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	NRM2013660346
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

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

Location of Release Source

Latitude 32.349692 Longitude -103.829822
(NAD 83 in decimal degrees to 5 decimal places)

Site Name James Ranch Unit 31	Site Type Well Pad
Date Release Discovered 5/02/2020	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
H	36	22S	30E	EDDY

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

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) 2.09	Volume Recovered (bbls) 1.47
☒ Produced Water	Volume Released (bbls) 7.86	Volume Recovered (bbls) 5.53
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release A threaded 2" flow line was broken by an unknown vehicle close to the lease road at the James Ranch unit 31. A third-party contractor has been retained for remediation activities.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NRM2013660346
District RP	
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Application ID	

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

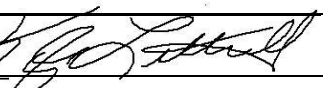
The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

- ☒ 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:
N/A

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

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

Printed Name: Kyle Littrell
Title: SH&E Supervisor
Signature: 
Date: 5-14-20
email: Kyle_Littrell@xtoenergy.com
Telephone: 432-221-7331

OCD Only

Received by: Ramona Marcus
Date: 5/15/2020

NRM2013660346

Location:	JRU 31 Flowline	
Spill Date:	5/2/2020	
Area 1		
Approximate Area =	771.00	sq. ft.
Average Saturation (or depth) of spill =	0.13	inches
Average Porosity Factor =	0.03	
VOLUME OF LEAK		
Total Crude Oil =	0.01	bbls
Total Produced Water =	0.03	bbls
Area 2		
Approximate Area =	350.00	sq. ft.
Average Saturation (or depth) of spill =	3.00	inches

Average Porosity Factor =		

VOLUME OF LEAK		
Total Crude Oil =	0.49	bbls
Total Produced Water =	1.85	bbls

Area 3		
Approximate Area =	2550.00	sq. ft.
Average Saturation (or depth) of spill =	0.50	inches

Average Porosity Factor =	0.03	

VOLUME OF LEAK		
Total Crude Oil =	1.59	bbls
Total Produced Water =	5.98	bbls

TOTAL VOLUME OF LEAK		
Total Crude Oil =	**2.09**	**bbls**
Total Produced Water =	**7.86**	**bbls**
TOTAL VOLUME RECOVERED		
Total Crude Oil =	**1.47**	**bbls**
Total Produced Water =	**5.53**	**bbls**

Incident ID	NRM2013660346
District RP	
Facility ID	
Application ID	

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.

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State of New Mexico
Oil Conservation Division

Incident ID	NRM2013660346
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I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature:

Date: 09/25/2020

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

OCDOnly

Received by: Date:

Form C-141
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State of New Mexico
Oil Conservation Division

Incident ID	NRM2013660346
District RP	
Facility ID	
Application ID	

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: 09/25/2020

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:

A proud member of WSP

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

September 25, 2020

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

RE: Closure Request
James Ranch Unit 31
Incident Number NRM2013660346
Eddy County, New Mexico

To Whom It May Concern:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following Closure Request detailing site assessment, soil sampling, and excavation activities at the James Ranch Unit 31 (Site) in Unit H, Section 36, Township 22 South, Range 30 East, in Eddy County, New Mexico (Figure 1). The purpose of the site assessment, soil sampling, and excavation activities was to address impacts to soil resulting from a release of crude oil and produced water at the Site. Based on field observations, field screening activities, and soil sample laboratory analytical results, XTO is submitting this Closure Request and requesting no further action (NFA) for Incident Number NRM2013660346.

RELEASE BACKGROUND

On May 2, 2020, a flow line was damaged by an unknown vehicle, resulting in the release of 2.09 barrels (bbls) of crude oil and 7.86 bbls of produced water onto the lease road and surrounding pasture. A vacuum truck was immediately dispatched to the Site to recover freestanding fluids, of which approximately 1.47 bbls of crude oil and 5.53 bbls of produced water were recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification Form C-141 (Form C-141) on May 14, 2020 and was assigned Incident Number NRM2013660346.

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 groundwater well data. The closest permitted groundwater well with depth to groundwater data is United States Geological Survey (USGS) well 321946103492001, located approximately 1.3 miles southeast of the Site. The groundwater well

has a reported depth to groundwater of 145 feet bgs and a total depth of 180 feet bgs. In addition, there are five wells within a 2-mile radius of the Site that indicate regional depth to water is greater than 100 feet bgs. New Mexico Office of the State Engineer (NMOSE) well C 02418 was sampled most recently on October 4, 1994 and indicates groundwater was 413 feet bgs. All wells used for depth to groundwater determination are depicted on Figure 1 and referenced well records are provided in Attachment 1.

During January 2020, in an effort to confirm depth to water in the area, a borehole (BH01) was advanced to a depth of 110 feet bgs via truck-mounted sonic drill rig. The borehole was located approximately 0.4 miles southwest of the Site. The location of borehole BH01 is provided on Figure 1. An LTE geologist logged and described soils continuously. The borehole lithologic/soil sampling log is included in Attachment 1. The borehole was left open for over 72 hours to allow for potential slow infill of groundwater. After the 72-hour waiting period without observing groundwater, it was confirmed that groundwater beneath the Site is greater than 110 feet. The borehole was properly abandoned with hydrated bentonite chips.

The closest continuously flowing water or significant watercourse to the Site is an intermittent stream, located approximately 1.4 miles southwest 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 not underlain by unstable geology (medium potential karst designation area). 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
- Total petroleum hydrocarbons (TPH)-gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg
- TPH: 2,500 mg/kg
- Chloride: 20,000 mg/kg

Additionally, a Closure Criteria of 600 mg/kg chloride was applied to the top 4 feet of the pasture area that was impacted by the release, per NMAC 19.15.29.13.D (1) for the top 4 feet of areas that will be reclaimed following remediation.

SITE ASSESSMENT ACTIVITIES AND ANALYTICAL RESULTS

On May 14, 2020, LTE personnel evaluated the release extent based on information provided on the Form C-141 and visual observations. LTE personnel collected five preliminary soil samples (SS01 through SS05) within the release extent from a depth of approximately 0.5 feet bgs to assess the lateral extent of impacted soil. Soil from the preliminary soil samples was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photoionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. The release extent and preliminary soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation was conducted during the Site visit. A photographic log is included in Attachment 2.

The preliminary soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported at or below 4 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 (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

Laboratory analytical results indicated that TPH-GRO/TPH-DRO, and TPH concentrations exceeded the Closure Criteria in preliminary soil sample SS02, located on the lease road south of the release point, and in preliminary soil sample SS05, located adjacent to the release point. Laboratory analytical results indicated that chloride concentrations exceeded the reclamation standard in preliminary soil samples SS01 through SS05. Based on visible observations, field screening activities, and laboratory analytical results for the preliminary soil samples, delineation and excavation activities were warranted.

On June 3, 2020, XTO submitted a Right of Entry (ROE) permit to the State Land Office (SLO) to request access to disturb soils in the pasture adjacent to the lease road. The executed permit was received from SLO on July 9, 2020.

EXCAVATION AND DELINEATION SOIL SAMPLING ACTIVITIES

Between August 3, 2020 and August 14, 2020, LTE personnel were at the Site to oversee excavation activities as indicated by visual observations, field screening activities, and laboratory analytical results for the preliminary soil samples. Excavation activities were performed using track-mounted backhoe and transport vehicle. To direct excavation activities, LTE screened soil for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach® chloride QuanTab® test strips, respectively. Excavation was completed within the entire release extent in the lease road and pasture.

Following removal of impacted soil, LTE collected 5-point composite soil samples at least every 200 square feet from the sidewalls and floor of the excavation. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples FS01 through FS14, and FS13A were collected from the floor of the excavation at depths ranging from 1.5 feet to 7 feet bgs. Composite soil samples SW01 through SW13 were collected from the sidewalls of the excavation at depths ranging from ground surface to 6 feet bgs.

Additionally, one borehole (BH01) was advanced to a depth of 9 feet bgs via hand auger and hydro-vacuum immediately south of the release point, to delineate the vertical extent of impacted soil. Delineation soil samples were collected from borehole BH01 at depths of 7 feet and 9 feet bgs. Soil from the borehole was field screened for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach© chloride QuanTab© test strips, respectively. Field screening results and observations for the borehole was logged on lithologic/soil sampling logs, which are included in Attachment 3.

The excavation and delineation soil samples were collected, handled, and analyzed as described above at Xenco in Carlsbad, New Mexico. The excavation extent and excavation and delineation soil sample locations are presented on Figure 3. Photo documentation was conducted during excavation activities and a photographic log is included in Attachment 2.

The excavation extent measured approximately 2,710 square feet. A total of approximately 220 cubic yards of impacted soil were removed during the excavation activities. The impacted soil was transported and properly disposed of at the R360 Facility located in Hobbs, New Mexico. After completion of confirmation sampling, the excavation was secured with fencing.

ANALYTICAL RESULTS

Laboratory analytical results for preliminary soil samples SS02 and SS05 indicated that TPH-GRO/TPH-DRO and TPH concentrations exceeded the Closure Criteria. Laboratory analytical results for preliminary soil samples SS01 through SS05 indicated that chloride concentrations exceeded the reclamation standard.

Laboratory analytical results for final excavation sidewall samples SW01 through SW13 and final excavation floor samples FS01 through FS12, FS13A, and FS14 indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. In addition, excavation samples collected in the top 4 feet of pasture areas were compliant with the reclamation standards for TPH and chloride.

Laboratory analytical results for the delineation soil samples collected from borehole BH01 indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria and provided vertical delineation to the strictest Closure

Criteria. The laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are provided in Attachment 4.

BACKFILL ACTIVITIES

Following a review of laboratory analytical results, the excavation was backfilled with clean backfill material and graded to match the surrounding area. Photo documentation was conducted during backfill activities and a photographic log is included in Attachment 2.

CLOSURE REQUEST

Site assessment and excavation activities were conducted at the Site to address the May 2, 2020, release of produced water and crude oil. Laboratory analytical results for the excavation soil samples, collected from the final excavation extent, indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Excavation soil samples collected in the pasture from the top four feet of the subsurface were compliant with the reclamation standards. Additionally, delineation soil sampling activities completed at the release point, provided vertical delineation to the strictest Closure Criteria.

Initial response efforts and excavation of impacted soil have mitigated impacts at this Site. Based on the excavation and delineation soil sample analytical results and confirmed depth to water greater than 100 feet bgs, XTO requests no further action for Incident Number NRM2013660346.

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

Sincerely,

LT ENVIRONMENTAL, INC.

Fatima Smith
Staff Geologist

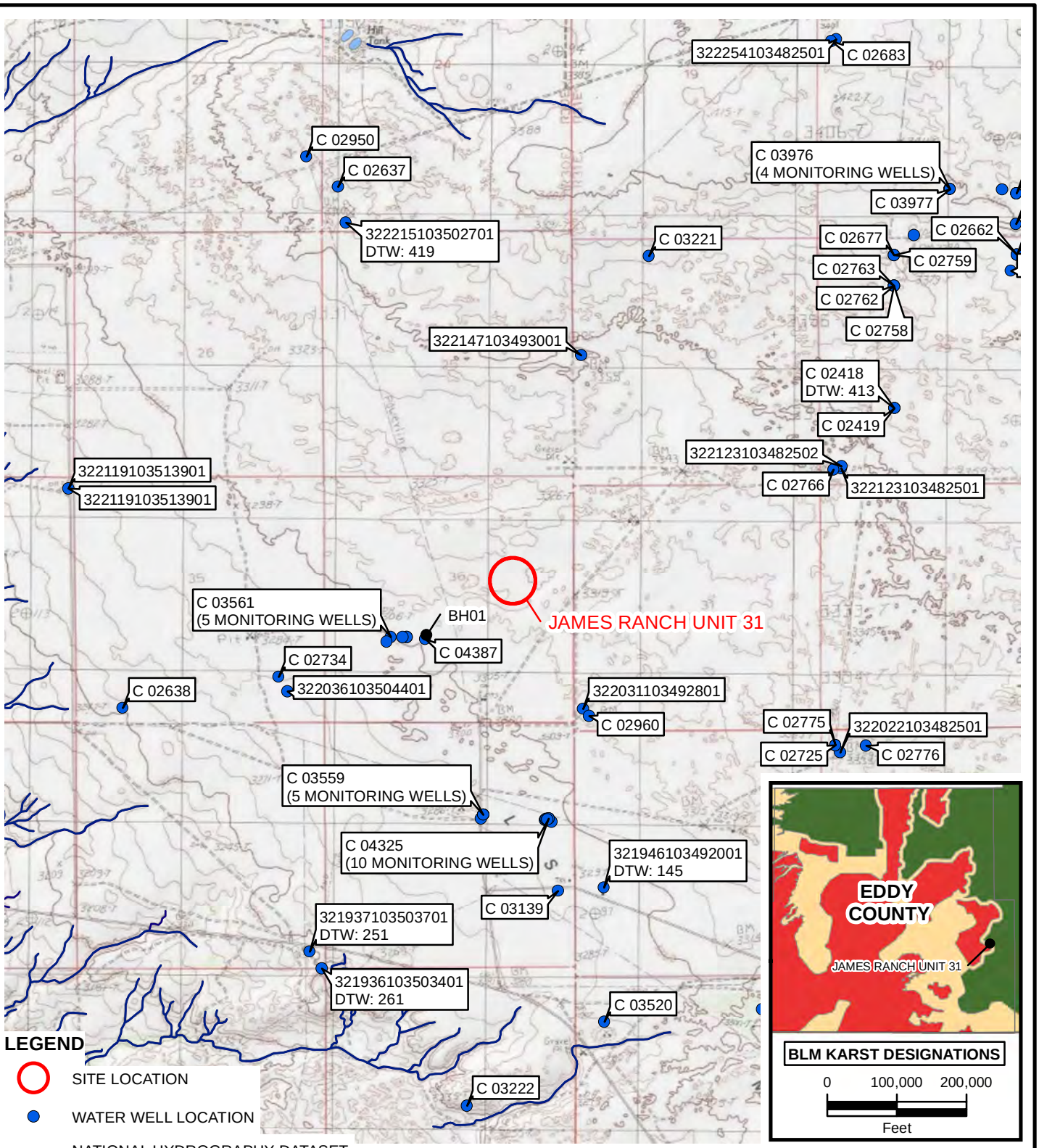
Ashley L. Ager, P.G.
Senior Geologist

cc: Kyle Littrell, XTO
Jim Amos, BLM
Robert Hamlet, NMOCD
Victoria Venegas, NMOCD

Attachments:

Figure 1	Site Location Map
Figure 2	Preliminary Soil Sample Locations
Figure 3	Soil Sample Locations
Table 1	Soil Analytical Results
Attachment 1	Referenced Well Logs
Attachment 2	Photographic Log
Attachment 3	Lithologic/Soil Sample Logs
Attachment 4	Laboratory Analytical Reports

FIGURES



NOTE: INCIDENT NUMBER NRM2013660346
DTW: DEPTH TO WATER IN FEET
BLM: BUREAU OF LAND MANAGEMENT

FIGURE 1
SITE LOCATION MAP
JAMES RANCH UNIT 31
UNIT H SEC 36 T22S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012920079_JRU 31\012920079_FIG01_SL_RECEPTOR_2020.mxd

LEGEND

IMAGE COURTESY OF ESRI

- RELEASE LOCATION
- PRELIMINARY SOIL SAMPLE WITH CONCENTRATIONS EXCEEDING APPLICABLE CLOSURE CRITERIA
- PRELIMINARY SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- RELEASE EXTENT

0 50 100
Feet

N

NOTE: INCIDENT NUMBER NRM2013660346
SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)

FIGURE 2
PRELIMINARY SOIL SAMPLE LOCATIONS
JAMES RANCH UNIT 31
UNIT H SEC 36 T22S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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P:\XTO Energy\GIS\MXD\012920079_JRU 31\012920079_FIG02_PRELIMINARY_2020.mxd

LEGEND

- RELEASE LOCATION
- FLOOR SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- SIDEWALL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- DELINEATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- EXCAVATION EXTENT

NOTE: INCIDENT NUMBER NRM2013660346
SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)
TEXT: INDICATES SOIL REPRESENTED BY SAMPLE THAT WAS REMOVED

IMAGE COURTESY OF ESRI

0 50 100
Feet

N

FIGURE 3
SOIL SAMPLE LOCATIONS
JAMES RANCH UNIT 31
UNIT H SEC 36 T22S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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P:\XTO Energy\GIS\MXD\012920079_JRU 31\012920079_FIG03_SS_LOC_2020.mxd

TABLES

TABLE 1
SOIL ANALYTICAL RESULTS

JAMES RANCH UNIT 31
INCIDENT NUMBER NRM2013660346
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	05/14/2020	<0.00199	0.00986	0.0147	0.0544	0.0790	<50.0	230	<50.0	230	230	3,630
SS02	0.5	05/14/2020	<0.00202	0.0874	0.209	0.443	0.740	164	2,910	610	**3,070**	**3,680**	11,700
SS03	0.5	05/14/2020	<0.00200	<0.00200	0.0220	0.346	0.368	<50.1	267	<50.1	267	267	8,240
SS04	0.5	05/14/2020	<0.00199	0.0179	0.00975	0.0294	0.0570	<49.8	475	74.1	475	549	17,200
SS05	0.5	05/14/2020	0.0156	20.6	14.5	20.9	**56.0**	2,740	12,700	1,230	**15,400**	**16,700**	15,500
FS01	2	08/03/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	182
FS02	1.5	08/03/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	130
FS03	2	08/03/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.3	<50.3	<50.3	<50.3	<50.3	61.3
FS04	1.5	08/03/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	68.9
FS05	1.5	08/04/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	110
FS06	1.5	08/04/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.2	<50.2	<50.2	<50.2	<50.2	43.1
FS07	1.5	08/04/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.8	<49.8	<49.8	<49.8	<49.8	83.0
FS08	1.5	08/04/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	185
FS09	1.5	08/04/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.2	<50.2	<50.2	<50.2	<50.2	173
FS10	1.5	08/04/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.1	<50.1	<50.1	<50.1	<50.1	213
FS11	1.5	08/04/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.8	<49.8	<49.8	<49.8	<49.8	28.5
FS12	1.5	08/04/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.3	<50.3	<50.3	<50.3	<50.3	108
FS13	6	08/10/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.3	1,180	135	**1,180**	1,320	2,350
FS13A	7	08/14/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	1,650
FS14	6	08/10/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.0	655	96.2	655	751	3,940
SW01	0 - 2	08/03/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.1	<50.1	<50.1	<50.1	<50.1	204
SW02	0 - 2	08/03/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	40.6
SW03	0 - 2	08/03/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	192
SW04	0 - 1.5	08/03/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.0	<50.0	<50.0	<50.0	<50.0	109

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TABLE 1
SOIL ANALYTICAL RESULTS

JAMES RANCH UNIT 31
INCIDENT NUMBER NRM2013660346
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)
SW05	0 - 1.5	08/04/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.8	<49.8	<49.8	<49.8	<49.8	18.0
SW06	0 - 1.5	08/04/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	251
SW07	0 - 1.5	08/04/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.0	<50.0	<50.0	<50.0	<50.0	68.6
SW08	0 - 1.5	08/04/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	147
SW09	0 - 1.5	08/04/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	219
SW10	0 - 1.5	08/04/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.3	<50.3	<50.3	<50.3	<50.3	97.6
SW11	0 - 1.5	08/04/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.0	<50.0	<50.0	<50.0	<50.0	20.2
SW12	0 - 6	08/06/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	46.5
SW13	0 - 6	08/10/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.1	<50.1	<50.1	<50.1	<50.1	146
BH01	7	08/14/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.8	<49.8	<49.8	<49.8	<49.8	533
BH01A	9	08/14/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	182

Notes:

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

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ATTACHMENT 1: REFERENCED WELL LOGS

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

Identifier:	Date:
BH01	1/18 - 1/21/20
Project Name: JRU 29	**RP Number:** 2RP-3302, 2RP-3726, 2RP-4040, 2RP-3822
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: FS, WM / Method: SONIC
Lat/Long: / Field Screening: ~~CHLORIDES, PID~~	Hole Diameter: 4" / Total Depth: 110'

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

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

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

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

LITHOLOGIC / SOIL SAMPLING LOG

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

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

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
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Identifier: BH01	Date: 1/18 - 1/21/20
Project Name: JRU 29	RP Number: 2RP-3302, 2RP-3726, 2RP-4040, 2RP-3082,
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: FS, BB, WM Method: Sonic
Lat/Long:	Field Screening: CHLORIDES, PID Hole Diameter: 6" Total Depth: 110'
Comments:	

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

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

Comments:

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

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

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

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

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

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USGS 321946103492001 23S.31E.06.312333

Available data for this site SUMMARY OF ALL AVAILABLE DATA GO

Well Site

DESCRIPTION:

Latitude 32°19'53.3", Longitude 103°49'24.8" NAD83
Eddy County, New Mexico , Hydrologic Unit 13060011
Well depth: 180 feet
Land surface altitude: 3,305.00 feet above NGVD29.
Well completed in "Chinle Formation" (231CHNL) local aquifer

AVAILABLE DATA:

Data Type	Begin Date	End Date	Count
Field groundwater-level measurements	1959-02-04	2013-01-16	2
Revisions	Unavailable (site:0) (timeseries:0)		

OPERATION:

Record for this site is maintained by the USGS New Mexico Water Science Center
Email questions about this site to New Mexico Water Science Center Water-Data Inquiries

