

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	NRM2026531591
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 32.20747 Longitude -103.7841
(NAD 83 in decimal degrees to 5 decimal places)

Site Name PLU 129 Flowline	Site Type Flow line
Date Release Discovered 9/3/2020	API# (if applicable)

Unit Letter	Section	Township	Range	County
B	20	24S	31E	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) .02	Volume Recovered (bbls) .01
☒ Produced Water	Volume Released (bbls) 6.12	Volume Recovered (bbls) 1.99
	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 flowline leak due to corrosion. A third party contractor will be retained for remediation activities.

Form C-141

State of New Mexico
Oil Conservation Division

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Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release? N/A
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? N/A	

Initial Response

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

☒ The source of the release has been stopped. ☒ The impacted area has been secured to protect human health and the environment. ☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. ☒ All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why:	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: <u>Kyle Littrell</u>	Title: <u>Environmental Supervisor</u>
Signature: 	Date: <u>9-14-20</u>
email: <u>Kyle_Littrell@xtoenergy.com</u>	Telephone: <u>432-221-7331</u>
<u>OCD Only</u>	
Received by: <u>Ramona Marcus</u>	Date: <u>9/21/2020</u>

NRM2026531591

Location:	PLU 129	
Spill Date:	9/3/2020	
Area 1		
Approximate Area =	456.00	sq. ft.
Average Saturation (or depth) of spill =	4.00	inches
Average Porosity Factor =	0.15	
VOLUME OF LEAK		
Total Crude Oil =	0.02	bbls
Total Produced Water =	6.04	bbls
Area 2		
Approximate Area =	352.00	sq. ft.
Average Saturation (or depth) of spill =	0.50	inches
Average Porosity Factor =	0.03	
VOLUME OF LEAK		
Total Crude Oil =	0.00	bbls
Total Produced Water =	0.08	bbls
TOTAL VOLUME OF LEAK		
Total Crude Oil =	0.02	bbls
Total Produced Water =	6.12	bbls
TOTAL VOLUME RECOVERED		
Total Crude Oil =	0.01	bbls
Total Produced Water =	1.99	bbls

Incident ID	NRM2026531591
District RP	
Facility ID	
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Site Assessment/Characterization

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

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

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

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

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

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

State of New Mexico
Oil Conservation Division

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

Printed Name: Kyle Littrell Title: SH&E Supervisor
Signature:  Date: 02/17/2021
email: Kyle_Littrell@xtoenergy.com Telephone: 432-221-7331

OCD Only

Received by: _____ Date: _____

Incident ID	NRM2026531591
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Closure

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

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

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

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

Printed Name: Kyle Littrell

Title: SH&E Supervisor

Signature: 

Date: 02/17/2021

email: Kyle_Littrell@xtoenergy.com

Telephone: 432-221-7331

OCD Only

Received by: Chad Hensley

Date: 03/29/2021

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: 03/29/2021

Printed Name: Chad Hensley

Title: Environmental Specialist Advanced



WSP USA

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

February 17, 2021

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

**RE: Closure Request
Poker Lake Unit 129 Flowline
Incident Number NRM2026531591
Eddy County, New Mexico**

To Whom it May Concern:

WSP USA Inc. on behalf of XTO Energy, Inc. (XTO), presents the following Closure Request detailing site assessment, soil sampling, and remediation activities at the Poker Lake Unit (PLU) 129 Flowline (Site) in Unit B, Section 20, Township 24 South, Range 31 East, in Eddy County, New Mexico (Figure 1). The purpose of the site assessment, soil sampling, and remediation 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, describing remediation that has occurred and requesting No Further Action (NFA) for Incident Number NRM2026531591.

RELEASE BACKGROUND

On September 3, 2020, a flow line leak developed due to corrosion and resulted in the release of approximately 0.02 barrels (bbls) of crude oil and 6.12 bbls of produced water onto the well pad surface and into the adjacent pasture. A vacuum truck was immediately dispatched to the Site to recover freestanding fluids, of which approximately 0.01 bbls of crude oil and 1.99 bbls of produced water were recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) and submitted a Release Notification and Corrective Action Form C-141 (Form C-141) on September 14, 2020. The release was assigned Incident Number NRM2026531591.

SITE CHARACTERIZATION

WSP 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). Results from the characterization desktop review are presented on the Form C-141 Site Assessment/Characterization Form.



Depth to groundwater at the Site was confirmed to be greater than 100 feet below ground surface (bgs). During December 2020, a borehole (C-4499) was advanced to a depth of 110 feet bgs via truck-mounted hollow stem auger. The borehole was located approximately 0.35 miles southeast of the Site. The location of borehole (C-4499) is provided on Figure 1. A WSP geologist logged and described soils continuously. The Well Log and Plugging Plan 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 bgs. The borehole was properly abandoned utilizing hydrated bentonite chips.

The closest continuously flowing water or significant watercourse to the Site is an unnamed watercourse, located approximately 1.58 miles northwest 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 (low potential karst designation area). Site receptors are identified on Figure 1.

CLOSURE CRITERIA

Based on the results of the Site Characterization, the following NMOC 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; and
- Chloride: 20,000 mg/kg

A reclamation standard of 600 mg/kg chloride and 100 mg/kg TPH was applied to the top 4 feet in 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

On September 30, 2020, WSP personnel conducted site assessment activities to evaluate the release extent. Additionally, WSP reviewed and verified the Form C-141 incident description (release source and release location) with visual soil impacts present onsite; it was confirmed that the release had impacted the well pad area and migrated southeast into the pasture. The release extent was mapped utilizing a handheld Global Positioning System (GPS) unit and is



presented on Figure 2. Photographic documentation was conducted during the site visit and is included as Attachment 3.

DELINEATION SOIL SAMPLING ACTIVITIES

Between October 6, 2020 and October 7, 2020, WSP personnel were at the Site to conduct delineation activities. In an effort to define the lateral and vertical extent of impacted soil, eight boreholes (BH01 through BH08) were advanced utilizing a hand auger to depths ranging from 0.5 feet to 4 feet bgs. Refusal was encountered in borehole BH06, located on the well pad, at a depth of 0.5 feet bgs. Delineation soil samples were collected from the boreholes from depths ranging from 0.5 feet to 4 feet bgs. Soil samples were field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photoionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. Field screening results and observations for each borehole were recorded on a lithologic/soil sampling log which are included in Attachment 2. The boreholes and delineation soil sample locations are presented on Figure 2.

The delineation soil samples were placed directly into a pre-cleaned glass jar, 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 Eurofins Laboratories (Eurofins) 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 no benzene, BTEX, TPH-GRO/TPH-DRO, or TPH concentrations were detected. Chloride concentrations in delineation soil samples BH05, BH05A, and BH06, collected on pad, were compliant with the Closure Criteria. Chloride concentrations in delineation soil samples BH01, BH02, and BH04, collected in the pasture above 4 feet bgs, exceeded the reclamation standard. Chloride concentrations in delineation soil samples BH03, BH03A, BH07, BH07A, BH08, and BH08A were compliant with the reclamation standard. Based on field screenings and laboratory analytical results, excavation was warranted within the pasture and the well pad based on visible staining.

