.0998	0.0961	96	0.0981	98	70-130	2	35	mg/kg	02.10.20 21:10	
Ethylbenzene	<0.00200	0.0998	0.0913	91	0.0921	92	71-129	1	35	mg/kg	02.10.20 21:10	
m,p-Xylenes	<0.00399	0.200	0.185	93	0.186	93	70-135	1	35	mg/kg	02.10.20 21:10	
o-Xylene	<0.00200	0.0998	0.0925	93	0.0940	94	71-133	2	35	mg/kg	02.10.20 21:10	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		104		70-130	%	02.10.20 21:10
4-Bromofluorobenzene	99		104		70-130	%	02.10.20 21:10

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

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

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

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

Final 1.000

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: 651894

Page 1 of 1

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

Work Order Comments

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

Project Name:	JRU 146H	Turn Around	
Project Number:		Routine ☐	
P.O. Number:		Rush: 3 day	
Sampler's Name:	Robert McAfee	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	2.8	Thermometer ID	THM007
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 2/10/20

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
FS04	S	02/07/20	1010	3'	1	X	X	X
FS05			1015	3'	1	X	X	X
SW04			1020	0-3'	1	X	X	X
SW05			1025	0-3'	1	X	X	X
FS01A	S	02/07/20	1125	4'	1	X	X	X

Work Order Notes

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

Sample Comments

Composite

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			2/10/20 1640	2			
3				4			
5				6			

Revised Date 051418 Rev. 2018.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 02.10.2020 04.40.00 PM

Work Order #: 651894

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

Temperature Measuring device used : T-NM-007

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

*** 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: 02.10.2020

Checklist reviewed by: Jessica Kramer Date: 02.11.2020

Jessica Kramer

ATTACHMENT 4: [ADD TITLE]

ATTACHMENT 5: [ADD TITLE]