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Title: NWIS Site Information for USA: Site Inventory
URL: https://waterdata.usgs.gov/nwis/inventory?agency_code=USGS&site_no=321946103492001

Page Contact Information: New Mexico Water Data Support Team
Page Last Modified: 2020-08-18 18:36:05 EDT
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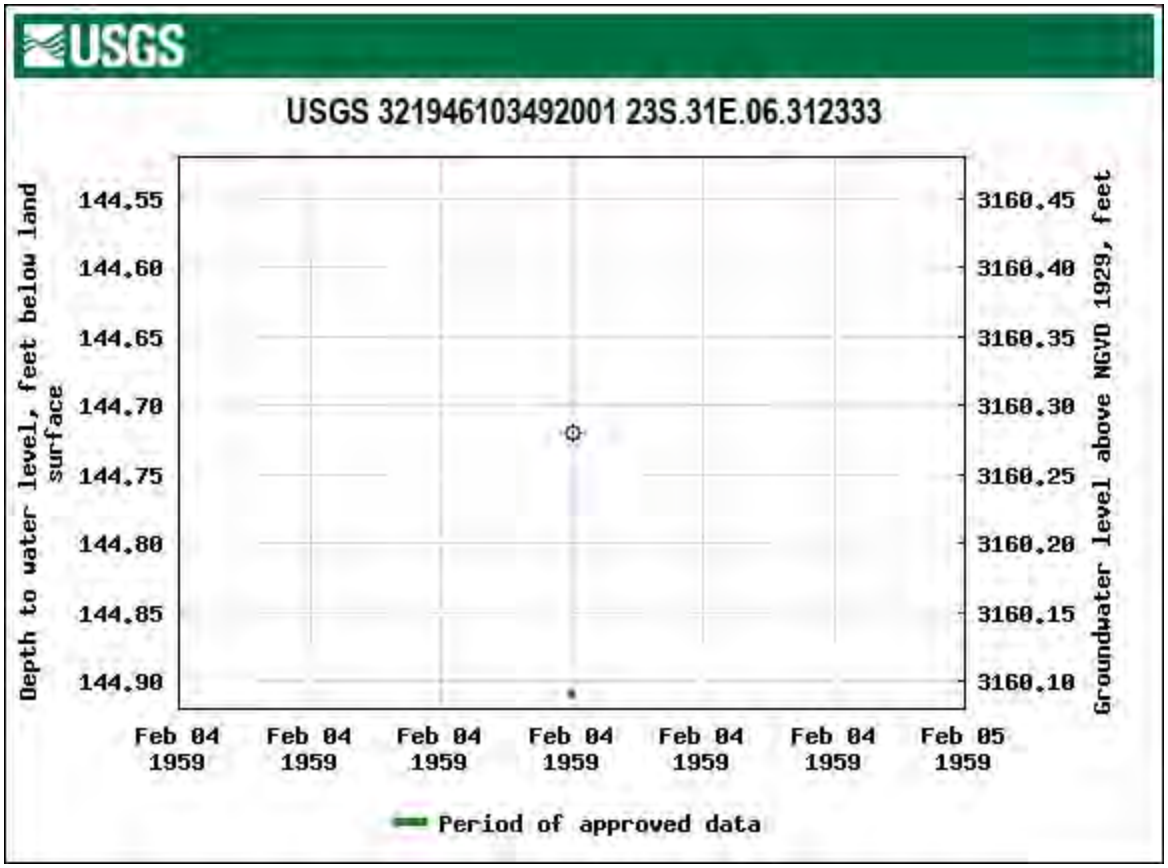
USGS
USGS 321946103492001 23S.31E.06.312333
Depth to water level, feet below land surface
144.55
144.60
144.65
144.70
144.75
144.80
144.85
144.90
Groundwater level above NGVD 1929, feet
3160.45
3160.40
3160.35
3160.30
3160.25
3160.20
3160.15
3160.10
Feb 04 1959
Feb 04 1959
Feb 04 1959
Feb 04 1959
Feb 04 1959
Feb 04 1959
Feb 05 1959
Period of approved data

New Mexico Office of the State Engineer

Water Right Summary

WR File Number: C 02418 **Subbasin:** CUB **Cross Reference:** -

Primary Purpose: MON MONITORING WELL

Primary Status: PMT PERMIT

Total Acres: **Subfile:** - **Header:** -

Total Diversion: 0 **Cause/Case:** -

Owner: U.S.DEPT. OF ENERGY

Contact: DOUG LYNN

Documents on File

Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/ To	Acres	Diversion	Consumptive
279289	EXPL	2003-08-19	PMT	APR	C 02418 MONITORING WELL	T	0	0	
202188	APPRO	1996-10-30	WDP	WDR	C 02418	T	0	1	
173350	ADM	1996-10-30	WDP	WDR	C 02418	T	0	1	
202181	EXPL	1996-01-25	PMT	LOG	C 02418	T	0	0	

Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Well Tag	Source	Q 64	Q16	Q4	Sec	Tws	Rng	X	Y	Other Location Desc
C 02418		Artesian	3	2	3	29	22S	31E	612613	3580948*	

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

Place of Use

Q 256	Q 64	Q16	Q4	Sec	Tws	Rng	Acres	Diversion	CU	Use	Priority	Status	Other Location Desc
							0	0		MON		PMT	NO PLACE OF USE GIVEN

Source

Acres	Diversion	CU	Use	Priority	Source	Description
0	0		MON		GW	

8/18/20 4:44 PM WATER RIGHT SUMMARY

New Mexico Office of the State Engineer

Point of Diversion Summary

Well Tag	POD Number	(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) Q64	Q16	Q4	Sec	Twn	Rng	(NAD83 UTM in meters) X	Y
	C 02418	3	2	3	29	22S	31E	612613	3580948*

Driller License: 1311 **Driller Company:** GEOPROJECTS INTERNATIONAL, INC

Driller Name:

Drill Start Date:	09/26/1994	**Drill Finish Date:**	10/04/1994	**Plug Date:**	
Log File Date:	05/07/2003	**PCW Rcv Date:**	10/29/1998	**Source:**	Artesian
Pump Type:	SUBMER	**Pipe Discharge Size:**	.75"	**Estimated Yield:**	
Casing Size:	5.00	**Depth Well:**	617 feet	**Depth Water:**	413 feet

Meter Number:	729	**Meter Make:**	NONE
Meter Serial Number:	NONE	**Meter Multiplier:**	1.0000
Number of Dials:	6	**Meter Type:**	Diversion
Unit of Measure:	Gallons	**Return Flow Percent:**	
Usage Multiplier:		**Reading Frequency:**	

Meter Readings (in Acre-Feet)

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount	Online
01/01/2000	2000	0	A	ms		0	
01/27/2000	2000	9	A	ms		0.003	
07/03/2000	2000	19	A	mb		0.003	
01/08/2001	2000	1096	A	RPT		0.003	
06/30/2001	2001	2170	A	RPT		0.003	
01/08/2002	2001	3473	A	tg		0.004	
07/03/2002	2002	4451	A	rm		0.003	
01/09/2003	2002	5103	A	RPT		0.002	

**YTD Meter Amounts:	Year	Amount
	2000	0.009
	2001	0.007
	2002	0.005

***UTM location was derived from PLSS - see Help**

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USGS Water Resources

Data Category: Site Information | Geographic Area: United States | GO

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USGS 321937103503701 23S.30E.02.44414 A

Available data for this site SUMMARY OF ALL AVAILABLE DATA | GO

Well Site

DESCRIPTION:

Latitude 32°19'40.0", Longitude 103°50'38.7" NAD83
Eddy County, New Mexico , Hydrologic Unit 13060011
Well depth: 317 feet
Land surface altitude: 3,268.00 feet above NGVD29.
Well completed in "Rustler Formation" (312RSLR) local aquifer

AVAILABLE DATA:

Data Type	Begin Date	End Date	Count
Field groundwater-level measurements	1959-04-20	2013-01-16	10
Field/Lab water-quality samples	1972-09-20	1972-09-20	1
Revisions	Unavailable (site:0) (timeseries:0)		

OPERATION:

Record for this site is maintained by the USGS New Mexico Water Science Center
Email questions about this site to New Mexico Water Science Center Water-Data Inquiries

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Title: NWIS Site Information for USA: Site Inventory
URL: https://waterdata.usgs.gov/nwis/inventory?agency_code=USGS&site_no=321937103503701

Page Contact Information: New Mexico Water Data Support Team
Page Last Modified: 2020-08-18 18:37:05 EDT
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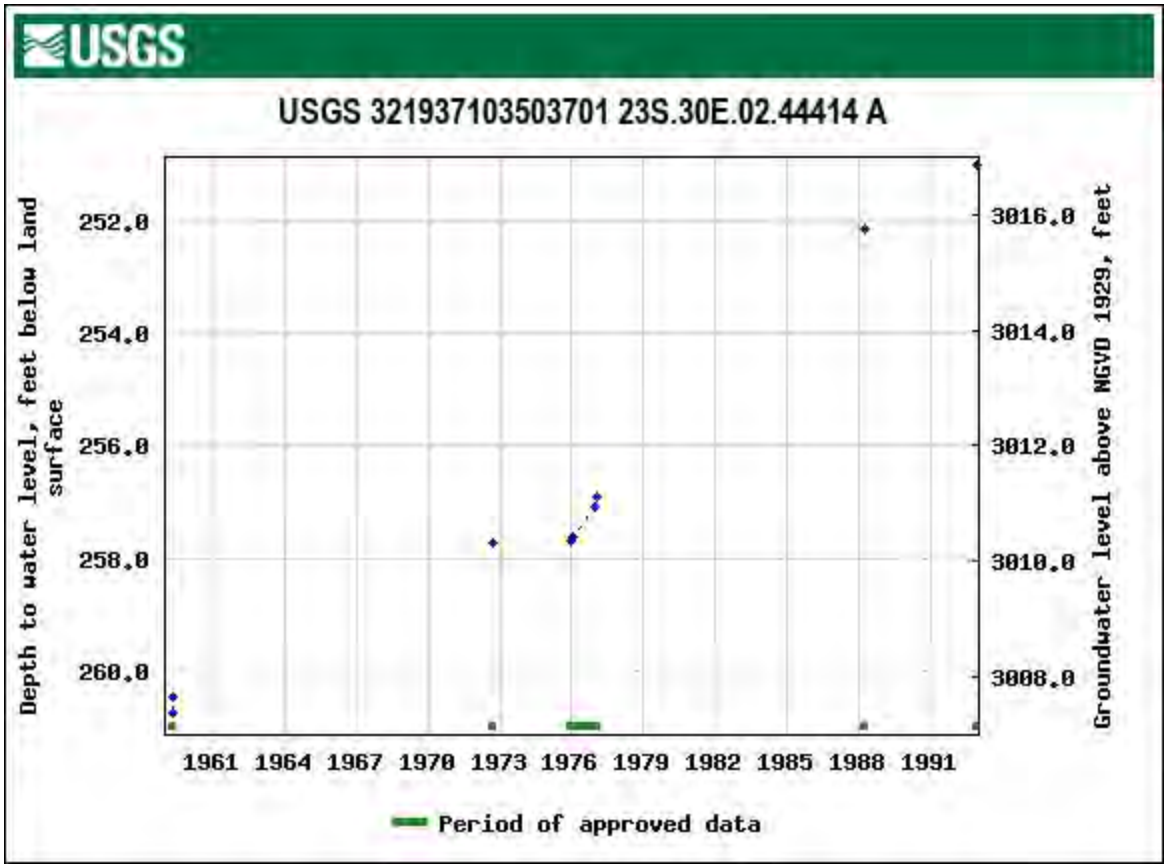
USGS
USGS 321937103503701 23S.30E.02.44414 A
Depth to water level, feet below land surface
252.0
254.0
256.0
258.0
260.0
Groundwater level above NGVD 1929, feet
3016.0
3014.0
3012.0
3010.0
3008.0
1961 1964 1967 1970 1973 1976 1979 1982 1985 1988 1991
Period of approved data

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USGS 321936103503401 23S.30E.02.44414

Available data for this site SUMMARY OF ALL AVAILABLE DATA GO

Well Site

DESCRIPTION:

Latitude 32°19'36", Longitude 103°50'34" NAD27
Eddy County, New Mexico , Hydrologic Unit 13060011
Well depth: 320 feet
Land surface altitude: 3,250 feet above NAVD88.
Well completed in "Rustler Formation" (312RSLR) local aquifer

AVAILABLE DATA:

Data Type	Begin Date	End Date	Count
Field groundwater-level measurements	1959-04-03	1959-04-03	1
Revisions	Unavailable (site:0) (timeseries:0)		

OPERATION:

Record for this site is maintained by the USGS New Mexico Water Science Center
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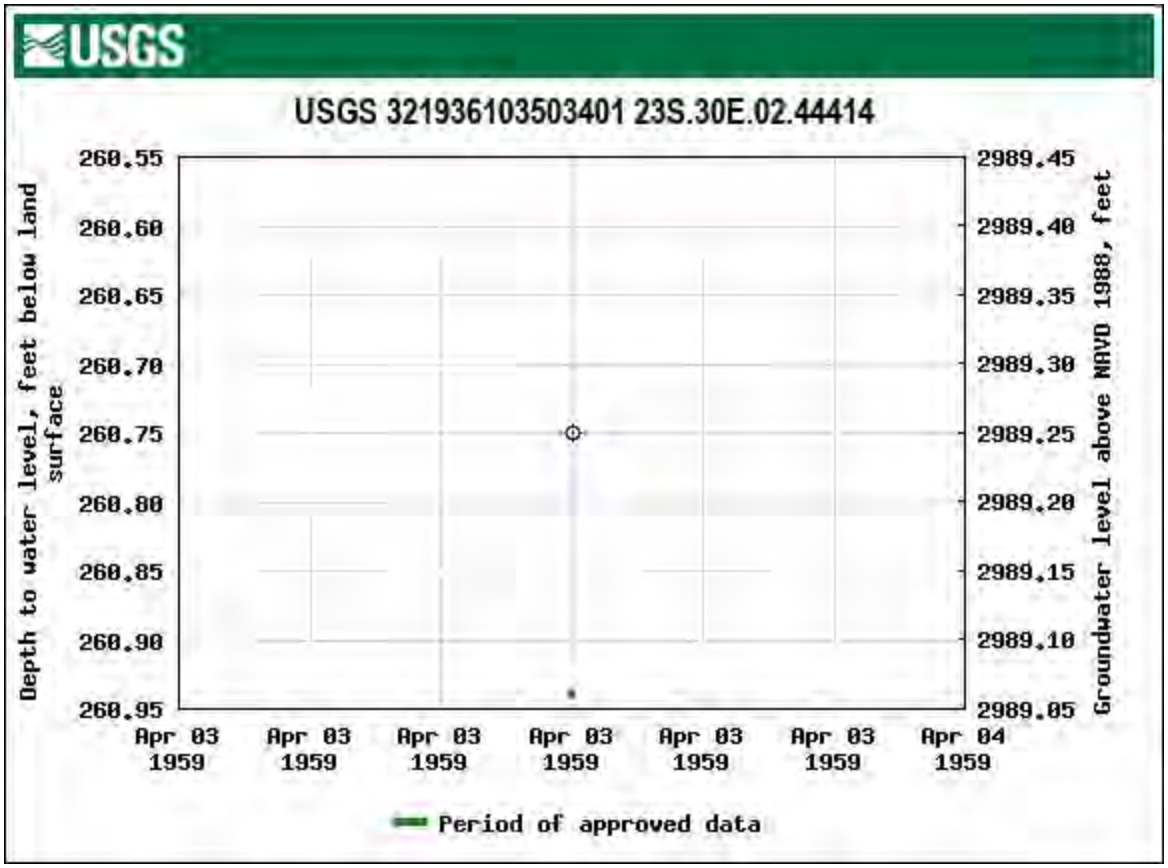
Page Contact Information: New Mexico Water Data Support Team
Page Last Modified: 2020-08-18 18:38:06 EDT
0.26 0.25 caww01


USGS
USGS 321936103503401 23S.30E.02.44414
Depth to water level, feet below land surface
260.55
260.60
260.65
260.70
260.75
260.80
260.85
260.90
260.95
Groundwater level above NAVD 1988, feet
2989.45
2989.40
2989.35
2989.30
2989.25
2989.20
2989.15
2989.10
2989.05
Apr 03 1959
Apr 03 1959
Apr 03 1959
Apr 03 1959
Apr 03 1959
Apr 03 1959
Apr 04 1959
Period of approved data

National Water Information System: Web Interface

Click to hideNews Bulletins

- Introducing The Next Generation of USGS Water Data for the Nation
- Full News

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

Available data for this site SUMMARY OF ALL AVAILABLE DATA | GO

Well Site

DESCRIPTION:

Latitude 32°22'15", Longitude 103°50'27" NAD27
Eddy County, New Mexico , Hydrologic Unit 13060011
Well depth: not determined.
Land surface altitude: 3,360 feet above NGVD29.

AVAILABLE DATA:

Data Type	Begin Date	End Date	Count
Field groundwater-level measurements	1977-02-24	1977-02-24	1
Field/Lab water-quality samples	1977-02-24	1977-03-14	2
Revisions	Unavailable (site:0) (timeseries:0)		

OPERATION:

Record for this site is maintained by the USGS New Mexico Water Science Center
Email questions about this site to New Mexico Water Science Center Water-Data Inquiries

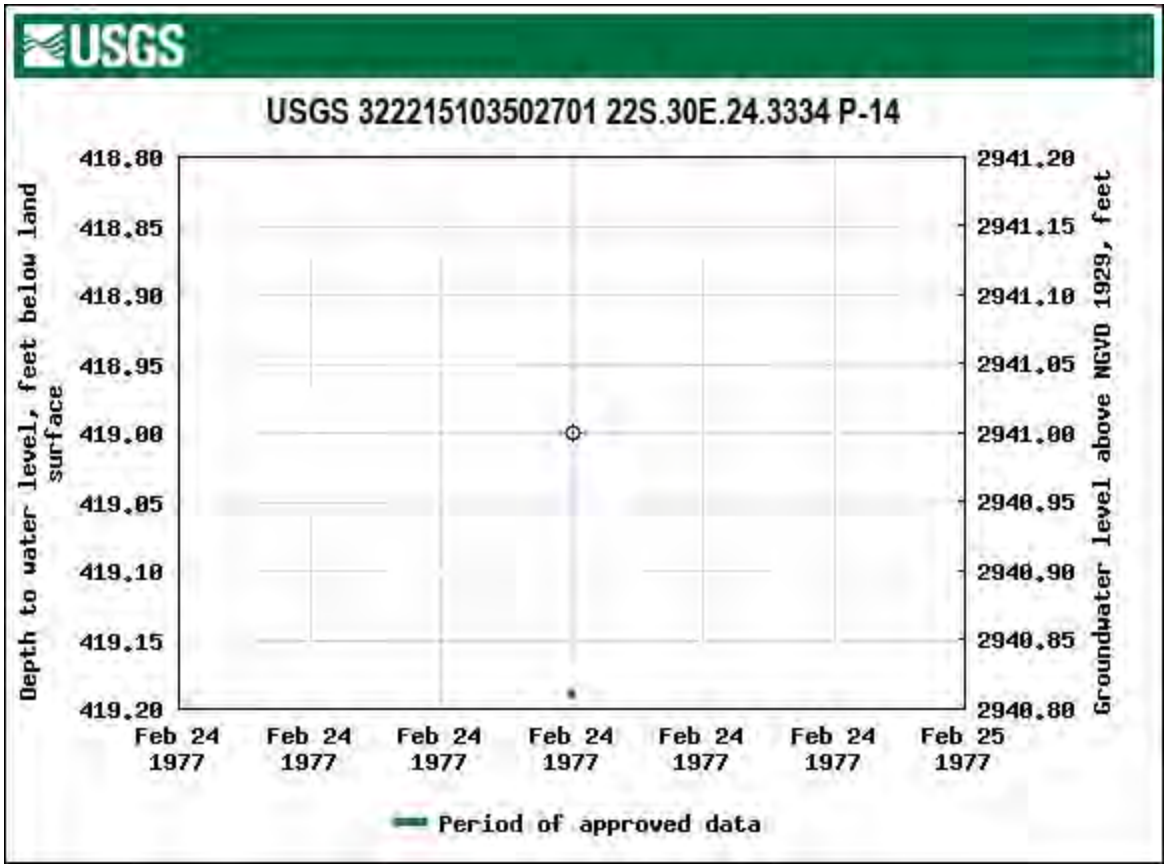
Questions about sites/data?
Feedback on this web site
Automated retrievals
Help
Data Tips
Explanation of terms
Subscribe for system changes
News

Accessibility FOIA Privacy Policies and Notices

U.S. Department of the Interior | U.S. Geological Survey

Title: NWIS Site Information for USA: Site Inventory
URL: https://waterdata.usgs.gov/nwis/inventory?agency_code=USGS&site_no=322215103502701

Page Contact Information: New Mexico Water Data Support Team
Page Last Modified: 2020-08-18 18:40:07 EDT
0.29 0.27 caww01


USGS
USGS 322215103502701 22S.30E.24.3334 P-14
Depth to water level, feet below land surface
418.80
418.85
418.90
418.95
419.00
419.05
419.10
419.15
419.20
Groundwater level above NGVD 1929, feet
2941.20
2941.15
2941.10
2941.05
2941.00
2940.95
2940.90
2940.85
2940.80
Feb 24 1977
Feb 24 1977
Feb 24 1977
Feb 24 1977
Feb 24 1977
Feb 24 1977
Feb 25 1977
Period of approved data

ATTACHMENT 2: PHOTOGRAPHIC LOG

PHOTOGRAPHIC LOG

Photograph 1: Source of release (2” flow line)

Photograph 2: Release flow direction facing South

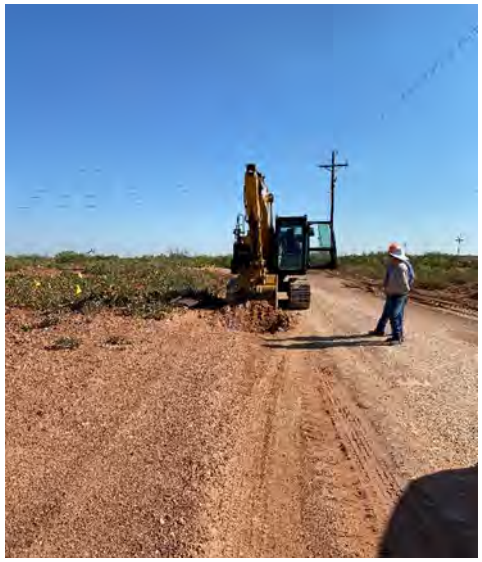
Photograph 3: Lease road and pasture release extent facing Southwest

Photograph 4: Lease road release extent facing North

James Ranch Unit 31
Incident Number NRM2013660346
Photographs Taken: May 15, 2020 – August 14, 2020

A proud member of WSP

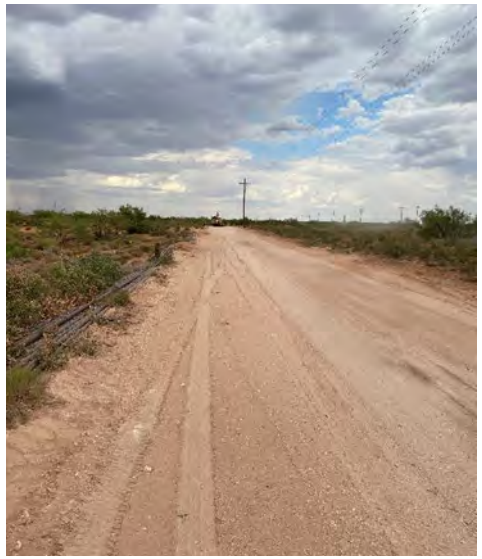
PHOTOGRAPHIC LOG



Photograph 5: Delineation of release extent via trackhoe facing North

Photograph 6: Excavation extent on lease road facing North

Photograph 7: Excavation extent in pasture facing Southeast



Photograph 8: Backfilled road excavation facing North

ATTACHMENT 3: LITHOLOGIC SOIL SAMPLE LOGS

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
A proud member of WSP
Compliance · Engineering · Remediation

BH or PH Name: BH01	Date: 8/14/2020
Site Name: JRU 31	
RP or Incident Number: NRM2013660346	
LTE Job Number: 012920079	

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: FS	Method: Hand auger/HVAC		
Lat/Long: 32.349692, -103.829822	Field Screening: Hatch chloride strips, PID	Hole Diameter:	Total Depth: 9'

Comments: All field screenings include a 40% correction factor. Same as above (SAA).