EXCAVATION AND SOIL SAMPLING ACTIVITIES

On October 20, 2020 and October 21, 2020, WSP personnel were onsite to oversee excavation activities as indicated by visual observations, field screening activities, and laboratory analytical results for the delineation soil samples. To direct excavation activities, WSP screened soil for volatile aromatic hydrocarbons and chloride utilizing a calibrated PID and Hach® chloride QuanTab® test strips, respectively. Heavy equipment and a hydrovac were utilized to remove impacted soil to depths determined by laboratory analytical results of the delineation soil samples and ongoing field screening results.



Following removal of impacted soil, WSP personnel collected 5-point composite soil samples from the excavation. Each composite soil sample represented at most a 200 square foot area and was collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the soil samples by thoroughly mixing. Sidewall soil samples SW01 through SW08 were collected from the sidewalls of the excavation from depths ranging from the ground surface to 4 feet bgs. Floor soil samples FS01 through FS07 were collected from the floor of the excavation from depths ranging from 1-foot to 4 feet bgs. The excavation soil samples were handled and analyzed as previously described. The excavation extent and soil sample locations were mapped utilizing GPS and are presented on Figure 3.

The excavation extent measured approximately 1,401 square feet. A total of approximately 208 cubic yards of impacted soil were removed during excavation activities. The impacted soil was transported and properly disposed of at the R360 Facility located in Hobbs, New Mexico under XTO approved manifests. Following completion of confirmation soil sampling, the excavation was properly secured with a perimeter berm and fencing.

ANALYTICAL RESULTS

Laboratory analytical results for final excavation soil samples SW01 through SW08 and FS01 through FS07 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 four feet of pasture areas were compliant with the reclamation standard. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Attachment 4.

CLOSURE REQUEST

Site assessment and excavation activities were conducted to address the September 3, 2020, release of produced water and crude oil at the Site. Laboratory analytical results for the excavation soil samples, collected from the final excavation extent, indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Additionally, soil samples collected in the pasture from the top four feet of the subsurface were compliant with the reclamation standard and all waste-containing material was removed from the top four feet of the subsurface. Based on the excavation soil sample analytical results, no further remediation was required. XTO will backfill the excavation with material purchased locally and recontour the Site to match pre-existing site conditions. The pasture excavation will be re-seeded with an approved BLM seed mixture.

Initial response efforts, which included removal of free-standing fluids via hydrovac and excavation of impacted soil have mitigated impacts at this Site. Depth to groundwater has been determined to be greater than 100 feet bgs and no other sensitive receptors were identified near the release extent. WSP and XTO believe these remedial actions are protective of human health,



District II
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the environment, and groundwater. As such, XTO respectfully requests no further action for Incident Number NRM2026531591.

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

Sincerely,

WSP USA Inc.

A handwritten signature in black ink that reads 'Anna Byers'.

Anna Byers
Consultant, Geologist

A handwritten signature in black ink that reads 'Ashley L. Ager'.

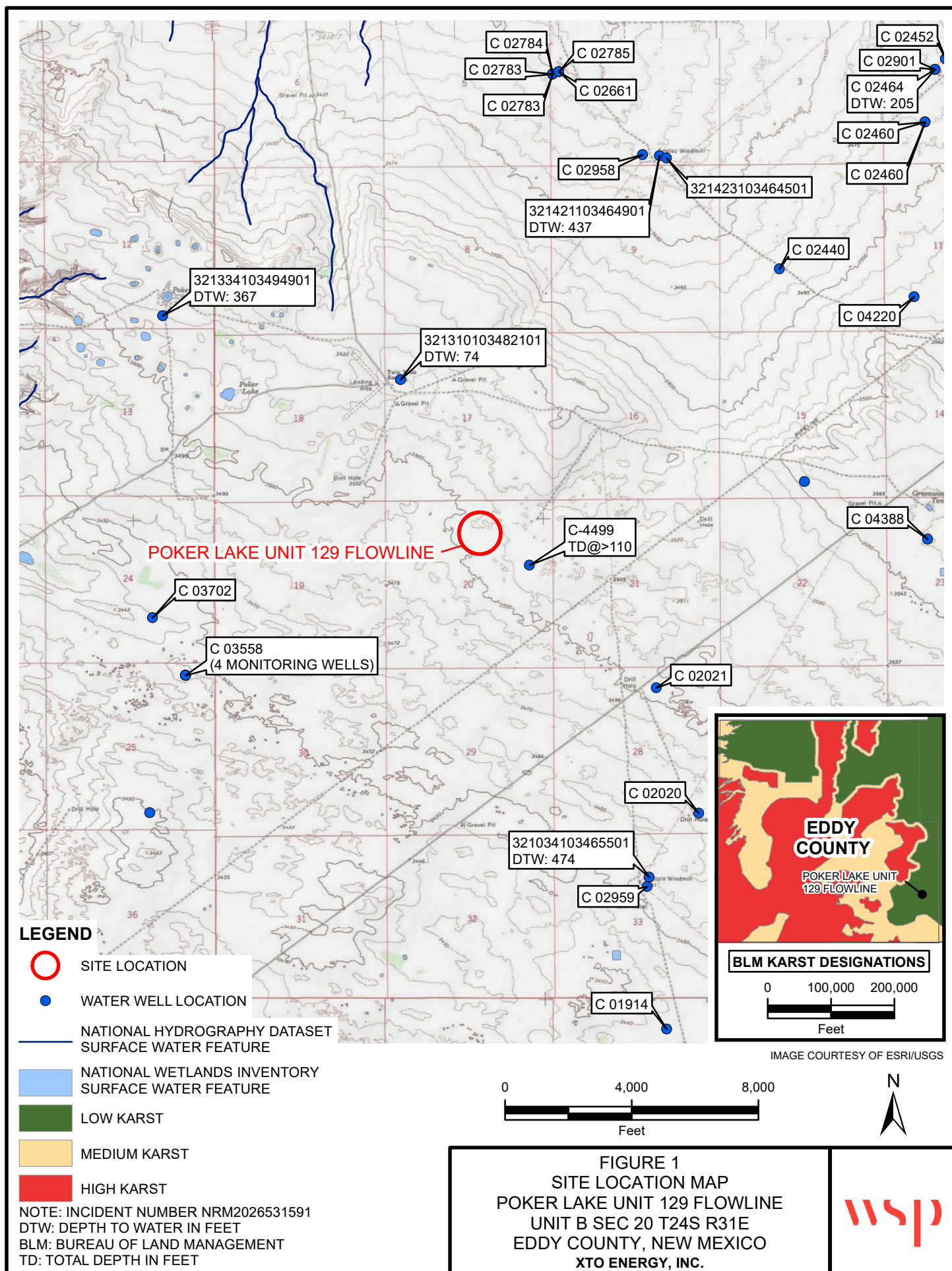
Ashley L. Ager, P.G.
Managing Director, Geologist

cc: Kyle Littrell, XTO
Jim Amos, Bureau of Land Management

Attachments:

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

FIGURES



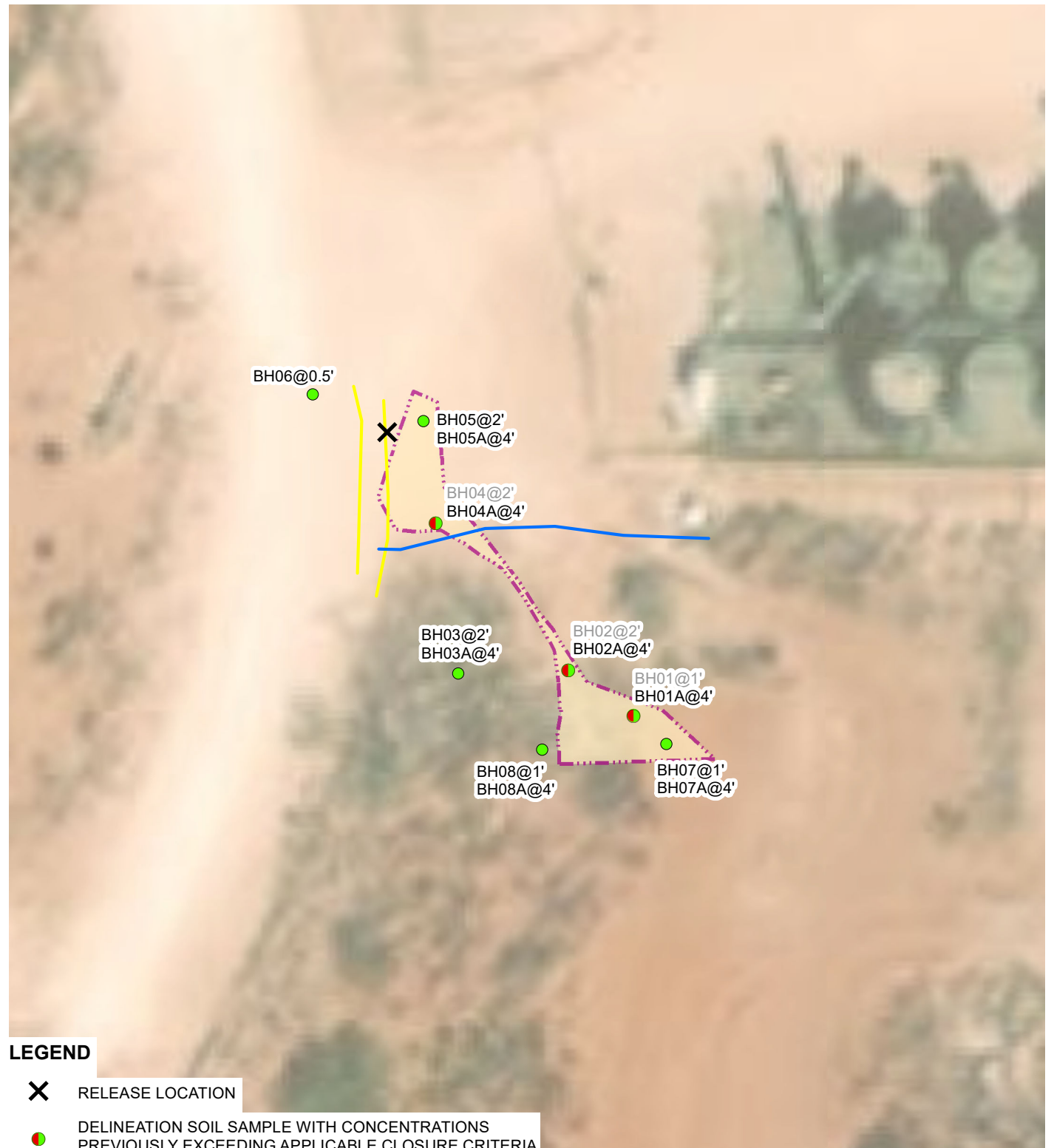


IMAGE COURTESY OF ESRI

LEGEND

RELEASE LOCATION

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

FLOW LINE



WATER LINE



RELEASE EXTENT

TEXT: INDICATES SOIL REPRESENTED BY SAMPLE
THAT WAS REMOVED

SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)

NOTE: INCIDENT NUMBER NRM2026531591

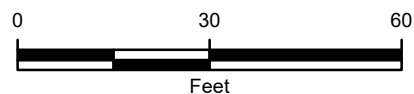


FIGURE 2
DELINEATION SOIL SAMPLE LOCATIONS
POKER LAKE UNIT 129 FLOWLINE
UNIT B SEC 20 T24S R31E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.