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0	CCHE	CALICHE, dry, tan-off white, poorly consolidated, strong odor, dark brown staining
						1	SP	SAND, dry, reddish brown, poorly graded, fine-very fine, no stain, no odor
						2		SAA
						3		SAA
						4		SAA
						5		SAA
						6	CL	CLAY, dry, reddish brown, low plasticity, non cohesive, no stain, no odor
D	1,024	0.1	N	BH01	7'	7		SAA
						8	CCHE	CALICHE, dry, tan-off white, consolidated, no odor, no staining
D	436	0.0	N	BH01A	9'	9		SAA
								Total depth 9 feet bgs

ATTACHMENT 4: LABORATORY ANALYTICAL REPORTS

Certificate of Analysis Summary 661635

LT Environmental, Inc., Arvada, CO

Project Name: JRU 31 Flowline

Project Id: 012920079
Contact: Tacoma Morrissey
Project Location:

Date Received in Lab: Thu 05.14.2020 13:50
Report Date: 05.18.2020 13:48
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	661635-001		661635-002		661635-003		661635-004		661635-005	
	Field Id:	SS01		SS02		SS03		SS04		SS05	
	Depth:	0.5- ft		0.5- ft		0.5- ft		0.5- ft		0.5- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	05.14.2020 10:01		05.14.2020 10:31		05.14.2020 10:43		05.14.2020 10:55		05.14.2020 11:03	
BTEX by EPA 8021B	***Extracted:***	05.14.2020 14:39		05.14.2020 14:39		05.14.2020 14:39		05.14.2020 14:39		05.14.2020 14:39	
	Analyzed:	05.14.2020 17:46		05.14.2020 18:27		05.14.2020 18:47		05.14.2020 19:08		05.14.2020 19:48	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199	0.0156	0.00200
Toluene		0.00986	0.00199	0.0874	0.00202	<0.00200	0.00200	0.0179	0.00199	20.6 D	0.401
Ethylbenzene		0.0147	0.00199	0.209	0.00202	0.0220	0.00200	0.00975	0.00199	14.5 D	0.401
m,p-Xylenes		0.0337	0.00398	0.0804	0.00403	0.0195	0.00399	0.0269	0.00398	3.99 D	0.802
o-Xylene		0.0207	0.00199	0.363	0.00202	0.326	0.00200	0.00249	0.00199	16.9 D	0.401
Total Xylenes		0.0544	0.00199	0.443	0.00202	0.346	0.00200	0.0294	0.00199	20.9	0.401
Total BTEX		0.0790	0.00199	0.740	0.00202	0.368	0.00200	0.0570	0.00199	56.0	0.00200
Chloride by EPA 300	***Extracted:***	05.14.2020 15:23		05.14.2020 15:23		05.14.2020 15:23		05.14.2020 15:23		05.14.2020 15:23	
	Analyzed:	05.14.2020 15:48		05.14.2020 15:54		05.14.2020 16:00		05.14.2020 16:06		05.14.2020 16:12	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		3630	99.2	11700	200	8240	200	17200	496	15500	495
TPH by SW8015 Mod	***Extracted:***	05.14.2020 17:30		05.14.2020 17:30		05.14.2020 17:30		05.14.2020 17:30		05.14.2020 17:30	
	Analyzed:	05.15.2020 08:33		05.15.2020 16:15		05.15.2020 15:13		05.15.2020 15:34		05.15.2020 17:18	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	164	125	<50.1	50.1	<49.8	49.8	2740	250
Diesel Range Organics (DRO)		230	50.0	2910	250	267	50.1	475	49.8	12700	250
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	610	250	<50.1	50.1	74.1	49.8	1230	250
Total GRO-DRO		230	50.0	3070	125	267	50.1	475	49.8	15400	250
Total TPH		230	50.0	3680	125	267	50.1	549	49.8	16700	250

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

Jessica Kramer
Project Manager

Analytical Report 661635

for

LT Environmental, Inc.

Project Manager: Tacoma Morrissey

JRU 31 Flowline

012920079

05.18.2020

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-32), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

05.18.2020

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

Reference: XENCO Report No(s): **661635**
JRU 31 Flowline
Project Address:

Tacoma Morrissey:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 661635. 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. 661635 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 Manager

A Small Business and Minority Company

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

Sample Cross Reference 661635

LT Environmental, Inc., Arvada, CO

JRU 31 Flowline

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	05.14.2020 10:01	0.5 ft	661635-001
SS02	S	05.14.2020 10:31	0.5 ft	661635-002
SS03	S	05.14.2020 10:43	0.5 ft	661635-003
SS04	S	05.14.2020 10:55	0.5 ft	661635-004
SS05	S	05.14.2020 11:03	0.5 ft	661635-005

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: JRU 31 Flowline

Project ID: *012920079*
Work Order Number(s): *661635*

Report Date: *05.18.2020*
Date Received: *05.14.2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analytical Results 661635

LT Environmental, Inc., Arvada, CO

JRU 31 Flowline

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	05.14.2020 13:50
Lab Sample Id:	661635-001	Date Collected:	05.14.2020 10:01	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.14.2020 15:23	Basis:	Wet Weight
Seq Number:	3126022				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**3630**	99.2	mg/kg	05.14.2020 15:48		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	05.14.2020 17:30	Basis:	Wet Weight
Seq Number:	3126041				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	05.15.2020 08:33	U	1
Diesel Range Organics (DRO)	C10C28DRO	**230**	50.0	mg/kg	05.15.2020 08:33		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	05.15.2020 08:33	U	1
Total GRO-DRO	PHC628	**230**	50.0	mg/kg	05.15.2020 08:33		1
Total TPH	PHC635	**230**	50.0	mg/kg	05.15.2020 08:33		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	05.15.2020 08:33	
o-Terphenyl	84-15-1	111	%	70-135	05.15.2020 08:33	

Certificate of Analytical Results 661635

LT Environmental, Inc., Arvada, CO

JRU 31 Flowline

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	05.14.2020 13:50
Lab Sample Id:	661635-001	Date Collected:	05.14.2020 10:01	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.14.2020 14:39	Basis:	Wet Weight
Seq Number:	3126047				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	05.14.2020 17:46	U	1
Toluene	108-88-3	**0.00986**	0.00199	mg/kg	05.14.2020 17:46		1
Ethylbenzene	100-41-4	**0.0147**	0.00199	mg/kg	05.14.2020 17:46		1
m,p-Xylenes	179601-23-1	**0.0337**	0.00398	mg/kg	05.14.2020 17:46		1
o-Xylene	95-47-6	**0.0207**	0.00199	mg/kg	05.14.2020 17:46		1
Total Xylenes	1330-20-7	**0.0544**	0.00199	mg/kg	05.14.2020 17:46		1
Total BTEX		**0.0790**	0.00199	mg/kg	05.14.2020 17:46		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	97	%	70-130	05.14.2020 17:46	
1,4-Difluorobenzene	540-36-3	102	%	70-130	05.14.2020 17:46	

Certificate of Analytical Results 661635

LT Environmental, Inc., Arvada, CO

JRU 31 Flowline

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	05.14.2020 13:50
Lab Sample Id:	661635-002	Date Collected:	05.14.2020 10:31	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.14.2020 15:23	Basis:	Wet Weight
Seq Number:	3126022				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**11700**	200	mg/kg	05.14.2020 15:54		20

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	05.14.2020 17:30	Basis:	Wet Weight
Seq Number:	3126199				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**164**	125	mg/kg	05.15.2020 16:15		5
Diesel Range Organics (DRO)	C10C28DRO	**2910**	250	mg/kg	05.15.2020 16:15		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**610**	250	mg/kg	05.15.2020 16:15		5
Total GRO-DRO	PHC628	**3070**	125	mg/kg	05.15.2020 16:15		5
Total TPH	PHC635	**3680**	125	mg/kg	05.15.2020 16:15		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	05.15.2020 16:15	
o-Terphenyl	84-15-1	118	%	70-135	05.15.2020 16:15	

Certificate of Analytical Results 661635

LT Environmental, Inc., Arvada, CO

JRU 31 Flowline

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	05.14.2020 13:50
Lab Sample Id:	661635-002	Date Collected:	05.14.2020 10:31	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.14.2020 14:39	Basis:	Wet Weight
Seq Number:	3126047				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	05.14.2020 18:27	U	1
Toluene	108-88-3	**0.0874**	0.00202	mg/kg	05.14.2020 18:27		1
Ethylbenzene	100-41-4	**0.209**	0.00202	mg/kg	05.14.2020 18:27		1
m,p-Xylenes	179601-23-1	**0.0804**	0.00403	mg/kg	05.14.2020 18:27		1
o-Xylene	95-47-6	**0.363**	0.00202	mg/kg	05.14.2020 18:27		1
Total Xylenes	1330-20-7	**0.443**	0.00202	mg/kg	05.14.2020 18:27		1
Total BTEX		**0.740**	0.00202	mg/kg	05.14.2020 18:27		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	70-130	05.14.2020 18:27	
4-Bromofluorobenzene	460-00-4	130	%	70-130	05.14.2020 18:27	

Certificate of Analytical Results 661635

LT Environmental, Inc., Arvada, CO

JRU 31 Flowline

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	05.14.2020 13:50
Lab Sample Id:	661635-003	Date Collected:	05.14.2020 10:43	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.14.2020 15:23	Basis:	Wet Weight
Seq Number:	3126022				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8240**	200	mg/kg	05.14.2020 16:00		20

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	05.14.2020 17:30	Basis:	Wet Weight
Seq Number:	3126199				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	05.15.2020 15:13	U	1
Diesel Range Organics (DRO)	C10C28DRO	**267**	50.1	mg/kg	05.15.2020 15:13		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	05.15.2020 15:13	U	1
Total GRO-DRO	PHC628	**267**	50.1	mg/kg	05.15.2020 15:13		1
Total TPH	PHC635	**267**	50.1	mg/kg	05.15.2020 15:13		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	05.15.2020 15:13	
o-Terphenyl	84-15-1	111	%	70-135	05.15.2020 15:13	

Certificate of Analytical Results 661635

LT Environmental, Inc., Arvada, CO

JRU 31 Flowline

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	05.14.2020 13:50
Lab Sample Id:	661635-003	Date Collected:	05.14.2020 10:43	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.14.2020 14:39	Basis:	Wet Weight
Seq Number:	3126047				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.14.2020 18:47	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.14.2020 18:47	U	1
Ethylbenzene	100-41-4	**0.0220**	0.00200	mg/kg	05.14.2020 18:47		1
m,p-Xylenes	179601-23-1	**0.0195**	0.00399	mg/kg	05.14.2020 18:47		1
o-Xylene	95-47-6	**0.326**	0.00200	mg/kg	05.14.2020 18:47		1
Total Xylenes	1330-20-7	**0.346**	0.00200	mg/kg	05.14.2020 18:47		1
Total BTEX		**0.368**	0.00200	mg/kg	05.14.2020 18:47		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	97	%	70-130	05.14.2020 18:47	
1,4-Difluorobenzene	540-36-3	103	%	70-130	05.14.2020 18:47	

Certificate of Analytical Results 661635

LT Environmental, Inc., Arvada, CO

JRU 31 Flowline

Sample Id:	**SS04**	Matrix:	Soil	Date Received:	05.14.2020 13:50
Lab Sample Id:	661635-004	Date Collected:	05.14.2020 10:55	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.14.2020 15:23	Basis:	Wet Weight
Seq Number:	3126022				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**17200**	496	mg/kg	05.14.2020 16:06		50

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	05.14.2020 17:30	Basis:	Wet Weight
Seq Number:	3126199				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	05.15.2020 15:34	U	1
Diesel Range Organics (DRO)	C10C28DRO	**475**	49.8	mg/kg	05.15.2020 15:34		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**74.1**	49.8	mg/kg	05.15.2020 15:34		1
Total GRO-DRO	PHC628	**475**	49.8	mg/kg	05.15.2020 15:34		1
Total TPH	PHC635	**549**	49.8	mg/kg	05.15.2020 15:34		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	05.15.2020 15:34	
o-Terphenyl	84-15-1	118	%	70-135	05.15.2020 15:34	

Certificate of Analytical Results 661635

LT Environmental, Inc., Arvada, CO

JRU 31 Flowline

Sample Id:	**SS04**	Matrix:	Soil	Date Received:	05.14.2020 13:50
Lab Sample Id:	661635-004	Date Collected:	05.14.2020 10:55	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.14.2020 14:39	Basis:	Wet Weight
Seq Number:	3126047				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	05.14.2020 19:08	U	1
Toluene	108-88-3	**0.0179**	0.00199	mg/kg	05.14.2020 19:08		1
Ethylbenzene	100-41-4	**0.00975**	0.00199	mg/kg	05.14.2020 19:08		1
m,p-Xylenes	179601-23-1	**0.0269**	0.00398	mg/kg	05.14.2020 19:08		1
o-Xylene	95-47-6	**0.00249**	0.00199	mg/kg	05.14.2020 19:08		1
Total Xylenes	1330-20-7	**0.0294**	0.00199	mg/kg	05.14.2020 19:08		1
Total BTEX		**0.0570**	0.00199	mg/kg	05.14.2020 19:08		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	05.14.2020 19:08	
4-Bromofluorobenzene	460-00-4	89	%	70-130	05.14.2020 19:08	

Certificate of Analytical Results 661635

LT Environmental, Inc., Arvada, CO

JRU 31 Flowline

Sample Id:	**SS05**	Matrix:	Soil	Date Received:	05.14.2020 13:50
Lab Sample Id:	661635-005	Date Collected:	05.14.2020 11:03	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.14.2020 15:23	Basis:	Wet Weight
Seq Number:	3126022				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**15500**	495	mg/kg	05.14.2020 16:12		50

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	05.14.2020 17:30	Basis:	Wet Weight
Seq Number:	3126199				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**2740**	250	mg/kg	05.15.2020 17:18		5
Diesel Range Organics (DRO)	C10C28DRO	**12700**	250	mg/kg	05.15.2020 17:18		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**1230**	250	mg/kg	05.15.2020 17:18		5
Total GRO-DRO	PHC628	**15400**	250	mg/kg	05.15.2020 17:18		5
Total TPH	PHC635	**16700**	250	mg/kg	05.15.2020 17:18		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	05.15.2020 17:18	
o-Terphenyl	84-15-1	132	%	70-135	05.15.2020 17:18	

Certificate of Analytical Results 661635

LT Environmental, Inc., Arvada, CO

JRU 31 Flowline

Sample Id:	**SS05**	Matrix:	Soil	Date Received:	05.14.2020 13:50
Lab Sample Id:	661635-005	Date Collected:	05.14.2020 11:03	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.14.2020 14:39	Basis:	Wet Weight
Seq Number:	3126047				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.0156**	0.00200	mg/kg	05.14.2020 19:48		1
Toluene	108-88-3	**20.6**	0.401	mg/kg	05.15.2020 10:44	D	200
Ethylbenzene	100-41-4	**14.5**	0.401	mg/kg	05.15.2020 10:44	D	200
m,p-Xylenes	179601-23-1	**3.99**	0.802	mg/kg	05.15.2020 10:44	D	200
o-Xylene	95-47-6	**16.9**	0.401	mg/kg	05.15.2020 10:44	D	200
Total Xylenes	1330-20-7	**20.9**	0.401	mg/kg	05.15.2020 10:44		200
Total BTEX		**56.0**	0.00200	mg/kg	05.15.2020 10:44		200

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	82	%	70-130	05.14.2020 19:48	
4-Bromofluorobenzene	460-00-4	95	%	70-130	05.14.2020 19:48	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 661635

LT Environmental, Inc.

JRU 31 Flowline

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3126022 — Matrix: Solid — Date Prep: 05.14.2020
MB Sample Id: 7703314-1-BLK — LCS Sample Id: 7703314-1-BKS — LCSD Sample Id: 7703314-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	250	100	249	100	90-110	0	20	mg/kg	05.14.2020 13:15	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3126022 — Matrix: Soil — Date Prep: 05.14.2020
Parent Sample Id: 661534-001 — MS Sample Id: 661534-001 S — MSD Sample Id: 661534-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	551	199	741	95	740	95	90-110	0	20	mg/kg	05.14.2020 13:33	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3126022 — Matrix: Soil — Date Prep: 05.14.2020
Parent Sample Id: 661534-011 — MS Sample Id: 661534-011 S — MSD Sample Id: 661534-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	57.1	201	246	94	246	94	90-110	0	20	mg/kg	05.14.2020 14:55	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3126041 — Matrix: Solid — Date Prep: 05.14.2020
MB Sample Id: 7703406-1-BLK — LCS Sample Id: 7703406-1-BKS — LCSD Sample Id: 7703406-1-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	999	100	1010	101	70-135	1	35	mg/kg	05.15.2020 00:16	
Diesel Range Organics (DRO)	<50.0	1000	1120	112	1120	112	70-135	0	35	mg/kg	05.15.2020 00:16	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	106		118		120		70-135	%	05.15.2020 00:16
o-Terphenyl	117		125		120		70-135	%	05.15.2020 00:16

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3126199 — Matrix: Solid — Date Prep: 05.14.2020
MB Sample Id: 7703409-1-BLK — LCS Sample Id: 7703409-1-BKS — LCSD Sample Id: 7703409-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1070	107	933	93	70-135	14	35	mg/kg	05.15.2020 09:41	
Diesel Range Organics (DRO)	<50.0	1000	1120	112	1070	107	70-135	5	35	mg/kg	05.15.2020 09:41	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	101		135		122		70-135	%	05.15.2020 09:41
o-Terphenyl	111		117		122		70-135	%	05.15.2020 09:41

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

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

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

QC Summary 661635

LT Environmental, Inc.

JRU 31 Flowline

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3126041 Matrix: Solid Date Prep: 05.14.2020
MB Sample Id: 7703406-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	05.14.2020 23:56	

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3126199 Matrix: Solid Date Prep: 05.14.2020
MB Sample Id: 7703409-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	05.15.2020 09:20	

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3126041 Matrix: Soil Date Prep: 05.14.2020
Parent Sample Id: 661534-009 MS Sample Id: 661534-009 S MSD Sample Id: 661534-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.1	1000	1120	112	1070	106	70-135	5	35	mg/kg	05.15.2020 01:18	
Diesel Range Organics (DRO)	<50.1	1000	1100	110	1210	120	70-135	10	35	mg/kg	05.15.2020 01:18	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	126		127		70-135	%	05.15.2020 01:18
o-Terphenyl	116		132		70-135	%	05.15.2020 01:18

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3126199 Matrix: Soil Date Prep: 05.14.2020
Parent Sample Id: 661663-001 MS Sample Id: 661663-001 S MSD Sample Id: 661663-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.3	1010	1010	100	967	97	70-135	4	35	mg/kg	05.15.2020 10:44	
Diesel Range Organics (DRO)	<50.3	1010	1170	116	1150	116	70-135	2	35	mg/kg	05.15.2020 10:44	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	124		119		70-135	%	05.15.2020 10:44
o-Terphenyl	124		123		70-135	%	05.15.2020 10:44

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

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

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

QC Summary 661635

LT Environmental, Inc.

JRU 31 Flowline

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3126047 Matrix: Solid Date Prep: 05.14.2020
MB Sample Id: 7703381-1-BLK LCS Sample Id: 7703381-1-BKS LCSD Sample Id: 7703381-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.107	107	0.101	101	70-130	6	35	mg/kg	05.14.2020 16:04	
Toluene	<0.00200	0.100	0.103	103	0.0974	97	70-130	6	35	mg/kg	05.14.2020 16:04	
Ethylbenzene	<0.00200	0.100	0.0974	97	0.0926	93	71-129	5	35	mg/kg	05.14.2020 16:04	
m,p-Xylenes	<0.00400	0.200	0.201	101	0.192	96	70-135	5	35	mg/kg	05.14.2020 16:04	
o-Xylene	<0.00200	0.100	0.101	101	0.0971	97	71-133	4	35	mg/kg	05.14.2020 16:04	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		104		100		70-130	%	05.14.2020 16:04
4-Bromofluorobenzene	97		93		91		70-130	%	05.14.2020 16:04

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3126047 Matrix: Soil Date Prep: 05.14.2020
Parent Sample Id: 661635-001 MS Sample Id: 661635-001 S MSD Sample Id: 661635-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00198	0.0992	0.107	108	0.0992	100	70-130	8	35	mg/kg	05.14.2020 16:45	
Toluene	0.00986	0.0992	0.106	97	0.0955	87	70-130	10	35	mg/kg	05.14.2020 16:45	
Ethylbenzene	0.0147	0.0992	0.0911	77	0.0894	75	71-129	2	35	mg/kg	05.14.2020 16:45	
m,p-Xylenes	0.0337	0.198	0.191	79	0.183	75	70-135	4	35	mg/kg	05.14.2020 16:45	
o-Xylene	0.0207	0.0992	0.0979	78	0.0939	74	71-133	4	35	mg/kg	05.14.2020 16:45	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		105		70-130	%	05.14.2020 16:45
4-Bromofluorobenzene	95		94		70-130	%	05.14.2020 16:45

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

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

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

Chain of Custody

Work Order No: 6e6e1635

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:	Tacoma Morrisey	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.236.3849 Email:	atrejo@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 31 flowline	Turn Around	
Project Number:	012920079	Routine X	
P.O. Number:		Rush:	
Sampler's Name:	Armando Trejo	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	3.6	Thermometer ID	TNM007
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	5

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
SS01	S	5/14/2020	1001	.5'	1	X	X	X
SS02	S	5/14/2020	1031	.5'	1	X	X	X
SS03	S	5/14/2020	1043	.5'	1	X	X	X
SS04	S	5/14/2020	1055	.5'	1	X	X	X
SS05	S	5/14/2020	1103	.5'	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: 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

1631 / 245.1 / 7470 / 7471 : Hg

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		5/14/20 13:50

Received by: (Signature)	Date/Time

Revised Date 051418 Rev. 2018.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 05.14.2020 01.50.00 PM

Work Order #: 661635

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

Temperature Measuring device used : T-NM-007

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 05.14.2020

Checklist reviewed by: Jessica Kramer Date: 05.15.2020

Jessica Kramer

eurofins | Environment Testing Xenco

Certificate of Analysis Summary 668975

LT Environmental, Inc., Arvada, CO

Project Name: JRU 31

Project Id: 012920079
Contact: Dan Moir
Project Location: Eddy County

Date Received in Lab: Mon 08.03.2020 17:30
Report Date: 08.04.2020 11:00
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	668975-001		668975-002		668975-003		668975-004		668975-005		668975-006	
	Field Id:	FS01		SW01		FS02		FS03		SW02		SW03	
	Depth:	2- ft		0-2 ft		1.5- ft		2- ft		0-2 ft		0-2 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	08.03.2020 09:42		08.03.2020 09:46		08.03.2020 11:57		08.03.2020 12:48		08.03.2020 12:50		08.03.2020 12:54	
BTEX by EPA 8021B	***Extracted:***	08.03.2020 18:04		08.03.2020 18:04		08.03.2020 18:04		08.03.2020 18:04		08.03.2020 18:04		08.03.2020 18:04	
	Analyzed:	08.03.2020 20:13		08.03.2020 20:36		08.03.2020 20:58		08.03.2020 21:21		08.03.2020 21:43		08.03.2020 22:05	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200
Toluene		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200
Ethylbenzene		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200
m,p-Xylenes		<0.00401	0.00401	<0.00398	0.00398	<0.00401	0.00401	<0.00402	0.00402	<0.00399	0.00399	<0.00401	0.00401
o-Xylene		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200
Total Xylenes		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200
Total BTEX		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200
Chloride by EPA 300	***Extracted:***	08.03.2020 18:01		08.03.2020 18:01		08.03.2020 18:01		08.03.2020 18:01		08.03.2020 18:01		08.03.2020 18:01	
	Analyzed:	08.03.2020 18:32		08.03.2020 18:49		08.03.2020 18:54		08.03.2020 19:00		08.03.2020 19:17		08.03.2020 19:22	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		182	9.92	204	9.96	130	9.98	61.3	10.0	40.6	10.0	192	10.0
TPH by SW8015 Mod	***Extracted:***	08.03.2020 18:10		08.03.2020 18:10		08.03.2020 18:10		08.03.2020 18:10		08.03.2020 18:10		08.03.2020 18:10	
	Analyzed:	08.03.2020 18:35		08.03.2020 18:56		08.03.2020 19:16		08.03.2020 19:36		08.03.2020 20:16		08.03.2020 20:36	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<49.9	49.9	<50.1	50.1	<50.1	50.1	<50.3	50.3	<50.1	50.1	<50.1	50.1
Diesel Range Organics (DRO)		<49.9	49.9	<50.1	50.1	<50.1	50.1	<50.3	50.3	<50.1	50.1	<50.1	50.1
Motor Oil Range Hydrocarbons (MRO)		<49.9	49.9	<50.1	50.1	<50.1	50.1	<50.3	50.3	<50.1	50.1	<50.1	50.1
Total GRO-DRO		<49.9	49.9	<50.1	50.1	<50.1	50.1	<50.3	50.3	<50.1	50.1	<50.1	50.1
Total TPH		<49.9	49.9	<50.1	50.1	<50.1	50.1	<50.3	50.3	<50.1	50.1	<50.1	50.1

BRL - Below Reporting Limit

Jessica Kramer

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

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Certificate of Analysis Summary 668975

LT Environmental, Inc., Arvada, CO

Project Name: JRU 31

Project Id: 012920079
Contact: Dan Moir
Project Location: Eddy County

Date Received in Lab: Mon 08.03.2020 17:30
Report Date: 08.04.2020 11:00
Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	668975-007		668975-008			
	Field Id:	FS04		SW04			
	Depth:	1.5- ft		0-1.5 ft			
	Matrix:	SOIL		SOIL			
	Sampled:	08.03.2020 13:27		08.03.2020 13:30			
BTEX by EPA 8021B	***Extracted:***	08.03.2020 18:04		08.03.2020 18:04			
	Analyzed:	08.03.2020 22:28		08.03.2020 22:50			
	Units/RL:	mg/kg	RL	mg/kg	RL		
Benzene		<0.00200	0.00200	<0.00201	0.00201		
Toluene		<0.00200	0.00200	<0.00201	0.00201		
Ethylbenzene		<0.00200	0.00200	<0.00201	0.00201		
m,p-Xylenes		<0.00401	0.00401	<0.00402	0.00402		
o-Xylene		<0.00200	0.00200	<0.00201	0.00201		
Total Xylenes		<0.00200	0.00200	<0.00201	0.00201		
Total BTEX		<0.00200	0.00200	<0.00201	0.00201		
Chloride by EPA 300	***Extracted:***	08.03.2020 18:01		08.03.2020 18:01			
	Analyzed:	08.03.2020 19:28		08.03.2020 19:33			
	Units/RL:	mg/kg	RL	mg/kg	RL		
Chloride		68.9	10.0	109	10.0		
TPH by SW8015 Mod	***Extracted:***	08.03.2020 18:10		08.03.2020 18:10			
	Analyzed:	08.03.2020 20:57		08.03.2020 21:17			
	Units/RL:	mg/kg	RL	mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)		<50.2	50.2	<50.0	50.0		
Diesel Range Organics (DRO)		<50.2	50.2	<50.0	50.0		
Motor Oil Range Hydrocarbons (MRO)		<50.2	50.2	<50.0	50.0		
Total GRO-DRO		<50.2	50.2	<50.0	50.0		
Total TPH		<50.2	50.2	<50.0	50.0		

BRL - Below Reporting Limit

Jessica Kramer

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Analytical Report 668975

for

LT Environmental, Inc.

Project Manager: Dan Moir

JRU 31

012920079

08.04.2020

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-17)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-7)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

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08.04.2020

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

Reference: Eurofins Xenco, LLC Report No(s): **668975**
JRU 31
Project Address: Eddy County

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 668975. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 668975 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Manager

A Small Business and Minority Company

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

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Sample Cross Reference 668975

LT Environmental, Inc., Arvada, CO

JRU 31

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	08.03.2020 09:42	2 ft	668975-001
SW01	S	08.03.2020 09:46	0 - 2 ft	668975-002
FS02	S	08.03.2020 11:57	1.5 ft	668975-003
FS03	S	08.03.2020 12:48	2 ft	668975-004
SW02	S	08.03.2020 12:50	0 - 2 ft	668975-005
SW03	S	08.03.2020 12:54	0 - 2 ft	668975-006
FS04	S	08.03.2020 13:27	1.5 ft	668975-007
SW04	S	08.03.2020 13:30	0 - 1.5 ft	668975-008

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CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: JRU 31

Project ID: *012920079*
Work Order Number(s): *668975*

Report Date: *08.04.2020*
Date Received: *08.03.2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

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Certificate of Analytical Results 668975

LT Environmental, Inc., Arvada, CO

JRU 31

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	08.03.2020 17:30
Lab Sample Id:	668975-001	Date Collected:	08.03.2020 09:42	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.03.2020 18:01	Basis:	Wet Weight
Seq Number:	3133430				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**182**	9.92	mg/kg	08.03.2020 18:32		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.03.2020 18:10	Basis:	Wet Weight
Seq Number:	3133363				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.03.2020 18:35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.03.2020 18:35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.03.2020 18:35	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	08.03.2020 18:35	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.03.2020 18:35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	08.03.2020 18:35	
o-Terphenyl	84-15-1	98	%	70-135	08.03.2020 18:35	

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Certificate of Analytical Results 668975

LT Environmental, Inc., Arvada, CO

JRU 31

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	08.03.2020 17:30
Lab Sample Id:	668975-001	Date Collected:	08.03.2020 09:42	Sample Depth:	2 ft

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.03.2020 18:04	Basis:	Wet Weight
Seq Number:	3133428				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.03.2020 20:13	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.03.2020 20:13	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.03.2020 20:13	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.03.2020 20:13	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.03.2020 20:13	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.03.2020 20:13	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.03.2020 20:13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	94	%	70-130	08.03.2020 20:13	
1,4-Difluorobenzene	540-36-3	98	%	70-130	08.03.2020 20:13	

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LT Environmental, Inc., Arvada, CO

JRU 31

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	08.03.2020 17:30
Lab Sample Id:	668975-002	Date Collected:	08.03.2020 09:46	Sample Depth:	0 - 2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.03.2020 18:01	Basis:	Wet Weight
Seq Number:	3133430				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**204**	9.96	mg/kg	08.03.2020 18:49		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.03.2020 18:10	Basis:	Wet Weight
Seq Number:	3133363				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	08.03.2020 18:56	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	08.03.2020 18:56	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	08.03.2020 18:56	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	08.03.2020 18:56	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	08.03.2020 18:56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	08.03.2020 18:56	
o-Terphenyl	84-15-1	97	%	70-135	08.03.2020 18:56	

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Certificate of Analytical Results 668975

LT Environmental, Inc., Arvada, CO

JRU 31

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	08.03.2020 17:30
Lab Sample Id:	668975-002	Date Collected:	08.03.2020 09:46	Sample Depth:	0 - 2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.03.2020 18:04	Basis:	Wet Weight
Seq Number:	3133428				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.03.2020 20:36	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.03.2020 20:36	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.03.2020 20:36	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.03.2020 20:36	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.03.2020 20:36	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.03.2020 20:36	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.03.2020 20:36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	107	%	70-130	08.03.2020 20:36	
1,4-Difluorobenzene	540-36-3	102	%	70-130	08.03.2020 20:36	

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Certificate of Analytical Results 668975

LT Environmental, Inc., Arvada, CO

JRU 31

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	08.03.2020 17:30
Lab Sample Id:	668975-003	Date Collected:	08.03.2020 11:57	Sample Depth:	1.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.03.2020 18:01	Basis:	Wet Weight
Seq Number:	3133430				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**130**	9.98	mg/kg	08.03.2020 18:54		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.03.2020 18:10	Basis:	Wet Weight
Seq Number:	3133363				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	08.03.2020 19:16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	08.03.2020 19:16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	08.03.2020 19:16	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	08.03.2020 19:16	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	08.03.2020 19:16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	08.03.2020 19:16	
o-Terphenyl	84-15-1	99	%	70-135	08.03.2020 19:16	

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Certificate of Analytical Results 668975

LT Environmental, Inc., Arvada, CO

JRU 31

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	08.03.2020 17:30
Lab Sample Id:	668975-003	Date Collected:	08.03.2020 11:57	Sample Depth:	1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.03.2020 18:04	Basis:	Wet Weight
Seq Number:	3133428				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.03.2020 20:58	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.03.2020 20:58	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.03.2020 20:58	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.03.2020 20:58	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.03.2020 20:58	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.03.2020 20:58	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.03.2020 20:58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	08.03.2020 20:58	
1,4-Difluorobenzene	540-36-3	101	%	70-130	08.03.2020 20:58	

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Certificate of Analytical Results 668975

LT Environmental, Inc., Arvada, CO

JRU 31

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	08.03.2020 17:30
Lab Sample Id:	668975-004	Date Collected:	08.03.2020 12:48	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.03.2020 18:01	Basis:	Wet Weight
Seq Number:	3133430				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**61.3**	10.0	mg/kg	08.03.2020 19:00		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.03.2020 18:10	Basis:	Wet Weight
Seq Number:	3133363				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	08.03.2020 19:36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	08.03.2020 19:36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	08.03.2020 19:36	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	08.03.2020 19:36	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	08.03.2020 19:36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	08.03.2020 19:36	
o-Terphenyl	84-15-1	98	%	70-135	08.03.2020 19:36	

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Certificate of Analytical Results 668975

LT Environmental, Inc., Arvada, CO

JRU 31

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	08.03.2020 17:30
Lab Sample Id:	668975-004	Date Collected:	08.03.2020 12:48	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.03.2020 18:04	Basis:	Wet Weight
Seq Number:	3133428				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.03.2020 21:21	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.03.2020 21:21	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.03.2020 21:21	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.03.2020 21:21	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.03.2020 21:21	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.03.2020 21:21	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.03.2020 21:21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	70-130	08.03.2020 21:21	
1,4-Difluorobenzene	540-36-3	93	%	70-130	08.03.2020 21:21	

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LT Environmental, Inc., Arvada, CO

JRU 31

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	08.03.2020 17:30
Lab Sample Id:	668975-005	Date Collected:	08.03.2020 12:50	Sample Depth:	0 - 2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.03.2020 18:01	Basis:	Wet Weight
Seq Number:	3133430				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**40.6**	10.0	mg/kg	08.03.2020 19:17		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.03.2020 18:10	Basis:	Wet Weight
Seq Number:	3133363				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	08.03.2020 20:16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	08.03.2020 20:16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	08.03.2020 20:16	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	08.03.2020 20:16	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	08.03.2020 20:16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	08.03.2020 20:16	
o-Terphenyl	84-15-1	94	%	70-135	08.03.2020 20:16	

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LT Environmental, Inc., Arvada, CO

JRU 31

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	08.03.2020 17:30
Lab Sample Id:	668975-005	Date Collected:	08.03.2020 12:50	Sample Depth:	0 - 2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.03.2020 18:04	Basis:	Wet Weight
Seq Number:	3133428				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.03.2020 21:43	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.03.2020 21:43	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.03.2020 21:43	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.03.2020 21:43	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.03.2020 21:43	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.03.2020 21:43	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.03.2020 21:43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	70-130	08.03.2020 21:43	
1,4-Difluorobenzene	540-36-3	99	%	70-130	08.03.2020 21:43	

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JRU 31

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	08.03.2020 17:30
Lab Sample Id:	668975-006	Date Collected:	08.03.2020 12:54	Sample Depth:	0 - 2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.03.2020 18:01	Basis:	Wet Weight
Seq Number:	3133430				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**192**	10.0	mg/kg	08.03.2020 19:22		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.03.2020 18:10	Basis:	Wet Weight
Seq Number:	3133363				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	08.03.2020 20:36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	08.03.2020 20:36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	08.03.2020 20:36	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	08.03.2020 20:36	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	08.03.2020 20:36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	08.03.2020 20:36	
o-Terphenyl	84-15-1	96	%	70-135	08.03.2020 20:36	

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JRU 31

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	08.03.2020 17:30
Lab Sample Id:	668975-006	Date Collected:	08.03.2020 12:54	Sample Depth:	0 - 2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.03.2020 18:04	Basis:	Wet Weight
Seq Number:	3133428				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.03.2020 22:05	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.03.2020 22:05	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.03.2020 22:05	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.03.2020 22:05	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.03.2020 22:05	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.03.2020 22:05	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.03.2020 22:05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	08.03.2020 22:05	
1,4-Difluorobenzene	540-36-3	100	%	70-130	08.03.2020 22:05	

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JRU 31

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	08.03.2020 17:30
Lab Sample Id:	668975-007	Date Collected:	08.03.2020 13:27	Sample Depth:	1.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.03.2020 18:01	Basis:	Wet Weight
Seq Number:	3133430				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**68.9**	10.0	mg/kg	08.03.2020 19:28		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.03.2020 18:10	Basis:	Wet Weight
Seq Number:	3133363				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	08.03.2020 20:57	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	08.03.2020 20:57	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	08.03.2020 20:57	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	08.03.2020 20:57	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	08.03.2020 20:57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	08.03.2020 20:57	
o-Terphenyl	84-15-1	96	%	70-135	08.03.2020 20:57	

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LT Environmental, Inc., Arvada, CO

JRU 31

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	08.03.2020 17:30
Lab Sample Id:	668975-007	Date Collected:	08.03.2020 13:27	Sample Depth:	1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.03.2020 18:04	Basis:	Wet Weight
Seq Number:	3133428				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.03.2020 22:28	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.03.2020 22:28	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.03.2020 22:28	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.03.2020 22:28	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.03.2020 22:28	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.03.2020 22:28	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.03.2020 22:28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	88	%	70-130	08.03.2020 22:28	
4-Bromofluorobenzene	460-00-4	99	%	70-130	08.03.2020 22:28	

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LT Environmental, Inc., Arvada, CO

JRU 31

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	08.03.2020 17:30
Lab Sample Id:	668975-008	Date Collected:	08.03.2020 13:30	Sample Depth:	0 - 1.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.03.2020 18:01	Basis:	Wet Weight
Seq Number:	3133430				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**109**	10.0	mg/kg	08.03.2020 19:33		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.03.2020 18:10	Basis:	Wet Weight
Seq Number:	3133363				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.03.2020 21:17	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.03.2020 21:17	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.03.2020 21:17	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	08.03.2020 21:17	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.03.2020 21:17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	08.03.2020 21:17	
o-Terphenyl	84-15-1	93	%	70-135	08.03.2020 21:17	

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LT Environmental, Inc., Arvada, CO

JRU 31

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	08.03.2020 17:30
Lab Sample Id:	668975-008	Date Collected:	08.03.2020 13:30	Sample Depth:	0 - 1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.03.2020 18:04	Basis:	Wet Weight
Seq Number:	3133428				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.03.2020 22:50	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.03.2020 22:50	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.03.2020 22:50	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.03.2020 22:50	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.03.2020 22:50	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.03.2020 22:50	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.03.2020 22:50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	08.03.2020 22:50	
1,4-Difluorobenzene	540-36-3	100	%	70-130	08.03.2020 22:50	

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Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

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QC Summary 668975

LT Environmental, Inc.