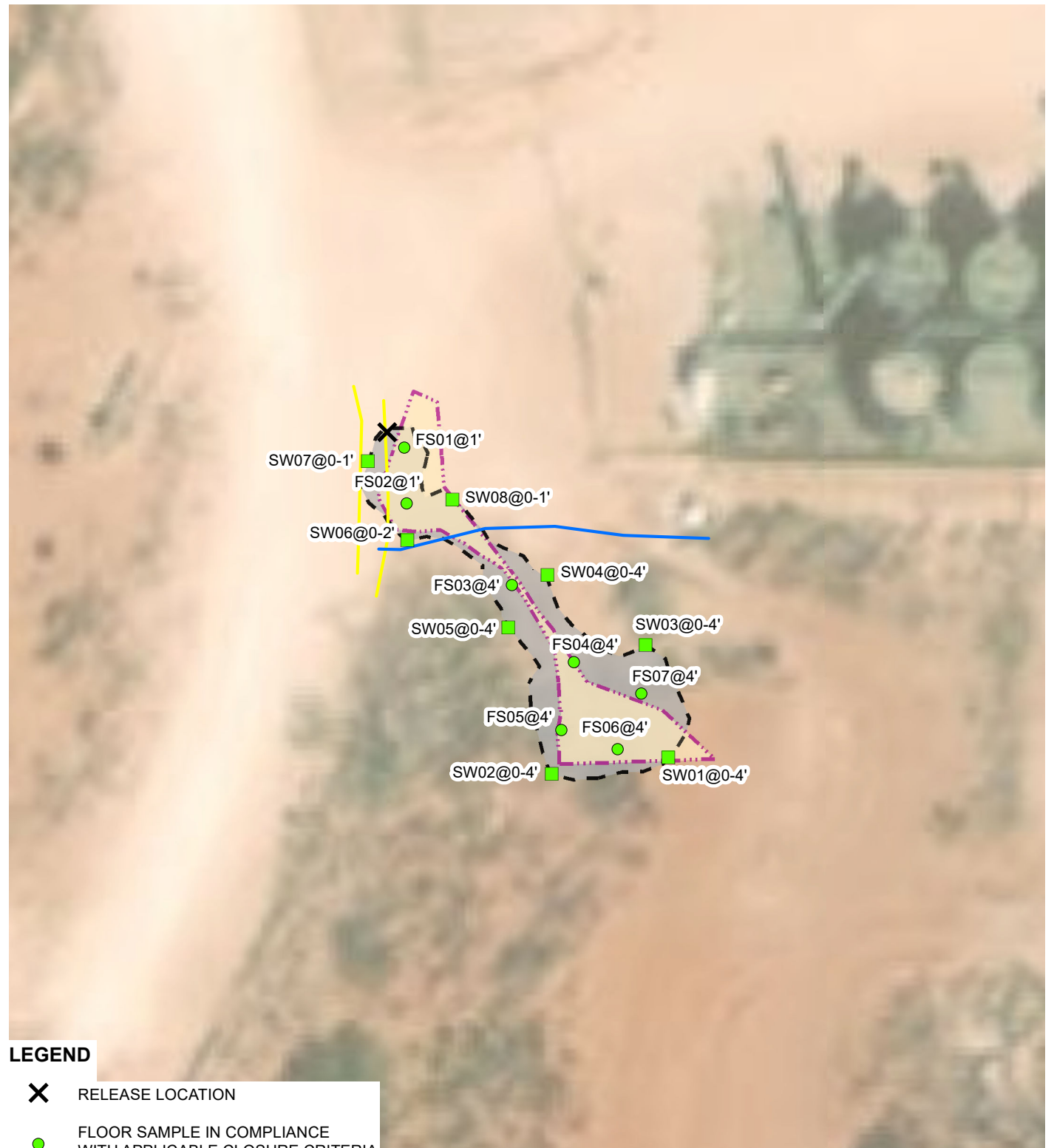


IMAGE COURTESY OF ESRI

LEGEND

RELEASE LOCATION

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

FLOW LINE



WATER LINE



RELEASE EXTENT



EXCAVATION EXTENT

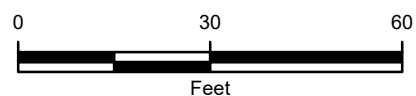
SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)
NOTE: INCIDENT NUMBER NRM2026531591

FIGURE 3
EXCAVATION SOIL SAMPLE LOCATIONS
POKER LAKE UNIT 129 FLOWLINE
UNIT B SEC 20 T24S R31E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.



TABLES

Table 1

**Soil Analytical Results
Poker Lake Unit 129 Flowline
Incident Number NRM2026531591
Eddy County, New Mexico
XTO Energy, Inc.**

Sample ID	Sample Date	Sample Depth (ft bgs)	Benzene (mg/kg)	BTEX (mg/kg)	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)	TPH-ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
Delineation Samples										
BH01	10/06/2020	1	<0.00198	<0.00198	<50.1	<50.1	<50.1	<50.1	<50.1	3,420*
BH01A	10/06/2020	4	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	46.6
BH02	10/06/2020	2	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	6,580*
BH02A	10/06/2020	4	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	311
BH03	10/06/2020	2	<0.00202	<0.00202	<50.3	<50.3	<50.3	<50.3	<50.3	12.1*
BH03A	10/06/2020	4	<0.00202	<0.00202	<50.1	<50.1	<50.1	<50.1	<50.1	13.0
BH04	10/06/2020	2	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	3,390*
BH04A	10/06/2020	4	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	37.0
BH05	10/06/2020	2	<0.00201	<0.00201	<50.2	<50.2	<50.2	<50.2	<50.2	17.8
BH05A	10/06/2020	4	<0.00202	<0.00202	<49.8	<49.8	<49.8	<49.8	<49.8	102
BH06	10/06/2020	0.5	<0.00199	<0.00199	<50.2	<50.2	<50.2	<50.2	<50.2	194
BH07	10/07/2020	1	<0.00202	<0.00202	<50.1	<50.1	<50.1	<50.1	<50.1	<10.0*
BH07A	10/07/2020	4	<0.00198	<0.00198	<49.8	<49.8	<49.8	<49.8	<49.8	12.4
BH08	10/07/2020	1	<0.00198	<0.00198	<49.8	<49.8	<49.8	<49.8	<49.8	14.2*
BH08A	10/07/2020	4	<0.00202	<0.00202	<49.9	<49.9	<49.9	<49.9	<49.9	15.0
Excavation Floor Samples										
FS01	10/21/2020	1	<0.00199	<0.00199	58.8	<50.2	<50.2	58.8	58.8	1,450
FS02	10/21/2020	1	<0.00202	<0.00202	<50.1	<50.1	<50.1	<50.1	<50.1	406
FS03	10/21/2020	4	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	1,610
FS04	10/21/2020	4	<0.00199	<0.00199	<50.3	<50.3	<50.3	<50.3	<50.3	4,120

Table 1

Soil Analytical Results
Poker Lake Unit 129 Flowline
Incident Number NRM2026531591
Eddy County, New Mexico
XTO Energy, Inc.

Sample ID	Sample Date	Sample Depth (ft bgs)	Benzene (mg/kg)	BTEX (mg/kg)	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)	TPH-ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
FS05	10/21/2020	4	<0.00202	<0.00202	<50.2	<50.2	<50.2	<50.2	<50.2	6,500
FS06	10/21/2020	4	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	993
FS07	10/21/2020	4	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	37.6
Excavation Sidewall Samples										
SW01	10/21/2020	0 - 4	<0.00201	<0.00201	<50.2	<50.2	<50.2	<50.2	<50.2	20.2*
SW02	10/21/2020	0 - 4	<0.00199	<0.00199	<50.1	<50.1	<50.1	<50.1	<50.1	332*
SW03	10/21/2020	0 - 4	<0.00200	<0.00200	<50.3	<50.3	<50.3	<50.3	<50.3	35.7*
SW04	10/21/2020	0 - 4	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	218*
SW05	10/21/2020	0 - 4	<0.00198	<0.00198	<49.8	<49.8	<49.8	<49.8	<49.8	184*
SW06	10/21/2020	0 - 2	<0.00202	<0.00202	<50.2	<50.2	<50.2	<50.2	<50.2	221
SW07	10/21/2020	0 - 1	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	595
SW08	10/21/2020	0 - 1	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	544

Notes:

ft - feet/foot

mg/kg - milligrams per kilograms

BTEX - benzene, toluene, ethylbenzene, and total xylenes

TPH - total petroleum hydrocarbons

DRO - diesel range organics

GRO - gasoline range organics

ORO - motor oil range organics

NMOCD - New Mexico Oil Conservation Division

NMAC - New Mexico Administrative Code

< - indicates result is less than the stated laboratory method practical quantitation limit

NE - Not Established

BOLD - indicates results exceed the higher of the background sample result or applicable regulatory standard

Greyed data represents samples that were excavated

* - indicates sample was collected in area to be reclaimed after remediation is complete;

closure criteria for chloride concentration in the top 4 feet of soil is 600 mg/kg

ATTACHMENT 1: REFERENCED WELL RECORD



2904 W 2nd St.
Roswell, NM 88201
voice: 575.624.2420
fax: 575.624.2421
www.atkinseng.com

01/20/2021

DII-NMOSE
1900 W 2nd Street
Roswell, NM 88201

Hand Delivered to the DII Office of the State Engineer

Re: Well Record C-4499 Pod1

To whom it may concern:

Attached please find a well record and a plugging record, in duplicate, for a one (1) soil borings, C-4499 Pod1.