JRU 31

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3133430 — Matrix: Solid — Date Prep: 08.03.2020
MB Sample Id: 7708638-1-BLK — LCS Sample Id: 7708638-1-BKS — LCSD Sample Id: 7708638-1-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	268	107	267	107	90-110	0	20	mg/kg	08.03.2020 16:56	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3133430 — Matrix: Soil — Date Prep: 08.03.2020
Parent Sample Id: 668916-001 — MS Sample Id: 668916-001 S — MSD Sample Id: 668916-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	243	200	448	103	449	103	90-110	0	20	mg/kg	08.03.2020 17:13	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3133430 — Matrix: Soil — Date Prep: 08.03.2020
Parent Sample Id: 668975-004 — MS Sample Id: 668975-004 S — MSD Sample Id: 668975-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	61.3	200	271	105	269	104	90-110	1	20	mg/kg	08.03.2020 19:06	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3133363 — Matrix: Solid — Date Prep: 08.03.2020
MB Sample Id: 7708598-1-BLK — LCS Sample Id: 7708598-1-BKS — LCSD Sample Id: 7708598-1-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	893	89	900	90	70-135	1	35	mg/kg	08.03.2020 12:24	
Diesel Range Organics (DRO)	<50.0	1000	950	95	962	96	70-135	1	35	mg/kg	08.03.2020 12:24	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	89		107		108		70-135	%	08.03.2020 12:24
o-Terphenyl	93		100		102		70-135	%	08.03.2020 12:24

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3133363 — Matrix: Solid — Date Prep: 08.03.2020
MB Sample Id: 7708598-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	08.03.2020 12:04	

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

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QC Summary 668975

LT Environmental, Inc.

JRU 31

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3133363 Matrix: Soil Date Prep: 08.03.2020
Parent Sample Id: 668916-001 MS Sample Id: 668916-001 S MSD Sample Id: 668916-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.1	1000	869	87	884	88	70-135	2	35	mg/kg	08.03.2020 13:25	
Diesel Range Organics (DRO)	<50.1	1000	956	96	978	98	70-135	2	35	mg/kg	08.03.2020 13:25	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	106		106		70-135	%	08.03.2020 13:25
o-Terphenyl	101		102		70-135	%	08.03.2020 13:25

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3133428 Matrix: Solid Date Prep: 08.03.2020
MB Sample Id: 7708618-1-BLK LCS Sample Id: 7708618-1-BKS LCSD Sample Id: 7708618-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.105	105	0.113	113	70-130	7	35	mg/kg	08.03.2020 15:45	
Toluene	<0.00200	0.100	0.0997	100	0.108	108	70-130	8	35	mg/kg	08.03.2020 15:45	
Ethylbenzene	<0.00200	0.100	0.0930	93	0.100	100	71-129	7	35	mg/kg	08.03.2020 15:45	
m,p-Xylenes	<0.00400	0.200	0.189	95	0.204	102	70-135	8	35	mg/kg	08.03.2020 15:45	
o-Xylene	<0.00200	0.100	0.0928	93	0.100	100	71-133	7	35	mg/kg	08.03.2020 15:45	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		99		98		70-130	%	08.03.2020 15:45
4-Bromofluorobenzene	94		101		100		70-130	%	08.03.2020 15:45

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3133428 Matrix: Soil Date Prep: 08.03.2020
Parent Sample Id: 668916-001 MS Sample Id: 668916-001 S MSD Sample Id: 668916-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.129	129	0.130	129	70-130	1	35	mg/kg	08.03.2020 16:30	
Toluene	<0.00201	0.100	0.122	122	0.123	122	70-130	1	35	mg/kg	08.03.2020 16:30	
Ethylbenzene	<0.00201	0.100	0.114	114	0.113	112	71-129	1	35	mg/kg	08.03.2020 16:30	
m,p-Xylenes	<0.00402	0.201	0.231	115	0.228	113	70-135	1	35	mg/kg	08.03.2020 16:30	
o-Xylene	<0.00201	0.100	0.113	113	0.112	111	71-133	1	35	mg/kg	08.03.2020 16:30	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		99		70-130	%	08.03.2020 16:30
4-Bromofluorobenzene	103		104		70-130	%	08.03.2020 16:30

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

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

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

Chain of Custody

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

Work Order No: 616975

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Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian Office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Greene St
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	

Work Order Comments

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

Project Name:	JRU 31	Turn Around	
Project Number:	012920079	Routine ☐	
Project Location	Eddy county	Rush: 24 hrs	
Sampler's Name:	Fatima Smith	Due Date:	
PO #:		Quote #:	

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Temperature (°C):	2.4 / 2.2	Thermometer ID	TNM007
Received Intact:	Yes No		
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Total Containers:	8

ANALYSIS REQUEST

Preservative Codes

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

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

Lab ID	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	8/3/20	0942	2'	1	X	X	X	
	SW01			0946	0-2'					
	FS02			1157	1.5'					
	FS03			1248	2'					
	SW02			1250	0-2'					
	SW03			1254	0-2'					
	FS04			1327	1.5'					
	SW04	↓	↓	1330	0-1.5'	↓	↓	↓	↓	

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr 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
		8/3/20 17:30	2		
			4		
			6		

Revised Date 022619 Rev. 2019.1

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 08.03.2020 05.30.00 PM

Work Order #: 668975

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

Temperature Measuring device used : T-NM-007

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 08.03.2020

Checklist reviewed by: Jessica Kramer Date: 08.04.2020

Jessica Kramer

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Certificate of Analysis Summary 669080

LT Environmental, Inc., Arvada, CO

Project Name: JRU 31

Project Id: 012920079
Contact: Dan Moir
Project Location: Eddy County

Date Received in Lab: Tue 08.04.2020 14:39
Report Date: 08.06.2020 12:50
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	669080-001		669080-002		669080-003		669080-004		669080-005		669080-006	
	Field Id:	FS05		FS06		FS07		SW05		SW06		SW07	
	Depth:	1.5- ft		1.5- ft		1.5- ft		0-1.5 ft		0-1.5 ft		0-1.5 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	08.04.2020 08:43		08.04.2020 08:47		08.04.2020 08:50		08.04.2020 09:12		08.04.2020 09:15		08.04.2020 09:20	
BTEX by EPA 8021B	***Extracted:***	08.04.2020 16:00		08.04.2020 16:00		08.04.2020 16:00		08.04.2020 16:00		08.04.2020 16:00		08.04.2020 16:00	
	Analyzed:	08.04.2020 22:19		08.04.2020 22:39		08.04.2020 22:59		08.04.2020 23:20		08.04.2020 23:40		08.05.2020 00:01	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00198	0.00198
Toluene		<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00198	0.00198
Ethylbenzene		<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00198	0.00198
m,p-Xylenes		<0.00401	0.00401	<0.00402	0.00402	<0.00398	0.00398	<0.00398	0.00398	<0.00400	0.00400	<0.00395	0.00395
o-Xylene		<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00198	0.00198
Total Xylenes		<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00198	0.00198
Total BTEX		<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00198	0.00198
Chloride by EPA 300	***Extracted:***	08.04.2020 15:33		08.04.2020 15:33		08.04.2020 15:33		08.04.2020 15:33		08.04.2020 15:33		08.04.2020 15:33	
	Analyzed:	08.04.2020 19:39		08.04.2020 19:56		08.04.2020 20:01		08.04.2020 20:18		08.04.2020 20:24		08.04.2020 20:29	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		110	9.98	43.1	9.92	83.0	9.96	18.0	10.1	251	9.94	68.6	9.98
TPH by SW8015 Mod	***Extracted:***	08.04.2020 16:30		08.04.2020 16:30		08.04.2020 16:30		08.04.2020 16:30		08.04.2020 16:30		08.04.2020 16:30	
	Analyzed:	08.04.2020 19:00		08.05.2020 12:54		08.05.2020 13:14		08.05.2020 10:52		08.05.2020 11:13		08.05.2020 11:33	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<49.8	49.8	<50.2	50.2	<49.8	49.8	<49.8	49.8	<50.1	50.1	<50.0	50.0
Diesel Range Organics (DRO)		<49.8	49.8	<50.2	50.2	<49.8	49.8	<49.8	49.8	<50.1	50.1	<50.0	50.0
Motor Oil Range Hydrocarbons (MRO)		<49.8	49.8	<50.2	50.2	<49.8	49.8	<49.8	49.8	<50.1	50.1	<50.0	50.0
Total GRO-DRO		<49.8	49.8	<50.2	50.2	<49.8	49.8	<49.8	49.8	<50.1	50.1	<50.0	50.0
Total TPH		<49.8	49.8	<50.2	50.2	<49.8	49.8	<49.8	49.8	<50.1	50.1	<50.0	50.0

BRL - Below Reporting Limit

Jessica Kramer

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Certificate of Analysis Summary 669080

LT Environmental, Inc., Arvada, CO

Project Name: JRU 31

Project Id: 012920079
Contact: Dan Moir
Project Location: Eddy County

Date Received in Lab: Tue 08.04.2020 14:39
Report Date: 08.06.2020 12:50
Project Manager: Jessica Kramer

Analysis Requested		669080-007		669080-008		669080-009		669080-010		669080-011		669080-012	
	Field Id:	FS08		FS09		FS10		FS11		SW11		SW08	
	Depth:	1.5- ft		1.5- ft		1.5- ft		1.5- ft		0-1.5 ft		0-1.5 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	08.04.2020 09:47		08.04.2020 09:50		08.04.2020 09:57		08.04.2020 10:42		08.04.2020 10:47		08.04.2020 11:02	
BTEX by EPA 8021B	Extracted:	08.04.2020 16:00		08.04.2020 16:00		08.04.2020 17:50		08.04.2020 17:50		08.04.2020 17:50		08.04.2020 17:50	
	Analyzed:	08.05.2020 00:21		08.05.2020 00:41		08.05.2020 12:05		08.05.2020 12:28		08.05.2020 12:50		08.05.2020 06:07	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00199	0.00199	<0.00202	0.00202	<0.00202	0.00202	<0.00201	0.00201	<0.00200	0.00200
Toluene		<0.00200	0.00200	<0.00199	0.00199	<0.00202	0.00202	<0.00202	0.00202	<0.00201	0.00201	<0.00200	0.00200
Ethylbenzene		<0.00200	0.00200	<0.00199	0.00199	<0.00202	0.00202	<0.00202	0.00202	<0.00201	0.00201	<0.00200	0.00200
m,p-Xylenes		<0.00399	0.00399	<0.00398	0.00398	<0.00404	0.00404	<0.00403	0.00403	<0.00402	0.00402	<0.00401	0.00401
o-Xylene		<0.00200	0.00200	<0.00199	0.00199	<0.00202	0.00202	<0.00202	0.00202	<0.00201	0.00201	<0.00200	0.00200
Total Xylenes		<0.00200	0.00200	<0.00199	0.00199	<0.00202	0.00202	<0.00202	0.00202	<0.00201	0.00201	<0.00200	0.00200
Total BTEX		<0.00200	0.00200	<0.00199	0.00199	<0.00202	0.00202	<0.00202	0.00202	<0.00201	0.00201	<0.00200	0.00200
Chloride by EPA 300	Extracted:	08.04.2020 15:33		08.04.2020 15:33		08.04.2020 15:33		08.04.2020 15:33		08.04.2020 17:40		08.04.2020 17:40	
	Analyzed:	08.04.2020 20:35		08.04.2020 20:40		08.04.2020 20:46		08.04.2020 20:52		08.04.2020 21:25		08.04.2020 21:42	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		185	9.96	173	9.98	213	9.96	28.5	9.98	20.2	9.94	147	9.92
TPH by SW8015 Mod	Extracted:	08.04.2020 16:30		08.04.2020 16:30		08.04.2020 16:30		08.04.2020 16:30		08.04.2020 16:30		08.04.2020 16:30	
	Analyzed:	08.05.2020 11:53		08.05.2020 12:14		08.05.2020 12:34		08.04.2020 19:00		08.04.2020 19:21		08.04.2020 19:41	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<49.8	49.8	<50.2	50.2	<50.1	50.1	<49.8	49.8	<50.0	50.0	<49.8	49.8
Diesel Range Organics (DRO)		<49.8	49.8	<50.2	50.2	<50.1	50.1	<49.8	49.8	<50.0	50.0	<49.8	49.8
Motor Oil Range Hydrocarbons (MRO)		<49.8	49.8	<50.2	50.2	<50.1	50.1	<49.8	49.8	<50.0	50.0	<49.8	49.8
Total GRO-DRO		<49.8	49.8	<50.2	50.2	<50.1	50.1	<49.8	49.8	<50.0	50.0	<49.8	49.8
Total TPH		<49.8	49.8	<50.2	50.2	<50.1	50.1	<49.8	49.8	<50.0	50.0	<49.8	49.8

BRL - Below Reporting Limit

Jessica Kramer

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Certificate of Analysis Summary 669080

LT Environmental, Inc., Arvada, CO

Project Name: JRU 31

Project Id: 012920079
Contact: Dan Moir
Project Location: Eddy County

Date Received in Lab: Tue 08.04.2020 14:39
Report Date: 08.06.2020 12:50
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	669080-013		669080-014		669080-015					
	Field Id:	SW09		FS12		SW10					
	Depth:	0-1.5 ft		1.5- ft		0-1.5 ft					
	Matrix:	SOIL		SOIL		SOIL					
	Sampled:	08.04.2020 11:05		08.04.2020 11:09		08.04.2020 12:14					
BTEX by EPA 8021B	***Extracted:***	08.04.2020 17:50		08.04.2020 17:50		08.04.2020 17:50					
	Analyzed:	08.05.2020 13:13		08.05.2020 13:35		08.05.2020 13:58					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201				
Toluene		<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201				
Ethylbenzene		<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201				
m,p-Xylenes		<0.00401	0.00401	<0.00398	0.00398	<0.00402	0.00402				
o-Xylene		<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201				
Total Xylenes		<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201				
Total BTEX		<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201				
Chloride by EPA 300	***Extracted:***	08.04.2020 17:40		08.04.2020 17:40		08.04.2020 17:40					
	Analyzed:	08.04.2020 21:47		08.04.2020 21:53		08.04.2020 21:59					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		219	9.88	108	9.98	97.6	10.1				
TPH by SW8015 Mod	***Extracted:***	08.04.2020 16:30		08.04.2020 16:30		08.04.2020 16:30					
	Analyzed:	08.04.2020 20:01		08.04.2020 20:21		08.04.2020 20:42					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<50.1	50.1	<50.3	50.3	<50.3	50.3				
Diesel Range Organics (DRO)		<50.1	50.1	<50.3	50.3	<50.3	50.3				
Motor Oil Range Hydrocarbons (MRO)		<50.1	50.1	<50.3	50.3	<50.3	50.3				
Total GRO-DRO		<50.1	50.1	<50.3	50.3	<50.3	50.3				
Total TPH		<50.1	50.1	<50.3	50.3	<50.3	50.3				

BRL - Below Reporting Limit

Jessica Kramer

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Analytical Report 669080

for

LT Environmental, Inc.

Project Manager: Dan Moir

JRU 31

012920079

08.06.2020

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-17)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-7)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

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08.06.2020

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

Reference: Eurofins Xenco, LLC Report No(s): **669080**
JRU 31
Project Address: Eddy County

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 669080. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 669080 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Manager

A Small Business and Minority Company

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

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Sample Cross Reference 669080

LT Environmental, Inc., Arvada, CO

JRU 31

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS05	S	08.04.2020 08:43	1.5 ft	669080-001
FS06	S	08.04.2020 08:47	1.5 ft	669080-002
FS07	S	08.04.2020 08:50	1.5 ft	669080-003
SW05	S	08.04.2020 09:12	0 - 1.5 ft	669080-004
SW06	S	08.04.2020 09:15	0 - 1.5 ft	669080-005
SW07	S	08.04.2020 09:20	0 - 1.5 ft	669080-006
FS08	S	08.04.2020 09:47	1.5 ft	669080-007
FS09	S	08.04.2020 09:50	1.5 ft	669080-008
FS10	S	08.04.2020 09:57	1.5 ft	669080-009
FS11	S	08.04.2020 10:42	1.5 ft	669080-010
SW11	S	08.04.2020 10:47	0 - 1.5 ft	669080-011
SW08	S	08.04.2020 11:02	0 - 1.5 ft	669080-012
SW09	S	08.04.2020 11:05	0 - 1.5 ft	669080-013
FS12	S	08.04.2020 11:09	1.5 ft	669080-014
SW10	S	08.04.2020 12:14	0 - 1.5 ft	669080-015

CASE NARRATIVE

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Client Name: LT Environmental, Inc.

Project Name: JRU 31

Project ID: *012920079*
Work Order Number(s): *669080*

Report Date: *08.06.2020*
Date Received: *08.04.2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

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Certificate of Analytical Results 669080

LT Environmental, Inc., Arvada, CO

JRU 31

Sample Id:	**FS05**	Matrix:	Soil	Date Received:	08.04.2020 14:39
Lab Sample Id:	669080-001	Date Collected:	08.04.2020 08:43	Sample Depth:	1.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.04.2020 15:33	Basis:	Wet Weight
Seq Number:	3133577				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**110**	9.98	mg/kg	08.04.2020 19:39		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.04.2020 16:30	Basis:	Wet Weight
Seq Number:	3133532				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.04.2020 19:00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.04.2020 19:00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.04.2020 19:00	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	08.04.2020 19:00	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.04.2020 19:00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	08.04.2020 19:00	
o-Terphenyl	84-15-1	94	%	70-135	08.04.2020 19:00	

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Certificate of Analytical Results 669080

LT Environmental, Inc., Arvada, CO

JRU 31

Sample Id:	**FS05**	Matrix:	Soil	Date Received:	08.04.2020 14:39
Lab Sample Id:	669080-001	Date Collected:	08.04.2020 08:43	Sample Depth:	1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.04.2020 16:00	Basis:	Wet Weight
Seq Number:	3133571				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.04.2020 22:19	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.04.2020 22:19	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.04.2020 22:19	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.04.2020 22:19	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.04.2020 22:19	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.04.2020 22:19	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.04.2020 22:19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	70-130	08.04.2020 22:19	
1,4-Difluorobenzene	540-36-3	101	%	70-130	08.04.2020 22:19	

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JRU 31

Sample Id:	**FS06**	Matrix:	Soil	Date Received:	08.04.2020 14:39
Lab Sample Id:	669080-002	Date Collected:	08.04.2020 08:47	Sample Depth:	1.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.04.2020 15:33	Basis:	Wet Weight
Seq Number:	3133577				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**43.1**	9.92	mg/kg	08.04.2020 19:56		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.04.2020 16:30	Basis:	Wet Weight
Seq Number:	3133532				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	08.05.2020 12:54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	08.05.2020 12:54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	08.05.2020 12:54	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	08.05.2020 12:54	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	08.05.2020 12:54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	08.05.2020 12:54	
o-Terphenyl	84-15-1	111	%	70-135	08.05.2020 12:54	

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JRU 31

Sample Id:	**FS06**	Matrix:	Soil	Date Received:	08.04.2020 14:39
Lab Sample Id:	669080-002	Date Collected:	08.04.2020 08:47	Sample Depth:	1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.04.2020 16:00	Basis:	Wet Weight
Seq Number:	3133571				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.04.2020 22:39	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.04.2020 22:39	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.04.2020 22:39	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.04.2020 22:39	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.04.2020 22:39	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.04.2020 22:39	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.04.2020 22:39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	96	%	70-130	08.04.2020 22:39	
1,4-Difluorobenzene	540-36-3	91	%	70-130	08.04.2020 22:39	

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JRU 31

Sample Id:	**FS07**	Matrix:	Soil	Date Received:	08.04.2020 14:39
Lab Sample Id:	669080-003	Date Collected:	08.04.2020 08:50	Sample Depth:	1.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.04.2020 15:33	Basis:	Wet Weight
Seq Number:	3133577				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**83.0**	9.96	mg/kg	08.04.2020 20:01		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.04.2020 16:30	Basis:	Wet Weight
Seq Number:	3133532				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.05.2020 13:14	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.05.2020 13:14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.05.2020 13:14	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	08.05.2020 13:14	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.05.2020 13:14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	08.05.2020 13:14	
o-Terphenyl	84-15-1	102	%	70-135	08.05.2020 13:14	

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JRU 31

Sample Id:	**FS07**	Matrix:	Soil	Date Received:	08.04.2020 14:39
Lab Sample Id:	669080-003	Date Collected:	08.04.2020 08:50	Sample Depth:	1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.04.2020 16:00	Basis:	Wet Weight
Seq Number:	3133571				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.04.2020 22:59	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.04.2020 22:59	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.04.2020 22:59	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.04.2020 22:59	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.04.2020 22:59	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.04.2020 22:59	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.04.2020 22:59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	70-130	08.04.2020 22:59	
1,4-Difluorobenzene	540-36-3	102	%	70-130	08.04.2020 22:59	

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JRU 31

Sample Id:	**SW05**	Matrix:	Soil	Date Received:	08.04.2020 14:39
Lab Sample Id:	669080-004	Date Collected:	08.04.2020 09:12	Sample Depth:	0 - 1.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.04.2020 15:33	Basis:	Wet Weight
Seq Number:	3133577				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**18.0**	10.1	mg/kg	08.04.2020 20:18		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.04.2020 16:30	Basis:	Wet Weight
Seq Number:	3133532				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.05.2020 10:52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.05.2020 10:52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.05.2020 10:52	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	08.05.2020 10:52	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.05.2020 10:52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	08.05.2020 10:52	
o-Terphenyl	84-15-1	100	%	70-135	08.05.2020 10:52	

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Sample Id:	**SW05**	Matrix:	Soil	Date Received:	08.04.2020 14:39
Lab Sample Id:	669080-004	Date Collected:	08.04.2020 09:12	Sample Depth:	0 - 1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.04.2020 16:00	Basis:	Wet Weight
Seq Number:	3133571				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.04.2020 23:20	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.04.2020 23:20	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.04.2020 23:20	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.04.2020 23:20	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.04.2020 23:20	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.04.2020 23:20	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.04.2020 23:20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	08.04.2020 23:20	
1,4-Difluorobenzene	540-36-3	101	%	70-130	08.04.2020 23:20	