If you have any questions, please contact me at 575.499.9244 or lucas@atkinseng.com.

Sincerely,

A handwritten signature in black ink, appearing to read "Lucas Middleton".

Lucas Middleton

Enclosures: as noted above

OSE DII JAN 27 2021 10:31:24



PLUGGING RECORD



NOTE: A Well Plugging Plan of Operations shall be approved by the State Engineer prior to plugging - 19.27.4 NMAC

I. GENERAL / WELL OWNERSHIP:

State Engineer Well Number: C-4499-POD1

Well owner: XTO ENERGY (Kyle Littrell)

Phone No.: 432.682.8873

Mailing address: 6401 Holiday Hill Dr.

City: Midland State: Texas Zip code: 79707

II. WELL PLUGGING INFORMATION:

- 1) Name of well drilling company that plugged well: Jackie D. Atkins (Atkins Engineering Associates Inc.)
- 2) New Mexico Well Driller License No.: 1249 Expiration Date: 04/30/21
- 3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s):
Shane Eldridge
- 4) Date well plugging began: 1/19/2021 Date well plugging concluded: 1/19/2021
- 5) GPS Well Location: Latitude: 32 deg, 12 min, 15.89 sec
Longitude: -104 deg, 47 min, 36.29 sec, WGS 84
- 6) Depth of well confirmed at initiation of plugging as: 111 ft below ground level (bgl),
by the following manner: weighted tape
- 7) Static water level measured at initiation of plugging: n/a ft bgl
- 8) Date well plugging plan of operations was approved by the State Engineer: 12/1/2020
- 9) Were all plugging activities consistent with an approved plugging plan? Yes If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):

- 10) Log of Plugging Activities - Label vertical scale with depths, and indicate separate plugging intervals with horizontal lines as necessary to illustrate material or methodology changes. Attach additional pages if necessary.

For each interval plugged, describe within the following columns:

<u>Depth</u> (ft bgl)	<u>Plugging Material Used</u> (include any additives used)	<u>Volume of Material Placed</u> (gallons)	<u>Theoretical Volume of Borehole/ Casing</u> (gallons)	<u>Placement Method</u> (tremie pipe, other)	<u>Comments</u> ("casing perforated first", "open annular space also plugged", etc.)
0-10'	Hydrated Bentonite	Approx. 26 gallons	26 gallons	Augers	
10'-110'	Drill Cuttings	Approx. 163 gallons	163 gallons	Boring	

USE OF JAN 27 2021 PM 3:25

MULTIPLY	BY	AND OBTAIN
cubic feet x 7.4805	=	gallons
cubic yards x 201.97	=	gallons

III. SIGNATURE:

I, Jackie D. Atkins, say that I am familiar with the rules of the Office of the State Engineer pertaining to the plugging of wells and that each and all of the statements in this Plugging Record and attachments are true to the best of my knowledge and belief.

Jack Atkins

Signature of Well Driller

01/21/2021

Date

2020-1-15_C-4499-POD1_Plugging Record-forsign

Final Audit Report

2021-01-20

Created:	2021-01-20
By:	Lucas Middleton (lucas@atkinseng.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAKYAIMzENwZcWpwbipfZabZsZsWa5ksl

"2020-1-15_C-4499-POD1_Plugging Record-forsign" History

-  Document created by Lucas Middleton (lucas@atkinseng.com)
2021-01-20 - 4:18:16 PM GMT- IP address: 69.21.248.123
-  Document emailed to Jack Atkins (jack@atkinseng.com) for signature
2021-01-20 - 4:18:36 PM GMT
-  Email viewed by Jack Atkins (jack@atkinseng.com)
2021-01-20 - 4:24:48 PM GMT- IP address: 74.50.153.115
-  Document e-signed by Jack Atkins (jack@atkinseng.com)
Signature Date: 2021-01-20 - 4:27:30 PM GMT - Time Source: server- IP address: 74.50.153.115
-  Agreement completed.
2021-01-20 - 4:27:30 PM GMT

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WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION	OSE POD NO. (WELL NO.) POD1 (MW-1)		WELL TAG ID NO. n/a		OSE FILE NO(S). C-4499			
	WELL OWNER NAME(S) XTO Energy (Kyle Littrell)				PHONE (OPTIONAL)			
	WELL OWNER MAILING ADDRESS 6401 Holiday Hill Dr.				CITY Midland	STATE TX	ZIP 79707	
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE	MINUTES 32°	SECONDS 12'	SECONDS 15.89"	N		
		LONGITUDE	-103°	47'	36.29"	W		
* ACCURACY REQUIRED: ONE TENTH OF A SECOND * DATUM REQUIRED: WGS 84								
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS – PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE SE NE Sec. 20 T24S R31E								
2. DRILLING & CASING INFORMATION	LICENSE NO. 1249		NAME OF LICENSED DRILLER Jackie D. Atkins			NAME OF WELL DRILLING COMPANY Atkins Engineering Associates, Inc.		
	DRILLING STARTED 12/30/2020		DRILLING ENDED 12/30/2020		DEPTH OF COMPLETED WELL (FT) temporary well material		BORE HOLE DEPTH (FT) 110	
	COMPLETED WELL IS:		☐ ARTESIAN ☒ DRY HOLE ☐ SHALLOW (UNCONFINED)				DEPTH WATER FIRST ENCOUNTERED (FT) n/a	
	DRILLING FLUID:		☒ AIR ☐ MUD ADDITIVES – SPECIFY:					
	DRILLING METHOD:		☐ ROTARY ☐ HAMMER ☐ CABLE TOOL ☒ OTHER – SPECIFY: Hollow Stem Auger					
	DEPTH (feet bgl)		BORE HOLE DIAM. (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	FROM	TO						
	0	110	±8.5	Boring- HSA	--	--	--	--
3. ANNULAR MATERIAL	DEPTH (feet bgl)		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT		
	FROM	TO						

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/30/17)

FILE NO.	POD NO.	TRN NO.
LOCATION	WELL TAG ID NO.	PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL	DEPTH (feet bgl)		THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER- BEARING ZONES (gpm)
	FROM	TO				
	0	6	6	SAND, well graded, fine-to-large grain particles red-brown, dry	Y ✓ N	
	6	8	2	SAND, poorly graded, fine grained little clay mod. plasticity, red-brown, moist	Y ✓ N	
	8	11	3	CALICHE, mod. consolidated, some sand, medium /fine grain, white-tan, dry	Y ✓ N	
	11	46	35	CALICHE, mod. consolidated, some sand, medium to fine grain, white-tan, dry.	Y ✓ N	
	46	74	28	SAND, well-graded, medium grain, caliche gravel (1-4mm), light brown, dry.	Y ✓ N	
	74	110	36	SAND, well-graded, fine/large grain, few clay, cohesive, red-brown, dry	Y ✓ N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA: ☐ PUMP ☐ AIR LIFT ☐ BAILER ☐ OTHER - SPECIFY:					TOTAL ESTIMATED WELL YIELD (gpm): 0.00	
5. TEST; RIG SUPERVISION	WELL TEST	TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.				
	MISCELLANEOUS INFORMATION: Temporary well materials removed and the soil boring backfilled using drill cuttings from total depth to ten feet below ground surface, then hydrated bentonite chips from ten feet below ground surface to surface. Logs adapted from WSP on-site geologist.					
	PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE: Shane Eldridge					
6. SIGNATURE	THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 30 DAYS AFTER COMPLETION OF WELL DRILLING:  SIGNATURE OF DRILLER / PRINT SIGNEE NAME Jackie D. Atkins DATE					

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/30/2017)

FILE NO.

POD NO.

TRN NO.

LOCATION

WELL TAG ID NO.

JAN 27 2021 10:31

PAGE 2 OF 2

2021-1-15_C-4499_POD1_OSE_Well Record and Log_plu129-forsign

Final Audit Report

2021-01-15

Created:	2021-01-15
By:	Lucas Middleton (lucas@atkinseng.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAgs296c366oCiflrLCiy9WDKJlrUnq-9u

"2021-1-15_C-4499_POD1_OSE_Well Record and Log_plu129-forsign" History

-  Document created by Lucas Middleton (lucas@atkinseng.com)
2021-01-15 - 8:45:00 PM GMT- IP address: 69.21.248.123
-  Document emailed to Jack Atkins (jack@atkinseng.com) for signature
2021-01-15 - 8:45:35 PM GMT
-  Email viewed by Jack Atkins (jack@atkinseng.com)
2021-01-15 - 9:05:13 PM GMT- IP address: 74.50.153.115
-  Document e-signed by Jack Atkins (jack@atkinseng.com)
Signature Date: 2021-01-15 - 9:13:18 PM GMT - Time Source: server- IP address: 74.50.153.115
-  Agreement completed.
2021-01-15 - 9:13:18 PM GMT

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ATTACHMENT 2: LITHOLOGIC/SOIL SAMPLING LOG

 WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220						BH or PH Name: BH01		Date: 10/06/2020			
						Site Name: PLU 129 Flowline					
						RP or Incident Number: NRM2026531591					
						WSP Job Number: TE012920136					
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: TC		Method: Hand Auger	
Lat/Long: 32.20735061, -103.7982725				Field Screening: Hatch chloride strips , PID				Hole Diameter: 3 inches		Total Depth: 4 feet	
Comments: Chloride testing was conducted using a 1:4 dilution of soil to distilled water. Reported values included a 40% correction factor. SAA - same as above											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks			
M	4,362	0.0	N	BH01	1	1	SP	SAND, moist, poorly graded, dark brown, fine- very fine, some silt, low plasticity, no stain, no odor			
						2		SAA			
						3		SAA			
M	212	0.0	N	BH01A	4	4		SAA			
								Total depth 4 feet bgs			

 WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220						BH or PH Name: BH02		Date: 10/06/2020	
						Site Name: PLU 129 Flowline			
						RP or Incident Number: NRM2026531591			
						WSP Job Number: TE012920136			
LITHOLOGIC / SOIL SAMPLING LOG						Logged By: TC		Method: Hand Auger	
Lat/Long: 32.20735061, -103.7982725			Field Screening: Hatch chloride strips , PID			Hole Diameter: 3 inches		Total Depth: 4 feet	
Comments: Chloride testing was conducted using a 1:4 dilution of soil to distilled water. Reported values included a 40% correction factor. SAA - same as above									
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks	
M	9,206	2.2	N	BH02	2	0	SP	SAND, moist, poorly graded, dark brown, fine- very fine, some silt, low plasticity, no stain, no odor SAA SAA SAA SAA	
						1			
						2			
						3			
M	252	0.0	N	BH02A	4	4		SAA	
								Total depth 4 feet bgs	

 WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220						BH or PH Name: BH03		Date: 10/06/2020			
						Site Name: PLU 129 Flowline					
						RP or Incident Number: NRM2026531591					
						WSP Job Number: TE012920136					
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: TC		Method: Hand Auger	
Lat/Long: 32.20735061, -103.7982725				Field Screening: Hatch chloride strips , PID				Hole Diameter: 3 inches		Total Depth: 4 feet	
Comments: Chloride testing was conducted using a 1:4 dilution of soil to distilled water. Reported values included a 40% correction factor. SAA - same as above											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks			
						0	SP	SAND, dry, poorly graded, dark brown, fine- very fine, no stain no odor			
						1		SAA			
D	184	0.0	N	BH03	2	2		SAA			
						3		SAA			
D	184	0.1	N	BH03A	4	4		SAA			
								Total depth 4 feet bgs			

 WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220						BH or PH Name: BH04		Date: 10/06/2020	
						Site Name: PLU 129 Flowline			
						RP or Incident Number: NRM2026531591			
						WSP Job Number: TE012920136			
LITHOLOGIC / SOIL SAMPLING LOG						Logged By: TC		Method: Hand Auger	
Lat/Long: 32.20735061, -103.7982725			Field Screening: Hatch chloride strips , PID			Hole Diameter: 3 inches		Total Depth: 4 feet	
Comments: Chloride testing was conducted using a 1:4 dilution of soil to distilled water. Reported values included a 40% correction factor. SAA - same as above									
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks	
M	4,362	0.3	Y	BH04	2	0	SP	SAND, moist, poorly graded, dark brown, fine- very fine, some silt, low plasticity, no stain, no odor SAA SAA SAA SAA	
						1			
						2			
						3			
M	184	11.8	N	BH04A	4	4		SAA	
								Total depth 4 feet bgs	

 WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220						BH or PH Name: BH05		Date: 10/06/2020			
						Site Name: PLU 129 Flowline					
						RP or Incident Number: NRM2026531591					
						WSP Job Number: TE012920136					
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: TC		Method: Hand Auger	
Lat/Long: 32.20735061, -103.7982725				Field Screening: Hatch chloride strips , PID				Hole Diameter: 3 inches		Total Depth: 4 feet	
Comments: Chloride testing was conducted using a 1:4 dilution of soil to distilled water. Reported values included a 40% correction factor. SAA - same as above											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks			
D	212	0.0	N	BH05	2	0	CCHE	CALICHE, dry, tan - off white, moderately consolidated, no stain no odor			
						1					
						2	SP	SAND, dry, poorly graded, dark brown, fine- very fine, no stain no odor			
M	212	11.8	N	BH05A	4	3		SAA			
						4		SAA			
						Total depth 4 feet bgs					

 WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220								BH or PH Name: BH06		Date: 10/06/2020	
								Site Name: PLU 129 Flowline			
								RP or Incident Number: NRM2026531591			
								WSP Job Number: TE012920136			
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: TC		Method: Hand Auger	
Lat/Long: 32.20735061, -103.7982725				Field Screening: Hatch chloride strips , PID				Hole Diameter: 3 inches		Total Depth: 0.5 feet	
Comments: Chloride testing was conducted using a 1:4 dilution of soil to distilled water. Reported values included a 40% correction factor. SAA - same as above											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks			
D	375	0	N	BH06	0.5	0 0.5	CCHE	CALICHE, dry, tan - off white, moderately consolidated, no stain no odor Total depth 0.5 feet bgs (auger refusal)			

 WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220						BH or PH Name: BH07		Date: 10/07/2020			
						Site Name: PLU 129 Flowline					
						RP or Incident Number: NRM2026531591					
						WSP Job Number: TE012920136					
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: TC		Method: Hand Auger	
Lat/Long: 32.20735061, -103.7982725				Field Screening: Hatch chloride strips , PID				Hole Diameter: 3 inches		Total Depth: 4 feet	
Comments: Chloride testing was conducted using a 1:4 dilution of soil to distilled water. Reported values included a 40% correction factor. SAA - same as above											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks			
M	<184	0.0	N	BH07	1	1	SP	SAND, moist, poorly graded, dark brown, fine- very fine, no stain no odor			
M	<184	0.0	N		2	2		SAA			
M	184	0.0	N		3	3		SAA			
D	184	0.0	N	BH07A	4	4		SAA			
								Total depth 4 feet bgs			

 WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220					BH or PH Name: BH08		Date: 10/07/2020	
					Site Name: PLU 129 Flowline			
					RP or Incident Number: NRM2026531591			
					WSP Job Number: TE012920136			
LITHOLOGIC / SOIL SAMPLING LOG								
Lat/Long: 32.20735061, -103.7982725			Field Screening: Hatch chloride strips , PID		Hole Diameter: 3 inches		Total Depth: 4 feet	
Comments: Chloride testing was conducted using a 1:4 dilution of soil to distilled water. Reported values included a 40% correction factor. SAA - same as above								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D	<184	0.0	N	BH08	1	1	SP	SAND, dry, poorly graded, dark brown, fine- very fine, no stain no odor
D	184	0.0	N		2	2		SAA
D	<184	0.1	N		3	3		SAA
M	<184	0.3	N	BH08A	4	4		SAA
					Total depth 4 feet bgs			

ATTACHMENT 3: PHOTOGRAPHIC LOG

**PHOTOGRAPHIC LOG**

XTO Energy, Inc.	Poker Lake Unit 129 Flowline Eddy County, New Mexico	TE012920136
-------------------------	---	--------------------

Photo No.	Date	
1	September 4 – October 21, 2020	
Southeast view of the point of release courtesy of XTO.		 A photograph showing a dry, sandy area with sparse vegetation. A small, dark, circular hole or depression is visible in the center, surrounded by yellow caution tape. In the background, there are utility poles and a clear blue sky.

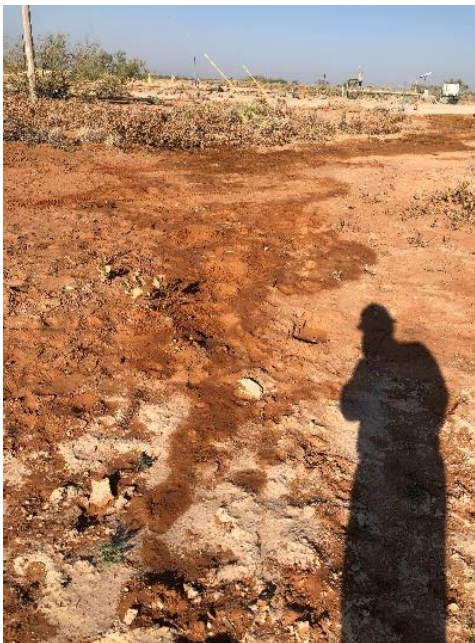
Photo No.	Date	
2	September 4 – October 21, 2020	
Southeast view of the release area courtesy of XTO.		 A photograph showing a dry, sandy area with sparse vegetation. A large, dark, irregularly shaped area of soil is visible in the foreground, possibly indicating a release or spill. In the background, there are utility poles and a clear blue sky.



PHOTOGRAPHIC LOG

XTO Energy, Inc.	Poker Lake Unit 129 Flowline Eddy County, New Mexico	TE012920136
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Photo No.	Date	
3	September 4 – October 21, 2020	
Northwest view of the release area.		 A photograph showing a dirt road or path leading towards a drilling rig in the distance. The ground is reddish-brown and appears to be disturbed. A white truck is parked on the right side of the road. The shadow of the person taking the photo is visible in the foreground.

Photo No.	Date	
4	September 4 – October 21, 2020	
Northwestern view of the Site.		 A photograph showing a dirt road or path leading towards a drilling rig in the distance. The ground is reddish-brown and appears to be disturbed. A white truck is parked on the right side of the road. The shadow of the person taking the photo is visible in the foreground.



PHOTOGRAPHIC LOG		
XTO Energy, Inc.	Poker Lake Unit 129 Flowline Eddy County, New Mexico	TE012920136

Photo No.	Date	
5	September 4 – October 21, 2020	
Northern view of the final excavation extent.		 A photograph showing a large, deep excavation pit with reddish-brown soil. Two workers in blue uniforms are standing on the left side of the pit. In the background, there is a white pickup truck, a yellow excavator, and industrial equipment including a large storage tank and piping.

Photo No.	Date	
6	September 4 – October 21, 2020	
Southern view of the final southern excavation extent.		 A photograph showing a deep excavation pit with reddish-brown soil. A white pickup truck is parked on the right side of the pit. The background shows a flat, arid landscape with some sparse vegetation and a clear sky.



PHOTOGRAPHIC LOG		
XTO Energy, Inc.	Poker Lake Unit 129 Flowline Eddy County, New Mexico	TE012920136

Photo No.	Date	
7	September 4 – October 21, 2020	
Western view of the final southern excavation extent.		

Photo No.	Date	
8	September 4 – October 21, 2020	
Southern view of the final excavation extent.		