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Sample Id:	**SW06**	Matrix:	Soil	Date Received:	08.04.2020 14:39
Lab Sample Id:	669080-005	Date Collected:	08.04.2020 09:15	Sample Depth:	0 - 1.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.04.2020 15:33	Basis:	Wet Weight
Seq Number:	3133577				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**251**	9.94	mg/kg	08.04.2020 20:24		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.04.2020 16:30	Basis:	Wet Weight
Seq Number:	3133532				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	08.05.2020 11:13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	08.05.2020 11:13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	08.05.2020 11:13	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	08.05.2020 11:13	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	08.05.2020 11:13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	08.05.2020 11:13	
o-Terphenyl	84-15-1	94	%	70-135	08.05.2020 11:13	

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Sample Id:	**SW06**	Matrix:	Soil	Date Received:	08.04.2020 14:39
Lab Sample Id:	669080-005	Date Collected:	08.04.2020 09:15	Sample Depth:	0 - 1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.04.2020 16:00	Basis:	Wet Weight
Seq Number:	3133571				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.04.2020 23:40	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.04.2020 23:40	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.04.2020 23:40	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.04.2020 23:40	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.04.2020 23:40	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.04.2020 23:40	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.04.2020 23:40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	08.04.2020 23:40	
4-Bromofluorobenzene	460-00-4	105	%	70-130	08.04.2020 23:40	

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Sample Id:	**SW07**	Matrix:	Soil	Date Received:	08.04.2020 14:39
Lab Sample Id:	669080-006	Date Collected:	08.04.2020 09:20	Sample Depth:	0 - 1.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.04.2020 15:33	Basis:	Wet Weight
Seq Number:	3133577				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**68.6**	9.98	mg/kg	08.04.2020 20:29		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.04.2020 16:30	Basis:	Wet Weight
Seq Number:	3133532				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.05.2020 11:33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.05.2020 11:33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.05.2020 11:33	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	08.05.2020 11:33	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.05.2020 11:33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	08.05.2020 11:33	
o-Terphenyl	84-15-1	94	%	70-135	08.05.2020 11:33	

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Sample Id:	**SW07**	Matrix:	Soil	Date Received:	08.04.2020 14:39
Lab Sample Id:	669080-006	Date Collected:	08.04.2020 09:20	Sample Depth:	0 - 1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.04.2020 16:00	Basis:	Wet Weight
Seq Number:	3133571				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.05.2020 00:01	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.05.2020 00:01	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.05.2020 00:01	U	1
m,p-Xylenes	179601-23-1	<0.00395	0.00395	mg/kg	08.05.2020 00:01	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.05.2020 00:01	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.05.2020 00:01	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.05.2020 00:01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	70-130	08.05.2020 00:01	
1,4-Difluorobenzene	540-36-3	102	%	70-130	08.05.2020 00:01	

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Sample Id:	**FS08**	Matrix:	Soil	Date Received:	08.04.2020 14:39
Lab Sample Id:	669080-007	Date Collected:	08.04.2020 09:47	Sample Depth:	1.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.04.2020 15:33	Basis:	Wet Weight
Seq Number:	3133577				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**185**	9.96	mg/kg	08.04.2020 20:35		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.04.2020 16:30	Basis:	Wet Weight
Seq Number:	3133532				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.05.2020 11:53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.05.2020 11:53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.05.2020 11:53	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	08.05.2020 11:53	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.05.2020 11:53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	08.05.2020 11:53	
o-Terphenyl	84-15-1	92	%	70-135	08.05.2020 11:53	

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Sample Id:	**FS08**	Matrix:	Soil	Date Received:	08.04.2020 14:39
Lab Sample Id:	669080-007	Date Collected:	08.04.2020 09:47	Sample Depth:	1.5 ft

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.04.2020 16:00	Basis:	Wet Weight
Seq Number:	3133571				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.05.2020 00:21	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.05.2020 00:21	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.05.2020 00:21	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.05.2020 00:21	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.05.2020 00:21	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.05.2020 00:21	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.05.2020 00:21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	70-130	08.05.2020 00:21	
1,4-Difluorobenzene	540-36-3	108	%	70-130	08.05.2020 00:21	

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JRU 31

Sample Id:	**FS09**	Matrix:	Soil	Date Received:	08.04.2020 14:39
Lab Sample Id:	669080-008	Date Collected:	08.04.2020 09:50	Sample Depth:	1.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.04.2020 15:33	Basis:	Wet Weight
Seq Number:	3133577				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**173**	9.98	mg/kg	08.04.2020 20:40		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.04.2020 16:30	Basis:	Wet Weight
Seq Number:	3133532				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	08.05.2020 12:14	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	08.05.2020 12:14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	08.05.2020 12:14	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	08.05.2020 12:14	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	08.05.2020 12:14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	08.05.2020 12:14	
o-Terphenyl	84-15-1	91	%	70-135	08.05.2020 12:14	

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Sample Id:	**FS09**	Matrix:	Soil	Date Received:	08.04.2020 14:39
Lab Sample Id:	669080-008	Date Collected:	08.04.2020 09:50	Sample Depth:	1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.04.2020 16:00	Basis:	Wet Weight
Seq Number:	3133571				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.05.2020 00:41	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.05.2020 00:41	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.05.2020 00:41	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.05.2020 00:41	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.05.2020 00:41	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.05.2020 00:41	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.05.2020 00:41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	08.05.2020 00:41	
1,4-Difluorobenzene	540-36-3	102	%	70-130	08.05.2020 00:41	

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Sample Id:	**FS10**	Matrix:	Soil	Date Received:	08.04.2020 14:39
Lab Sample Id:	669080-009	Date Collected:	08.04.2020 09:57	Sample Depth:	1.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.04.2020 15:33	Basis:	Wet Weight
Seq Number:	3133577				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**213**	9.96	mg/kg	08.04.2020 20:46		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.04.2020 16:30	Basis:	Wet Weight
Seq Number:	3133532				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	08.05.2020 12:34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	08.05.2020 12:34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	08.05.2020 12:34	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	08.05.2020 12:34	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	08.05.2020 12:34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	08.05.2020 12:34	
o-Terphenyl	84-15-1	91	%	70-135	08.05.2020 12:34	

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Sample Id:	**FS10**	Matrix:	Soil	Date Received:	08.04.2020 14:39
Lab Sample Id:	669080-009	Date Collected:	08.04.2020 09:57	Sample Depth:	1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.04.2020 17:50	Basis:	Wet Weight
Seq Number:	3133584				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	08.05.2020 12:05	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	08.05.2020 12:05	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	08.05.2020 12:05	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	08.05.2020 12:05	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	08.05.2020 12:05	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	08.05.2020 12:05	U	1
Total BTEX		<0.00202	0.00202	mg/kg	08.05.2020 12:05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	08.05.2020 12:05	
4-Bromofluorobenzene	460-00-4	98	%	70-130	08.05.2020 12:05	

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Sample Id:	**FS11**	Matrix:	Soil	Date Received:	08.04.2020 14:39
Lab Sample Id:	669080-010	Date Collected:	08.04.2020 10:42	Sample Depth:	1.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.04.2020 15:33	Basis:	Wet Weight
Seq Number:	3133577				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**28.5**	9.98	mg/kg	08.04.2020 20:52		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.04.2020 16:30	Basis:	Wet Weight
Seq Number:	3133557				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.04.2020 19:00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.04.2020 19:00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.04.2020 19:00	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	08.04.2020 19:00	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.04.2020 19:00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	08.04.2020 19:00	
o-Terphenyl	84-15-1	109	%	70-135	08.04.2020 19:00	

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Sample Id:	**FS11**	Matrix:	Soil	Date Received:	08.04.2020 14:39
Lab Sample Id:	669080-010	Date Collected:	08.04.2020 10:42	Sample Depth:	1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.04.2020 17:50	Basis:	Wet Weight
Seq Number:	3133584				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	08.05.2020 12:28	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	08.05.2020 12:28	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	08.05.2020 12:28	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	08.05.2020 12:28	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	08.05.2020 12:28	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	08.05.2020 12:28	U	1
Total BTEX		<0.00202	0.00202	mg/kg	08.05.2020 12:28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	87	%	70-130	08.05.2020 12:28	
4-Bromofluorobenzene	460-00-4	99	%	70-130	08.05.2020 12:28	

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Sample Id:	**SW11**	Matrix:	Soil	Date Received:	08.04.2020 14:39
Lab Sample Id:	669080-011	Date Collected:	08.04.2020 10:47	Sample Depth:	0 - 1.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.04.2020 17:40	Basis:	Wet Weight
Seq Number:	3133578				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**20.2**	9.94	mg/kg	08.04.2020 21:25		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.04.2020 16:30	Basis:	Wet Weight
Seq Number:	3133557				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.04.2020 19:21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.04.2020 19:21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.04.2020 19:21	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	08.04.2020 19:21	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.04.2020 19:21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	08.04.2020 19:21	
o-Terphenyl	84-15-1	106	%	70-135	08.04.2020 19:21	

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Sample Id:	**SW11**	Matrix:	Soil	Date Received:	08.04.2020 14:39
Lab Sample Id:	669080-011	Date Collected:	08.04.2020 10:47	Sample Depth:	0 - 1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.04.2020 17:50	Basis:	Wet Weight
Seq Number:	3133584				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.05.2020 12:50	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.05.2020 12:50	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.05.2020 12:50	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.05.2020 12:50	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.05.2020 12:50	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.05.2020 12:50	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.05.2020 12:50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	70-130	08.05.2020 12:50	
4-Bromofluorobenzene	460-00-4	99	%	70-130	08.05.2020 12:50	

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Sample Id:	**SW08**	Matrix:	Soil	Date Received:	08.04.2020 14:39
Lab Sample Id:	669080-012	Date Collected:	08.04.2020 11:02	Sample Depth:	0 - 1.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.04.2020 17:40	Basis:	Wet Weight
Seq Number:	3133578				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**147**	9.92	mg/kg	08.04.2020 21:42		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.04.2020 16:30	Basis:	Wet Weight
Seq Number:	3133557				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.04.2020 19:41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.04.2020 19:41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.04.2020 19:41	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	08.04.2020 19:41	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.04.2020 19:41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	08.04.2020 19:41	
o-Terphenyl	84-15-1	108	%	70-135	08.04.2020 19:41	

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Sample Id:	**SW08**	Matrix:	Soil	Date Received:	08.04.2020 14:39
Lab Sample Id:	669080-012	Date Collected:	08.04.2020 11:02	Sample Depth:	0 - 1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.04.2020 17:50	Basis:	Wet Weight
Seq Number:	3133584				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.05.2020 06:07	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.05.2020 06:07	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.05.2020 06:07	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.05.2020 06:07	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.05.2020 06:07	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.05.2020 06:07	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.05.2020 06:07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	70-130	08.05.2020 06:07	
4-Bromofluorobenzene	460-00-4	96	%	70-130	08.05.2020 06:07	

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Sample Id:	**SW09**	Matrix:	Soil	Date Received:	08.04.2020 14:39
Lab Sample Id:	669080-013	Date Collected:	08.04.2020 11:05	Sample Depth:	0 - 1.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.04.2020 17:40	Basis:	Wet Weight
Seq Number:	3133578				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**219**	9.88	mg/kg	08.04.2020 21:47		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.04.2020 16:30	Basis:	Wet Weight
Seq Number:	3133557				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	08.04.2020 20:01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	08.04.2020 20:01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	08.04.2020 20:01	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	08.04.2020 20:01	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	08.04.2020 20:01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	08.04.2020 20:01	
o-Terphenyl	84-15-1	103	%	70-135	08.04.2020 20:01	

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Sample Id:	**SW09**	Matrix:	Soil	Date Received:	08.04.2020 14:39
Lab Sample Id:	669080-013	Date Collected:	08.04.2020 11:05	Sample Depth:	0 - 1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.04.2020 17:50	Basis:	Wet Weight
Seq Number:	3133584				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.05.2020 13:13	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.05.2020 13:13	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.05.2020 13:13	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.05.2020 13:13	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.05.2020 13:13	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.05.2020 13:13	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.05.2020 13:13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	70-130	08.05.2020 13:13	
1,4-Difluorobenzene	540-36-3	95	%	70-130	08.05.2020 13:13	

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Sample Id:	**FS12**	Matrix:	Soil	Date Received:	08.04.2020 14:39
Lab Sample Id:	669080-014	Date Collected:	08.04.2020 11:09	Sample Depth:	1.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.04.2020 17:40	Basis:	Wet Weight
Seq Number:	3133578				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**108**	9.98	mg/kg	08.04.2020 21:53		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.04.2020 16:30	Basis:	Wet Weight
Seq Number:	3133557				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	08.04.2020 20:21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	08.04.2020 20:21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	08.04.2020 20:21	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	08.04.2020 20:21	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	08.04.2020 20:21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	08.04.2020 20:21	
o-Terphenyl	84-15-1	107	%	70-135	08.04.2020 20:21	

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Sample Id:	**FS12**	Matrix:	Soil	Date Received:	08.04.2020 14:39
Lab Sample Id:	669080-014	Date Collected:	08.04.2020 11:09	Sample Depth:	1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.04.2020 17:50	Basis:	Wet Weight
Seq Number:	3133584				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.05.2020 13:35	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.05.2020 13:35	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.05.2020 13:35	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.05.2020 13:35	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.05.2020 13:35	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.05.2020 13:35	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.05.2020 13:35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	08.05.2020 13:35	
4-Bromofluorobenzene	460-00-4	106	%	70-130	08.05.2020 13:35	

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Sample Id:	**SW10**	Matrix:	Soil	Date Received:	08.04.2020 14:39
Lab Sample Id:	669080-015	Date Collected:	08.04.2020 12:14	Sample Depth:	0 - 1.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.04.2020 17:40	Basis:	Wet Weight
Seq Number:	3133578				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**97.6**	10.1	mg/kg	08.04.2020 21:59		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.04.2020 16:30	Basis:	Wet Weight
Seq Number:	3133557				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	08.04.2020 20:42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	08.04.2020 20:42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	08.04.2020 20:42	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	08.04.2020 20:42	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	08.04.2020 20:42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	08.04.2020 20:42	
o-Terphenyl	84-15-1	106	%	70-135	08.04.2020 20:42	

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Certificate of Analytical Results 669080

LT Environmental, Inc., Arvada, CO

JRU 31

Sample Id:	**SW10**	Matrix:	Soil	Date Received:	08.04.2020 14:39
Lab Sample Id:	669080-015	Date Collected:	08.04.2020 12:14	Sample Depth:	0 - 1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.04.2020 17:50	Basis:	Wet Weight
Seq Number:	3133584				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.05.2020 13:58	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.05.2020 13:58	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.05.2020 13:58	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.05.2020 13:58	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.05.2020 13:58	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.05.2020 13:58	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.05.2020 13:58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	70-130	08.05.2020 13:58	
1,4-Difluorobenzene	540-36-3	101	%	70-130	08.05.2020 13:58	

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Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

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QC Summary 669080

LT Environmental, Inc.

JRU 31

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3133577 — Matrix: Solid — Date Prep: 08.04.2020
MB Sample Id: 7708736-1-BLK — LCS Sample Id: 7708736-1-BKS — LCSD Sample Id: 7708736-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	269	108	268	107	90-110	0	20	mg/kg	08.04.2020 18:10	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3133578 — Matrix: Solid — Date Prep: 08.04.2020
MB Sample Id: 7708740-1-BLK — LCS Sample Id: 7708740-1-BKS — LCSD Sample Id: 7708740-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	269	108	268	107	90-110	0	20	mg/kg	08.04.2020 21:14	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3133577 — Matrix: Soil — Date Prep: 08.04.2020
Parent Sample Id: 669032-004 — MS Sample Id: 669032-004 S — MSD Sample Id: 669032-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	177	199	382	103	384	104	90-110	1	20	mg/kg	08.04.2020 18:26	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3133577 — Matrix: Soil — Date Prep: 08.04.2020
Parent Sample Id: 669080-001 — MS Sample Id: 669080-001 S — MSD Sample Id: 669080-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	110	200	319	105	318	104	90-110	0	20	mg/kg	08.04.2020 19:45	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3133578 — Matrix: Soil — Date Prep: 08.04.2020
Parent Sample Id: 669080-011 — MS Sample Id: 669080-011 S — MSD Sample Id: 669080-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	20.2	200	225	102	225	102	90-110	0	20	mg/kg	08.04.2020 21:31	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3133578 — Matrix: Soil — Date Prep: 08.04.2020
Parent Sample Id: 669107-002 — MS Sample Id: 669107-002 S — MSD Sample Id: 669107-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	399	201	604	102	619	109	90-110	2	20	mg/kg	08.04.2020 22:49	

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

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QC Summary 669080

LT Environmental, Inc.

JRU 31

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3133532 — Matrix: Solid — Date Prep: 08.04.2020
MB Sample Id: 7708699-1-BLK — LCS Sample Id: 7708699-1-BKS — LCSD Sample Id: 7708699-1-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	925	93	903	90	70-135	2	35	mg/kg	08.04.2020 12:46	
Diesel Range Organics (DRO)	<50.0	1000	984	98	958	96	70-135	3	35	mg/kg	08.04.2020 12:46	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	96		115		109		70-135	%	08.04.2020 12:46
o-Terphenyl	99		108		102		70-135	%	08.04.2020 12:46

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3133557 — Matrix: Solid — Date Prep: 08.04.2020
MB Sample Id: 7708701-1-BLK — LCS Sample Id: 7708701-1-BKS — LCSD Sample Id: 7708701-1-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	1060	106	1020	102	70-135	4	35	mg/kg	08.04.2020 12:46	
Diesel Range Organics (DRO)	<50.0	1000	1150	115	1110	111	70-135	4	35	mg/kg	08.04.2020 12:46	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	102		131		125		70-135	%	08.04.2020 12:46
o-Terphenyl	108		120		115		70-135	%	08.04.2020 12:46

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3133532 — Matrix: Solid — Date Prep: 08.04.2020
MB Sample Id: 7708699-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	08.04.2020 12:25	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3133557 — Matrix: Solid — Date Prep: 08.04.2020
MB Sample Id: 7708701-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	08.04.2020 12:25	

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

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

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

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QC Summary 669080

LT Environmental, Inc.

JRU 31

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3133532 — Matrix: Soil — Date Prep: 08.04.2020
Parent Sample Id: 669020-001 — MS Sample Id: 669020-001 S — MSD Sample Id: 669020-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.9	998	834	84	826	83	70-135	1	35	mg/kg	08.04.2020 13:46	
Diesel Range Organics (DRO)	21.6	998	964	94	908	89	70-135	6	35	mg/kg	08.04.2020 13:46	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	103		100		70-135	%	08.04.2020 13:46
o-Terphenyl	100		96		70-135	%	08.04.2020 13:46

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3133557 — Matrix: Soil — Date Prep: 08.04.2020
Parent Sample Id: 669020-011 — MS Sample Id: 669020-011 S — MSD Sample Id: 669020-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.3	1010	993	98	914	91	70-135	8	35	mg/kg	08.04.2020 13:46	
Diesel Range Organics (DRO)	<50.3	1010	1080	107	1000	100	70-135	8	35	mg/kg	08.04.2020 13:46	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	120		111		70-135	%	08.04.2020 13:46
o-Terphenyl	112		103		70-135	%	08.04.2020 13:46

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5035A
Seq Number: 3133571 — Matrix: Solid — Date Prep: 08.04.2020
MB Sample Id: 7708725-1-BLK — LCS Sample Id: 7708725-1-BKS — LCSD Sample Id: 7708725-1-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	0.0934	93	0.0969	97	70-130	4	35	mg/kg	08.04.2020 14:46	
Toluene	<0.00200	0.100	0.0892	89	0.0911	91	70-130	2	35	mg/kg	08.04.2020 14:46	
Ethylbenzene	<0.00200	0.100	0.0926	93	0.0958	96	71-129	3	35	mg/kg	08.04.2020 14:46	
m,p-Xylenes	<0.00400	0.200	0.187	94	0.196	98	70-135	5	35	mg/kg	08.04.2020 14:46	
o-Xylene	<0.00200	0.100	0.0942	94	0.0942	94	71-133	0	35	mg/kg	08.04.2020 14:46	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		95		98		70-130	%	08.04.2020 14:46
4-Bromofluorobenzene	102		98		101		70-130	%	08.04.2020 14:46

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

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QC Summary 669080

LT Environmental, Inc.

JRU 31

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5035A
Seq Number: 3133584 — Matrix: Solid — Date Prep: 08.04.2020
MB Sample Id: 7708727-1-BLK — LCS Sample Id: 7708727-1-BKS — LCSD Sample Id: 7708727-1-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	0.109	109	0.112	112	70-130	3	35	mg/kg	08.05.2020 04:04	
Toluene	<0.00200	0.100	0.103	103	0.106	106	70-130	3	35	mg/kg	08.05.2020 04:04	
Ethylbenzene	<0.00200	0.100	0.0956	96	0.0978	98	71-129	2	35	mg/kg	08.05.2020 04:04	
m,p-Xylenes	<0.00400	0.200	0.194	97	0.198	99	70-135	2	35	mg/kg	08.05.2020 04:04	
o-Xylene	<0.00200	0.100	0.0963	96	0.0983	98	71-133	2	35	mg/kg	08.05.2020 04:04	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		99		99		70-130	%	08.05.2020 04:04
4-Bromofluorobenzene	95		102		102		70-130	%	08.05.2020 04:04

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5035A
Seq Number: 3133571 — Matrix: Soil — Date Prep: 08.04.2020
Parent Sample Id: 669032-001 — MS Sample Id: 669032-001 S — MSD Sample Id: 669032-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.114	114	0.110	110	70-130	4	35	mg/kg	08.04.2020 15:27	
Toluene	<0.00199	0.0996	0.0961	96	0.0983	98	70-130	2	35	mg/kg	08.04.2020 15:27	
Ethylbenzene	<0.00199	0.0996	0.0847	85	0.0926	93	71-129	9	35	mg/kg	08.04.2020 15:27	
m,p-Xylenes	<0.00398	0.199	0.169	85	0.185	93	70-135	9	35	mg/kg	08.04.2020 15:27	
o-Xylene	<0.00199	0.0996	0.0829	83	0.0911	91	71-133	9	35	mg/kg	08.04.2020 15:27	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		96		70-130	%	08.04.2020 15:27
4-Bromofluorobenzene	90		84		70-130	%	08.04.2020 15:27

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5035A
Seq Number: 3133584 — Matrix: Soil — Date Prep: 08.04.2020
Parent Sample Id: 669080-012 — MS Sample Id: 669080-012 S — MSD Sample Id: 669080-012 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.110	110	0.112	112	70-130	2	35	mg/kg	08.05.2020 09:06	
Toluene	<0.00200	0.0998	0.103	103	0.104	104	70-130	1	35	mg/kg	08.05.2020 09:06	
Ethylbenzene	<0.00200	0.0998	0.0949	95	0.0946	95	71-129	0	35	mg/kg	08.05.2020 09:06	
m,p-Xylenes	<0.00399	0.200	0.198	99	0.178	89	70-135	11	35	mg/kg	08.05.2020 09:06	
o-Xylene	<0.00200	0.0998	0.122	122	0.0934	94	71-133	27	35	mg/kg	08.05.2020 09:06	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		99		70-130	%	08.05.2020 09:06
4-Bromofluorobenzene	115		105		70-130	%	08.05.2020 09:06

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

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

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

Chain of Custody

XENCO LABORATORIES

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 Crasbad, NM (432) 704-5440
Phoenix,AZ (480) 355-0900 Atlanta,GA (770) 449-8800 Tampa,FL (813) 620-2000 West Palm Beach, FL (561) 689-6701

Work Order No: 469080

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Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc, Permian Office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Greene St
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	fsmith@ltenv.com, dmoir@ltenv.com

Work Order Comments

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

Project Name:	JRU 31	Turn Around	
Project Number:	012920079	Routine ☐	
Project Location	Eddy county	Rush: 2 days	
Sampler's Name:	Fatima Smith	Due Date:	
PO #:		Quote #:	

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Temperature (°C):	2.0/1.8	Thermometer ID	T-NM-007
Received Intact:	Yes No		
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Total Containers:	15

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA O=8021)	Chloride (EPA 300.0)
	FS05	S	8/4/20	0843	1.5'	1	X	X	X
	FS06			0847	1.5'				
	FS07			0850	1.5'				
	SW05			0912	0-1.5'				
	SW06			0915	0-1.5'				
	SW07			0920	0-1.5'				
	FS08			0947	1.5'				
	FS09			0950	1.5'				
	FS10			0957	1.5'				
	FS11			1042	1.5'				

ANALYSIS REQUEST

Preservative Codes

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

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

Sample Comments

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

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

TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U

1631 / 245.1 / 7470 / 7471 : Hg

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		8/4/20 1439	2		
			4		
			6		

Revised Date 022619 Rev. 2019.1

Chain of Custody

Work Order No: 1e1e9080

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

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc, Permian Office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Greene St
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	fsmith@ltenv.com, dmoir@ltenv.com

Work Order Comments

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

Project Name:	JRU 31	Turn Around	
Project Number:	012920079	Routine ☐	
Project Location	Eddy county	Rush: 2 days	
Sampler's Name:	Fatima Smith	Due Date:	
PO #:		Quote #:	

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

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Pres. Code	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)	Sample Comments
	SW11	S	8/4/20	1047	0-1.5'	1		X	X	X	
	SW08	S	8/4/20	1102	0-1.5'	1		X	X	X	
	SW09	S	8/4/20	1105	0-1.5'	1		X	X	X	
	FS12	S	8/4/20	1109	1.5'	1		X	X	X	
	SW10	S	8/4/20	1214	0-1.5'	1		X	X	X	

Preservative Codes

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

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

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

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

TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U

1631 / 245.1 / 7470 / 7471 : Hg

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		8/4/20 1439	2		
			4		
			6		

Revised Date 022619 Rev. 2019.1

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 08.04.2020 02.39.00 PM

Work Order #: 669080

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

Temperature Measuring device used : T-NM-007

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 08.04.2020

Checklist reviewed by: Jessica Kramer Date: 08.04.2020

Jessica Kramer

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Certificate of Analysis Summary 669643

LT Environmental, Inc., Arvada, CO

Project Name: JRU 31

Project Id: 012920079
Contact: Dan Moir
Project Location: Eddy County

Date Received in Lab: Mon 08.10.2020 14:20
Report Date: 08.11.2020 12:17
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	669643-001		669643-002		669643-003					
	Field Id:	FS13		FS13		SW13					
	Depth:	6- ft		6- ft		0-6 ft					
	Matrix:	SOIL		SOIL		SOIL					
	Sampled:	08.10.2020 09:07		08.10.2020 09:15		08.10.2020 13:00					
BTEX by EPA 8021B	***Extracted:***	08.10.2020 15:33		08.10.2020 15:33		08.10.2020 15:33					
	Analyzed:	08.10.2020 18:34		08.10.2020 18:56		08.10.2020 19:19					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199				
Toluene		<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199				
Ethylbenzene		<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199				
m,p-Xylenes		<0.00398	0.00398	<0.00398	0.00398	<0.00398	0.00398				
o-Xylene		<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199				
Total Xylenes		<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199				
Total BTEX		<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199				
Chloride by EPA 300	***Extracted:***	08.10.2020 15:41		08.10.2020 15:41		08.10.2020 15:41					
	Analyzed:	08.10.2020 22:54		08.10.2020 23:00		08.10.2020 23:05					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		2350	49.7	3940	49.9	146	10.1				
TPH by SW8015 Mod	***Extracted:***	08.10.2020 15:15		08.10.2020 15:15		08.10.2020 15:15					
	Analyzed:	08.10.2020 16:49		08.10.2020 17:09		08.10.2020 17:30					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<50.3	50.3	<50.0	50.0	<50.1	50.1				
Diesel Range Organics (DRO)		1180	50.3	655	50.0	<50.1	50.1				
Motor Oil Range Hydrocarbons (MRO)		135	50.3	96.2	50.0	<50.1	50.1				
Total GRO-DRO		1180	50.3	655	50.0	<50.1	50.1				
Total TPH		1320	50.3	751	50.0	<50.1	50.1				

BRL - Below Reporting Limit

Jessica Kramer

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

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Analytical Report 669643

for

LT Environmental, Inc.

Project Manager: Dan Moir

JRU 31

012920079

08.11.2020

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-17)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-7)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

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08.11.2020

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

Reference: Eurofins Xenco, LLC Report No(s): **669643**
JRU 31
Project Address: Eddy County

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 669643. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 669643 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Manager

A Small Business and Minority Company

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

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Sample Cross Reference 669643

LT Environmental, Inc., Arvada, CO

JRU 31

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS13	S	08.10.2020 09:07	6 ft	669643-001
FS13	S	08.10.2020 09:15	6 ft	669643-002
SW13	S	08.10.2020 13:00	0 - 6 ft	669643-003

CASE NARRATIVE

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Client Name: LT Environmental, Inc.

Project Name: JRU 31

Project ID: *012920079*
Work Order Number(s): *669643*

Report Date: *08.11.2020*
Date Received: *08.10.2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

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Certificate of Analytical Results 669643

LT Environmental, Inc., Arvada, CO

JRU 31

Sample Id:	**FS13**	Matrix:	Soil	Date Received:	08.10.2020 14:20
Lab Sample Id:	669643-001	Date Collected:	08.10.2020 09:07	Sample Depth:	6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.10.2020 15:41	Basis:	Wet Weight
Seq Number:	3134099				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2350**	49.7	mg/kg	08.10.2020 22:54		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.10.2020 15:15	Basis:	Wet Weight
Seq Number:	3134122				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	08.10.2020 16:49	U	1
Diesel Range Organics (DRO)	C10C28DRO	**1180**	50.3	mg/kg	08.10.2020 16:49		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**135**	50.3	mg/kg	08.10.2020 16:49		1
Total GRO-DRO	PHC628	**1180**	50.3	mg/kg	08.10.2020 16:49		1
Total TPH	PHC635	**1320**	50.3	mg/kg	08.10.2020 16:49		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	08.10.2020 16:49	
o-Terphenyl	84-15-1	114	%	70-135	08.10.2020 16:49	

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Certificate of Analytical Results 669643

LT Environmental, Inc., Arvada, CO

JRU 31

Sample Id:	**FS13**	Matrix:	Soil	Date Received:	08.10.2020 14:20
Lab Sample Id:	669643-001	Date Collected:	08.10.2020 09:07	Sample Depth:	6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.10.2020 15:33	Basis:	Wet Weight
Seq Number:	3134096				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.10.2020 18:34	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.10.2020 18:34	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.10.2020 18:34	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.10.2020 18:34	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.10.2020 18:34	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.10.2020 18:34	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.10.2020 18:34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	70-130	08.10.2020 18:34	
1,4-Difluorobenzene	540-36-3	98	%	70-130	08.10.2020 18:34	

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Certificate of Analytical Results 669643

LT Environmental, Inc., Arvada, CO

JRU 31

Sample Id:	**FS13**	Matrix:	Soil	Date Received:	08.10.2020 14:20
Lab Sample Id:	669643-002	Date Collected:	08.10.2020 09:15	Sample Depth:	6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.10.2020 15:41	Basis:	Wet Weight
Seq Number:	3134099				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**3940**	49.9	mg/kg	08.10.2020 23:00		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.10.2020 15:15	Basis:	Wet Weight
Seq Number:	3134122				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.10.2020 17:09	U	1
Diesel Range Organics (DRO)	C10C28DRO	**655**	50.0	mg/kg	08.10.2020 17:09		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**96.2**	50.0	mg/kg	08.10.2020 17:09		1
Total GRO-DRO	PHC628	**655**	50.0	mg/kg	08.10.2020 17:09		1
Total TPH	PHC635	**751**	50.0	mg/kg	08.10.2020 17:09		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	08.10.2020 17:09	
o-Terphenyl	84-15-1	110	%	70-135	08.10.2020 17:09	

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Certificate of Analytical Results 669643

LT Environmental, Inc., Arvada, CO

JRU 31

Sample Id:	**FS13**	Matrix:	Soil	Date Received:	08.10.2020 14:20
Lab Sample Id:	669643-002	Date Collected:	08.10.2020 09:15	Sample Depth:	6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.10.2020 15:33	Basis:	Wet Weight
Seq Number:	3134096				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.10.2020 18:56	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.10.2020 18:56	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.10.2020 18:56	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.10.2020 18:56	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.10.2020 18:56	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.10.2020 18:56	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.10.2020 18:56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	70-130	08.10.2020 18:56	
4-Bromofluorobenzene	460-00-4	127	%	70-130	08.10.2020 18:56	

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Certificate of Analytical Results 669643

LT Environmental, Inc., Arvada, CO

JRU 31

Sample Id:	**SW13**	Matrix:	Soil	Date Received:	08.10.2020 14:20
Lab Sample Id:	669643-003	Date Collected:	08.10.2020 13:00	Sample Depth:	0 - 6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.10.2020 15:41	Basis:	Wet Weight
Seq Number:	3134099				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**146**	10.1	mg/kg	08.10.2020 23:05		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.10.2020 15:15	Basis:	Wet Weight
Seq Number:	3134122				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	08.10.2020 17:30	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	08.10.2020 17:30	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	08.10.2020 17:30	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	08.10.2020 17:30	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	08.10.2020 17:30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	08.10.2020 17:30	
o-Terphenyl	84-15-1	116	%	70-135	08.10.2020 17:30	

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Certificate of Analytical Results 669643

LT Environmental, Inc., Arvada, CO

JRU 31

Sample Id:	**SW13**	Matrix:	Soil	Date Received:	08.10.2020 14:20
Lab Sample Id:	669643-003	Date Collected:	08.10.2020 13:00	Sample Depth:	0 - 6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.10.2020 15:33	Basis:	Wet Weight
Seq Number:	3134096				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.10.2020 19:19	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.10.2020 19:19	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.10.2020 19:19	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.10.2020 19:19	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.10.2020 19:19	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.10.2020 19:19	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.10.2020 19:19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	112	%	70-130	08.10.2020 19:19	
1,4-Difluorobenzene	540-36-3	91	%	70-130	08.10.2020 19:19	

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Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

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QC Summary 669643

LT Environmental, Inc.

JRU 31

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3134099 — Matrix: Solid — Date Prep: 08.10.2020
MB Sample Id: 7709130-1-BLK — LCS Sample Id: 7709130-1-BKS — LCSD Sample Id: 7709130-1-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	267	107	267	107	90-110	0	20	mg/kg	08.10.2020 22:26	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3134099 — Matrix: Soil — Date Prep: 08.10.2020
Parent Sample Id: 669624-041 — MS Sample Id: 669624-041 S — MSD Sample Id: 669624-041 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	4450	248	4710	105	4720	109	90-110	0	20	mg/kg	08.10.2020 22:43	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3134099 — Matrix: Soil — Date Prep: 08.10.2020
Parent Sample Id: 669624-048 — MS Sample Id: 669624-048 S — MSD Sample Id: 669624-048 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	5750	202	5940	94	5940	94	90-110	0	20	mg/kg	08.11.2020 00:01	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3134122 — Matrix: Solid — Date Prep: 08.10.2020
MB Sample Id: 7709153-1-BLK — LCS Sample Id: 7709153-1-BKS — LCSD Sample Id: 7709153-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1070	107	1050	105	70-135	2	35	mg/kg	08.10.2020 12:40	
Diesel Range Organics (DRO)	<50.0	1000	1180	118	1140	114	70-135	3	35	mg/kg	08.10.2020 12:40	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	105		127		123		70-135	%	08.10.2020 12:40
o-Terphenyl	107		120		116		70-135	%	08.10.2020 12:40

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3134122 — Matrix: Solid — Date Prep: 08.10.2020
MB Sample Id: 7709153-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	08.10.2020 12:20	

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

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

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

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QC Summary 669643

LT Environmental, Inc.

JRU 31

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3134122 Matrix: Soil Date Prep: 08.10.2020
Parent Sample Id: 669620-001 MS Sample Id: 669620-001 S MSD Sample Id: 669620-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.8	995	1020	103	1010	102	70-135	1	35	mg/kg	08.10.2020 15:49	
Diesel Range Organics (DRO)	<49.8	995	1110	112	1090	110	70-135	2	35	mg/kg	08.10.2020 15:49	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	130		128		70-135	%	08.10.2020 15:49
o-Terphenyl	122		121		70-135	%	08.10.2020 15:49

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3134096 Matrix: Solid Date Prep: 08.10.2020
MB Sample Id: 7709129-1-BLK LCS Sample Id: 7709129-1-BKS LCSD Sample Id: 7709129-1-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	0.0973	97	0.110	110	70-130	12	35	mg/kg	08.10.2020 16:08	
Toluene	<0.00200	0.100	0.0925	93	0.105	105	70-130	13	35	mg/kg	08.10.2020 16:08	
Ethylbenzene	<0.00200	0.100	0.0867	87	0.0982	98	71-129	12	35	mg/kg	08.10.2020 16:08	
m,p-Xylenes	<0.00400	0.200	0.177	89	0.200	100	70-135	12	35	mg/kg	08.10.2020 16:08	
o-Xylene	<0.00200	0.100	0.0862	86	0.0977	98	71-133	13	35	mg/kg	08.10.2020 16:08	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		99		99		70-130	%	08.10.2020 16:08
4-Bromofluorobenzene	95		98		104		70-130	%	08.10.2020 16:08

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3134096 Matrix: Soil Date Prep: 08.10.2020
Parent Sample Id: 669624-021 MS Sample Id: 669624-021 S MSD Sample Id: 669624-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.121	121	0.108	108	70-130	11	35	mg/kg	08.10.2020 16:53	
Toluene	<0.00201	0.100	0.115	115	0.102	102	70-130	12	35	mg/kg	08.10.2020 16:53	
Ethylbenzene	<0.00201	0.100	0.107	107	0.0941	94	71-129	13	35	mg/kg	08.10.2020 16:53	
m,p-Xylenes	<0.00402	0.201	0.218	108	0.191	96	70-135	13	35	mg/kg	08.10.2020 16:53	
o-Xylene	<0.00201	0.100	0.106	106	0.0948	95	71-133	11	35	mg/kg	08.10.2020 16:53	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		99		70-130	%	08.10.2020 16:53
4-Bromofluorobenzene	104		103		70-130	%	08.10.2020 16:53

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

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

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

Chain of Custody

Work Order No: 6269643

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

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrel
Company Name:	LT Environmental, Inc, Permian Office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Greene St
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	fsmith@ltenv.com, dmoir@ltenv.com

Work Order Comments

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

Project Name:	JRU 31	Turn Around	
Project Number:	012920079	Routine ☐	
Project Location	Eddy county	Rush: 24 hrs	
Sampler's Name:	Fatima Smith	Due Date:	
PO #:		Quote #:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	4.0 / 3.8	Thermometer ID	
Received Intact:	(Yes) No	TNM007	
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	3

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Pres. Code	TPH (EPA 8015)	BTEX (EPA O= 8021)	Chloride (EPA 300.0)
	FS13	S	8/10/20	0907	6'	1		X	X	X
	FS14	S	8/10/20	0915	6'	1		X	X	X
	SW13	S	8/10/20	1300	0-6'	1		X	X	X

Preservative Codes

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

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

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
		8/10/20 14:20	2		
			4		
			6		

Revised Date 022619 Rev. 2019.1

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 08.10.2020 02.20.00 PM

Work Order #: 669643

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

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	3.8	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**	
#5 Custody Seals intact on sample bottles?	**Yes**	
#6*Custody Seals Signed and dated?	**Yes**	
#7 *Chain of Custody present?	**Yes**	
#8 Any missing/extra samples?	**No**	
#9 Chain of Custody signed when relinquished/ received?	**Yes**	
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**	
#11 Container label(s) legible and intact?	**Yes**	
#12 Samples in proper container/ bottle?	**Yes**	Samples received in bulk containers.
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**No**	
#18 Water VOC samples have zero headspace?	**N/A**	

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 08.10.2020

Checklist reviewed by: Jessica Kramer Date: 08.11.2020

Jessica Kramer

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Certificate of Analysis Summary 669462

LT Environmental, Inc., Arvada, CO

Project Name: JRU 31

Project Id: 012920079
Contact: Dan Moir
Project Location: Eddy County

Date Received in Lab: Thu 08.06.2020 14:31
Report Date: 08.10.2020 11:53
Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	669462-001					
	Field Id:	SW12					
	Depth:	0-6 ft					
	Matrix:	SOIL					
	Sampled:	08.06.2020 14:31					
BTEX by EPA 8021B	***Extracted:***	08.06.2020 16:55					
	Analyzed:	08.07.2020 02:38					
	Units/RL:	mg/kg RL					
Benzene		<0.00200 0.00200					
Toluene		<0.00200 0.00200					
Ethylbenzene		<0.00200 0.00200					
m,p-Xylenes		<0.00401 0.00401					
o-Xylene		<0.00200 0.00200					
Total Xylenes		<0.00200 0.00200					
Total BTEX		<0.00200 0.00200					
Chloride by EPA 300	***Extracted:***	08.06.2020 17:00					
	Analyzed:	08.06.2020 23:35					
	Units/RL:	mg/kg RL					
Chloride		46.5 9.98					
TPH by SW8015 Mod	***Extracted:***	08.06.2020 17:15					
	Analyzed:	08.07.2020 01:50					
	Units/RL:	mg/kg RL					
Gasoline Range Hydrocarbons (GRO)		<49.9 49.9					
Diesel Range Organics (DRO)		<49.9 49.9					
Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9					
Total GRO-DRO		<49.9 49.9					
Total TPH		<49.9 49.9					

BRL - Below Reporting Limit

Jessica Kramer

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

Final 1.000

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Analytical Report 669462

for

LT Environmental, Inc.

Project Manager: Dan Moir

JRU 31

012920079

08.10.2020

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-17)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-7)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

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08.10.2020

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

Reference: Eurofins Xenco, LLC Report No(s): **669462**
JRU 31
Project Address: Eddy County

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 669462. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 669462 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Manager

A Small Business and Minority Company

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

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Sample Cross Reference 669462

LT Environmental, Inc., Arvada, CO

JRU 31

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW12	S	08.06.2020 14:31	0 - 6 ft	669462-001

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CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: JRU 31

Project ID: *012920079*
Work Order Number(s): *669462*

Report Date: *08.10.2020*
Date Received: *08.06.2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

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Certificate of Analytical Results 669462

LT Environmental, Inc., Arvada, CO

JRU 31

Sample Id:	**SW12**	Matrix:	Soil	Date Received:	08.06.2020 14:31
Lab Sample Id:	669462-001	Date Collected:	08.06.2020 14:31	Sample Depth:	0 - 6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.06.2020 17:00	Basis:	Wet Weight
Seq Number:	3133869				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**46.5**	9.98	mg/kg	08.06.2020 23:35		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.06.2020 17:15	Basis:	Wet Weight
Seq Number:	3133852				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.07.2020 01:50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.07.2020 01:50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.07.2020 01:50	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	08.07.2020 01:50	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.07.2020 01:50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	08.07.2020 01:50	
o-Terphenyl	84-15-1	108	%	70-135	08.07.2020 01:50	

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Certificate of Analytical Results 669462

LT Environmental, Inc., Arvada, CO

JRU 31

Sample Id:	**SW12**	Matrix:	Soil	Date Received:	08.06.2020 14:31
Lab Sample Id:	669462-001	Date Collected:	08.06.2020 14:31	Sample Depth:	0 - 6 ft

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MRB	Date Prep:	08.06.2020 16:55	Basis:	Wet Weight
Seq Number:	3133865				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.07.2020 02:38	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.07.2020 02:38	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.07.2020 02:38	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.07.2020 02:38	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.07.2020 02:38	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.07.2020 02:38	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.07.2020 02:38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	08.07.2020 02:38	
1,4-Difluorobenzene	540-36-3	102	%	70-130	08.07.2020 02:38	

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Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

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QC Summary 669462

LT Environmental, Inc.

JRU 31

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3133869 — Matrix: Solid — Date Prep: 08.06.2020
MB Sample Id: 7708949-1-BLK — LCS Sample Id: 7708949-1-BKS — LCSD Sample Id: 7708949-1-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	270	108	268	107	90-110	1	20	mg/kg	08.06.2020 21:10	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3133869 — Matrix: Soil — Date Prep: 08.06.2020
Parent Sample Id: 669401-018 — MS Sample Id: 669401-018 S — MSD Sample Id: 669401-018 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	402	199	607	103	605	102	90-110	0	20	mg/kg	08.06.2020 21:27	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3133869 — Matrix: Soil — Date Prep: 08.06.2020
Parent Sample Id: 669401-028 — MS Sample Id: 669401-028 S — MSD Sample Id: 669401-028 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	81.7	200	288	103	287	103	90-110	0	20	mg/kg	08.06.2020 22:45	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3133852 — Matrix: Solid — Date Prep: 08.06.2020
MB Sample Id: 7708910-1-BLK — LCS Sample Id: 7708910-1-BKS — LCSD Sample Id: 7708910-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1130	113	1060	106	70-135	6	35	mg/kg	08.06.2020 18:44	
Diesel Range Organics (DRO)	<50.0	1000	1090	109	1150	115	70-135	5	35	mg/kg	08.06.2020 18:44	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	114		134		122		70-135	%	08.06.2020 18:44
o-Terphenyl	114		123		116		70-135	%	08.06.2020 18:44

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3133852 — Matrix: Solid — Date Prep: 08.06.2020
MB Sample Id: 7708910-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	08.06.2020 18:24	

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

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

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

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QC Summary 669462

LT Environmental, Inc.

JRU 31

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3133852 Matrix: Soil Date Prep: 08.06.2020
Parent Sample Id: 669401-018 MS Sample Id: 669401-018 S MSD Sample Id: 669401-018 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	995	997	100	1010	101	70-135	1	35	mg/kg	08.06.2020 19:44	
Diesel Range Organics (DRO)	<49.8	995	1070	108	1080	108	70-135	1	35	mg/kg	08.06.2020 19:44	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	124		123		70-135	%	08.06.2020 19:44
o-Terphenyl	118		116		70-135	%	08.06.2020 19:44

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3133865 Matrix: Solid Date Prep: 08.06.2020
MB Sample Id: 7708938-1-BLK LCS Sample Id: 7708938-1-BKS LCSD Sample Id: 7708938-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.101	101	0.102	102	70-130	1	35	mg/kg	08.06.2020 17:39	
Toluene	<0.00200	0.100	0.0958	96	0.0958	96	70-130	0	35	mg/kg	08.06.2020 17:39	
Ethylbenzene	<0.00200	0.100	0.0998	100	0.0994	99	71-129	0	35	mg/kg	08.06.2020 17:39	
m,p-Xylenes	<0.00400	0.200	0.203	102	0.203	102	70-135	0	35	mg/kg	08.06.2020 17:39	
o-Xylene	<0.00200	0.100	0.100	100	0.0999	100	71-133	0	35	mg/kg	08.06.2020 17:39	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		97		97		70-130	%	08.06.2020 17:39
4-Bromofluorobenzene	102		100		98		70-130	%	08.06.2020 17:39

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3133865 Matrix: Soil Date Prep: 08.06.2020
Parent Sample Id: 669317-001 MS Sample Id: 669317-001 S MSD Sample Id: 669317-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.101	101	0.0977	97	70-130	3	35	mg/kg	08.06.2020 18:20	
Toluene	<0.00201	0.100	0.0904	90	0.0918	91	70-130	2	35	mg/kg	08.06.2020 18:20	
Ethylbenzene	<0.00201	0.100	0.0896	90	0.0957	95	71-129	7	35	mg/kg	08.06.2020 18:20	
m,p-Xylenes	<0.00402	0.201	0.179	89	0.194	97	70-135	8	35	mg/kg	08.06.2020 18:20	
o-Xylene	<0.00201	0.100	0.0862	86	0.0964	95	71-133	11	35	mg/kg	08.06.2020 18:20	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		97		70-130	%	08.06.2020 18:20
4-Bromofluorobenzene	103		98		70-130	%	08.06.2020 18:20

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

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

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

Chain of Custody

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

Work Order No: 666942

Page 1 of 1

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian Office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	5104 E Greene St
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	fsmith@ltenv.com, dmoir@ltenv.com

Work Order Comments

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

Project Name:	JRU 31	Turn Around	
Project Number:	012920079	Routine	☑
Project Location	Eddy county	Rush:	
Sampler's Name:	Fatima Smith	Due Date:	
PO #:		Quote #:	

SAMPLE RECEIPT			
Temp Blank:	Yes / No	Wet Ice:	Yes / No
Temperature (°C):	2.6/2.4	Thermometer ID	TNM007
Received Intact:	Yes / No		
Cooler Custody Seals:	Yes / No / N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes / No / N/A	Total Containers:	1

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Pres. Code	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
	SW12	S	6/6/20	1431	0-6'	1		X	X	X

ANALYSIS REQUEST

Preservative Codes

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

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

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
		8/6/20 16:10	2		
			4		
			6		

Revised Date 022619 Rev. 2019.1

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 08.06.2020 02.31.00 PM

Work Order #: 669462

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

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	2.4	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**	
#5 Custody Seals intact on sample bottles?	**Yes**	
#6*Custody Seals Signed and dated?	**Yes**	
#7 *Chain of Custody present?	**Yes**	
#8 Any missing/extra samples?	**No**	
#9 Chain of Custody signed when relinquished/ received?	**Yes**	
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**	
#11 Container label(s) legible and intact?	**Yes**	
#12 Samples in proper container/ bottle?	**Yes**	Sample received inbulk containers.
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**No**	
#18 Water VOC samples have zero headspace?	**N/A**	

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 08.06.2020

Checklist reviewed by: Jessica Kramer Date: 08.10.2020

Jessica Kramer

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Certificate of Analysis Summary 670087

LT Environmental, Inc., Arvada, CO

Project Name: XTO Energy

Project Id: 012920079
Contact: Dan Moir
Project Location: Eddy County

Date Received in Lab: Fri 08.14.2020 11:30
Report Date: 08.17.2020 11:20
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	670087-001		670087-002		670087-003					
	Field Id:	FS13		BH01		BH01A					
	Depth:	7- ft		7- ft		9- ft					
	Matrix:	SOIL		SOIL		SOIL					
	Sampled:	08.14.2020 08:54		08.14.2020 09:05		08.14.2020 10:10					
BTEX by EPA 8021B	***Extracted:***	08.14.2020 14:45		08.14.2020 14:45		08.14.2020 14:45					
	Analyzed:	08.14.2020 17:01		08.14.2020 17:21		08.14.2020 17:42					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200				
Toluene		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200				
Ethylbenzene		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200				
m,p-Xylenes		<0.00399	0.00399	<0.00398	0.00398	<0.00401	0.00401				
o-Xylene		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200				
Total Xylenes		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200				
Total BTEX		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200				
Chloride by EPA 300	***Extracted:***	08.14.2020 12:00		08.14.2020 12:00		08.14.2020 12:00					
	Analyzed:	08.14.2020 16:44		08.14.2020 16:49		08.14.2020 16:55					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		1650	49.7	533	10.0	182	9.90				
TPH by SW8015 Mod	***Extracted:***	08.14.2020 12:30		08.14.2020 12:30		08.14.2020 12:30					
	Analyzed:	08.14.2020 16:10		08.14.2020 16:30		08.14.2020 16:50					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<49.9	49.9	<49.8	49.8	<49.9	49.9				
Diesel Range Organics (DRO)		<49.9	49.9	<49.8	49.8	<49.9	49.9				
Motor Oil Range Hydrocarbons (MRO)		<49.9	49.9	<49.8	49.8	<49.9	49.9				
Total GRO-DRO		<49.9	49.9	<49.8	49.8	<49.9	49.9				
Total TPH		<49.9	49.9	<49.8	49.8	<49.9	49.9				

BRL - Below Reporting Limit

Jessica Kramer

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

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Analytical Report 670087

for

LT Environmental, Inc.

Project Manager: Dan Moir

XTO Energy

012920079

08.17.2020

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-37), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

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

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

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08.17.2020

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

Reference: Eurofins Xenco, LLC Report No(s): **670087**
XTO Energy
Project Address: Eddy County

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 670087. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 670087 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Manager

A Small Business and Minority Company

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

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Sample Cross Reference 670087

LT Environmental, Inc., Arvada, CO

XTO Energy

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS13	S	08.14.2020 08:54	7 ft	670087-001
BH01	S	08.14.2020 09:05	7 ft	670087-002
BH01A	S	08.14.2020 10:10	9 ft	670087-003

CASE NARRATIVE

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Client Name: LT Environmental, Inc.

Project Name: XTO Energy

Project ID: *012920079*
Work Order Number(s): *670087*

Report Date: *08.17.2020*
Date Received: *08.14.2020*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

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Certificate of Analytical Results 670087

LT Environmental, Inc., Arvada, CO

XTO Energy

Sample Id:	**FS13**	Matrix:	Soil	Date Received:	08.14.2020 11:30
Lab Sample Id:	670087-001	Date Collected:	08.14.2020 08:54	Sample Depth:	7 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.14.2020 12:00	Basis:	Wet Weight
Seq Number:	3134602				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1650**	49.7	mg/kg	08.14.2020 16:44		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.14.2020 12:30	Basis:	Wet Weight
Seq Number:	3134621				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.14.2020 16:10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.14.2020 16:10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.14.2020 16:10	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	08.14.2020 16:10	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.14.2020 16:10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	08.14.2020 16:10	
o-Terphenyl	84-15-1	92	%	70-135	08.14.2020 16:10	

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Certificate of Analytical Results 670087

LT Environmental, Inc., Arvada, CO

XTO Energy

Sample Id:	**FS13**	Matrix:	Soil	Date Received:	08.14.2020 11:30
Lab Sample Id:	670087-001	Date Collected:	08.14.2020 08:54	Sample Depth:	7 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.14.2020 14:45	Basis:	Wet Weight
Seq Number:	3134694				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.14.2020 17:01	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.14.2020 17:01	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.14.2020 17:01	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.14.2020 17:01	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.14.2020 17:01	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.14.2020 17:01	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.14.2020 17:01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	08.14.2020 17:01	
4-Bromofluorobenzene	460-00-4	105	%	70-130	08.14.2020 17:01	

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Certificate of Analytical Results 670087

LT Environmental, Inc., Arvada, CO

XTO Energy

Sample Id:	**BH01**	Matrix:	Soil	Date Received:	08.14.2020 11:30
Lab Sample Id:	670087-002	Date Collected:	08.14.2020 09:05	Sample Depth:	7 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.14.2020 12:00	Basis:	Wet Weight
Seq Number:	3134602				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**533**	10.0	mg/kg	08.14.2020 16:49		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.14.2020 12:30	Basis:	Wet Weight
Seq Number:	3134621				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.14.2020 16:30	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.14.2020 16:30	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.14.2020 16:30	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	08.14.2020 16:30	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.14.2020 16:30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	08.14.2020 16:30	
o-Terphenyl	84-15-1	93	%	70-135	08.14.2020 16:30	

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Certificate of Analytical Results 670087

LT Environmental, Inc., Arvada, CO

XTO Energy

Sample Id:	**BH01**	Matrix:	Soil	Date Received:	08.14.2020 11:30
Lab Sample Id:	670087-002	Date Collected:	08.14.2020 09:05	Sample Depth:	7 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.14.2020 14:45	Basis:	Wet Weight
Seq Number:	3134694				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.14.2020 17:21	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.14.2020 17:21	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.14.2020 17:21	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.14.2020 17:21	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.14.2020 17:21	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.14.2020 17:21	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.14.2020 17:21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	70-130	08.14.2020 17:21	
1,4-Difluorobenzene	540-36-3	96	%	70-130	08.14.2020 17:21	

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Certificate of Analytical Results 670087

LT Environmental, Inc., Arvada, CO

XTO Energy

Sample Id:	**BH01A**	Matrix:	Soil	Date Received:	08.14.2020 11:30
Lab Sample Id:	670087-003	Date Collected:	08.14.2020 10:10	Sample Depth:	9 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.14.2020 12:00	Basis:	Wet Weight
Seq Number:	3134602				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**182**	9.90	mg/kg	08.14.2020 16:55		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.14.2020 12:30	Basis:	Wet Weight
Seq Number:	3134621				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.14.2020 16:50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.14.2020 16:50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.14.2020 16:50	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	08.14.2020 16:50	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.14.2020 16:50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	08.14.2020 16:50	
o-Terphenyl	84-15-1	88	%	70-135	08.14.2020 16:50	

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Certificate of Analytical Results 670087

LT Environmental, Inc., Arvada, CO

XTO Energy

Sample Id:	**BH01A**	Matrix:	Soil	Date Received:	08.14.2020 11:30
Lab Sample Id:	670087-003	Date Collected:	08.14.2020 10:10	Sample Depth:	9 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.14.2020 14:45	Basis:	Wet Weight
Seq Number:	3134694				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.14.2020 17:42	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.14.2020 17:42	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.14.2020 17:42	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.14.2020 17:42	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.14.2020 17:42	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.14.2020 17:42	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.14.2020 17:42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	107	%	70-130	08.14.2020 17:42	
1,4-Difluorobenzene	540-36-3	104	%	70-130	08.14.2020 17:42	

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Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

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QC Summary 670087

LT Environmental, Inc.

XTO Energy

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3134602 — Matrix: Solid — Date Prep: 08.14.2020
MB Sample Id: 7709464-1-BLK — LCS Sample Id: 7709464-1-BKS — LCSD Sample Id: 7709464-1-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	260	104	263	105	90-110	1	20	mg/kg	08.14.2020 12:29	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3134602 — Matrix: Soil — Date Prep: 08.14.2020
Parent Sample Id: 670038-004 — MS Sample Id: 670038-004 S — MSD Sample Id: 670038-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	10900	198	11100	101	11100	101	90-110	0	20	mg/kg	08.14.2020 16:04	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3134602 — Matrix: Soil — Date Prep: 08.14.2020
Parent Sample Id: 670079-003 — MS Sample Id: 670079-003 S — MSD Sample Id: 670079-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	13.7	200	208	97	211	99	90-110	1	20	mg/kg	08.14.2020 14:18	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3134621 — Matrix: Solid — Date Prep: 08.14.2020
MB Sample Id: 7709490-1-BLK — LCS Sample Id: 7709490-1-BKS — LCSD Sample Id: 7709490-1-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	890	89	887	89	70-135	0	35	mg/kg	08.14.2020 12:27	
Diesel Range Organics (DRO)	<50.0	1000	916	92	935	94	70-135	2	35	mg/kg	08.14.2020 12:27	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	93		115		114		70-135	%	08.14.2020 12:27
o-Terphenyl	100		102		104		70-135	%	08.14.2020 12:27

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3134621 — Matrix: Solid — Date Prep: 08.14.2020
MB Sample Id: 7709490-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	08.14.2020 13:08	

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

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QC Summary 670087

LT Environmental, Inc.

XTO Energy

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3134621 Matrix: Soil Date Prep: 08.14.2020
Parent Sample Id: 670079-001 MS Sample Id: 670079-001 S MSD Sample Id: 670079-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	999	901	90	883	88	70-135	2	35	mg/kg	08.14.2020 13:49	
Diesel Range Organics (DRO)	<50.0	999	932	93	915	92	70-135	2	35	mg/kg	08.14.2020 13:49	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	108		104		70-135	%	08.14.2020 13:49
o-Terphenyl	98		96		70-135	%	08.14.2020 13:49

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3134694 Matrix: Solid Date Prep: 08.14.2020
MB Sample Id: 7709550-1-BLK LCS Sample Id: 7709550-1-BKS LCSD Sample Id: 7709550-1-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	0.0961	96	0.101	101	70-130	5	35	mg/kg	08.14.2020 15:04	
Toluene	<0.00200	0.100	0.0909	91	0.0957	96	70-130	5	35	mg/kg	08.14.2020 15:04	
Ethylbenzene	<0.00200	0.100	0.0932	93	0.0981	98	71-129	5	35	mg/kg	08.14.2020 15:04	
m,p-Xylenes	<0.00400	0.200	0.194	97	0.199	100	70-135	3	35	mg/kg	08.14.2020 15:04	
o-Xylene	<0.00200	0.100	0.0950	95	0.100	100	71-133	5	35	mg/kg	08.14.2020 15:04	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		97		100		70-130	%	08.14.2020 15:04
4-Bromofluorobenzene	106		96		101		70-130	%	08.14.2020 15:04

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3134694 Matrix: Soil Date Prep: 08.14.2020
Parent Sample Id: 670087-001 MS Sample Id: 670087-001 S MSD Sample Id: 670087-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.102	102	0.107	107	70-130	5	35	mg/kg	08.14.2020 15:44	
Toluene	<0.00200	0.100	0.0975	98	0.103	103	70-130	5	35	mg/kg	08.14.2020 15:44	
Ethylbenzene	<0.00200	0.100	0.101	101	0.104	104	71-129	3	35	mg/kg	08.14.2020 15:44	
m,p-Xylenes	<0.00401	0.200	0.209	105	0.212	105	70-135	1	35	mg/kg	08.14.2020 15:44	
o-Xylene	<0.00200	0.100	0.102	102	0.109	109	71-133	7	35	mg/kg	08.14.2020 15:44	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	96		95		70-130	%	08.14.2020 15:44
4-Bromofluorobenzene	100		96		70-130	%	08.14.2020 15:44

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

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

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

Chain of Custody

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

Work Order No: 670087

Page 1 of 1

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	(T Environmental, Inc., Permian Office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Greene St
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	fsmith@ltenv.com, dmoir@ltenv.com

Work Order Comments

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

Project Name:	JRU 31	Turn Around	
Project Number:	012920079	Routine ☐	
Project Location	Eddy county	Rush: 24 hrs	
Sampler's Name:	Fatima Smith	Due Date:	
PO #:		Quote #:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	1.6 / 1.4	Thermometer ID	T-NM-007
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	3

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Pres. Code	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
	FS13	S	8/14/20	0854	7'	1		X	X	X
	BH01	S	8/14/20	0905	7'	1		X	X	X
	BH01A	S	8/14/20	1010	9'	1		X	X	X

ANALYSIS REQUEST

Preservative Codes

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

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

Sample Comments

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

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
	Cloé Chafin	8.14.20 11:30	2		
			4		
			6		

Revised Date 022619 Rev. 2019.1

Form C-141
Page 6

State of New Mexico
Oil Conservation Division

Incident ID	NRM2013660346
District RP	
Facility ID	
Application ID	

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: 09/25/2020

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

OCD Only

Received by: Chad Hensley Date: 2/11/2021

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

Closure Approved by: Date: 2/21/2021

Printed Name: Chad Hensley Title: Environmental Specialist Advanced

From: Hensley, Chad, EMNRD
To: adrian_baker@xtoenergy.com
Cc: Bratcher, Mike, EMNRD; Eads, Cristina, EMNRD; Hamlet, Robert, EMNRD
Subject: Closure Approval XTO Closure Request James Ranch Unit 31_Incident Number_NRM2013660346
Date: Thursday, February 11, 2021 11:28:00 AM
Attachments: Closure Approval_XTO_Closure Request_James Ranch Unit 31_Incident Number_NRM2013660346.pdf

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Adrian,

We have received your closure report and final C-141 for **Incident # NRM2013660346** James Ranch Unit 31, thank you. This closure is approved.
Please let me know if you have any further questions.

Regards,

Chad Hensley ● Environmental Science & Specialist
Environmental Bureau
EMNRD - Oil Conservation Division
811 First St. | Artesia, NM 88210
Office: 575.748.1283 | Cell: 575-703-1723
chad.hensley@state.nm.us
http://www.emnrd.state.nm.us/OCD/

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

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

CONDITIONS

Action 10428

CONDITIONS OF APPROVAL

Operator:	OGRID:	Action Number:	Action Type:
XTO ENERGY, INC 6401 Holiday Hill Road Building #5 Midland, TX79707	5380	10428	C-141

OCD Reviewer	Condition
chensley	None