ATTACHMENT 4: LABORATORY ANALYTICAL RESULTS

Certificate of Analysis Summary 674445



LT Environmental, Inc., Arvada, CO

Project Name: PLU 129 Flowine

Project Id: 012920136

Date Received in Lab: Tue 10.06.2020 14:30

Contact: Dan Moir

Report Date: 01.14.2021 14:10

Project Location:

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	674445-001	674445-002	674445-003	674445-004	674445-005	674445-006
	<i>Field Id:</i>	BH01	BH02	BH03	BH04	BH05	BH06
	<i>Depth:</i>	1- ft	2- ft	2- ft	2- ft	2- ft	0.5- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	10.06.2020 09:55	10.06.2020 10:02	10.06.2020 10:17	10.06.2020 10:24	10.06.2020 10:31	10.06.2020 10:47
BTEX by EPA 8021B	<i>Extracted:</i>	10.06.2020 16:00	10.06.2020 16:00	10.06.2020 16:00	10.06.2020 16:00	10.06.2020 16:00	10.06.2020 16:00
	<i>Analyzed:</i>	10.06.2020 19:00	10.06.2020 19:22	10.06.2020 19:44	10.06.2020 20:07	10.06.2020 20:29	10.06.2020 20:52
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199
Toluene		<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199
Ethylbenzene		<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199
m,p-Xylenes		<0.00397 0.00397	<0.00399 0.00399	<0.00403 0.00403	<0.00401 0.00401	<0.00402 0.00402	<0.00398 0.00398
o-Xylene		<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199
Total Xylenes		<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199
Total BTEX		<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199
Chloride by EPA 300	<i>Extracted:</i>	10.06.2020 16:50	10.06.2020 16:50	10.06.2020 16:50	10.06.2020 16:50	10.06.2020 16:50	10.06.2020 16:50
	<i>Analyzed:</i>	10.06.2020 17:26	10.06.2020 17:32	10.06.2020 17:38	10.06.2020 17:44	10.06.2020 17:50	10.06.2020 17:56
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		3420 49.9	6580 50.1	12.1 9.92	3390 49.8	17.8 9.98	194 9.98
TPH by SW8015 Mod	<i>Extracted:</i>	10.06.2020 15:30	10.06.2020 15:30	10.06.2020 15:30	10.06.2020 15:30	10.06.2020 15:30	10.06.2020 15:30
	<i>Analyzed:</i>	10.06.2020 19:07	10.06.2020 19:27	10.06.2020 19:07	10.06.2020 21:08	10.06.2020 21:28	10.06.2020 21:49
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.1 50.1	<50.1 50.1	<50.3 50.3	<50.2 50.2	<50.2 50.2	<50.2 50.2
Diesel Range Organics (DRO)		<50.1 50.1	<50.1 50.1	<50.3 50.3	<50.2 50.2	<50.2 50.2	<50.2 50.2
Motor Oil Range Hydrocarbons (MRO)		<50.1 50.1	<50.1 50.1	<50.3 50.3	<50.2 50.2	<50.2 50.2	<50.2 50.2
Total GRO-DRO		<50.1 50.1	<50.1 50.1	<50.3 50.3	<50.2 50.2	<50.2 50.2	<50.2 50.2
Total TPH		<50.1 50.1	<50.1 50.1	<50.3 50.3	<50.2 50.2	<50.2 50.2	<50.2 50.2

BRL - Below Reporting Limit

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

Certificate of Analysis Summary 674445



LT Environmental, Inc., Arvada, CO

Project Name: PLU 129 Flowine

Project Id: 012920136

Date Received in Lab: Tue 10.06.2020 14:30

Contact: Dan Moir

Report Date: 01.14.2021 14:10

Project Location:

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	674445-007	674445-008	674445-009	674445-010	674445-011	
	<i>Field Id:</i>	BH01 A	BH02 A	BH03 A	BH04 A	BH05 A	
	<i>Depth:</i>	4- ft	4- ft	4- ft	4- ft	4- ft	
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	
	<i>Sampled:</i>	10.06.2020 11:50	10.06.2020 11:55	10.06.2020 11:58	10.06.2020 12:01	10.06.2020 12:03	
BTEX by EPA 8021B	<i>Extracted:</i>	10.06.2020 17:37	10.06.2020 17:37	10.06.2020 17:37	10.06.2020 17:37	10.06.2020 17:37	
	<i>Analyzed:</i>	10.07.2020 04:35	10.07.2020 04:57	10.07.2020 05:20	10.07.2020 05:42	10.07.2020 06:05	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Benzene		<0.00199 0.00199	<0.00199 0.00199	<0.00202 0.00202	<0.00200 0.00200	<0.00202 0.00202	
Toluene		<0.00199 0.00199	<0.00199 0.00199	<0.00202 0.00202	<0.00200 0.00200	<0.00202 0.00202	
Ethylbenzene		<0.00199 0.00199	<0.00199 0.00199	<0.00202 0.00202	<0.00200 0.00200	<0.00202 0.00202	
m,p-Xylenes		<0.00398 0.00398	<0.00398 0.00398	<0.00404 0.00404	<0.00401 0.00401	<0.00404 0.00404	
o-Xylene		<0.00199 0.00199	<0.00199 0.00199	<0.00202 0.00202	<0.00200 0.00200	<0.00202 0.00202	
Total Xylenes		<0.00199 0.00199	<0.00199 0.00199	<0.00202 0.00202	<0.00200 0.00200	<0.00202 0.00202	
Total BTEX		<0.00199 0.00199	<0.00199 0.00199	<0.00202 0.00202	<0.00200 0.00200	<0.00202 0.00202	
Chloride by EPA 300	<i>Extracted:</i>	10.06.2020 16:50	10.06.2020 16:50	10.06.2020 16:50	10.06.2020 16:50	10.06.2020 16:50	
	<i>Analyzed:</i>	10.06.2020 18:02	10.06.2020 18:08	10.06.2020 18:38	10.06.2020 18:44	10.06.2020 18:50	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		46.6 9.92	311 9.98	13.0 10.0	37.0 10.0	102 9.92	
TPH by SW8015 Mod	<i>Extracted:</i>	10.06.2020 15:30	10.06.2020 15:30	10.06.2020 15:30	10.06.2020 15:30	10.06.2020 15:30	
	<i>Analyzed:</i>	10.06.2020 22:09	10.06.2020 22:29	10.06.2020 22:49	10.06.2020 23:30	10.06.2020 23:50	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<50.0 50.0	<50.1 50.1	<50.1 50.1	<49.8 49.8	
Diesel Range Organics (DRO)		<50.0 50.0	<50.0 50.0	<50.1 50.1	<50.1 50.1	<49.8 49.8	
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<50.0 50.0	<50.1 50.1	<50.1 50.1	<49.8 49.8	
Total GRO-DRO		<50.0 50.0	<50.0 50.0	<50.1 50.1	<50.1 50.1	<49.8 49.8	
Total TPH		<50.0 50.0	<50.0 50.0	<50.1 50.1	<50.1 50.1	<49.8 49.8	

BRL - Below Reporting Limit

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



Analytical Report 674445

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU 129 Flowine

012920136

01.14.2021

Collected By: Client

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

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-24)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-20-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



01.14.2021

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: Eurofins Xenco, LLC Report No(s): **674445**

PLU 129 Flowine

Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 674445. 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. 674445 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

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

Jessica Kramer

Project Manager

A Small Business and Minority Company

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

**Sample Cross Reference 674445****LT Environmental, Inc., Arvada, CO**

PLU 129 Flowine

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH01	S	10.06.2020 09:55	1 ft	674445-001
BH02	S	10.06.2020 10:02	2 ft	674445-002
BH03	S	10.06.2020 10:17	2 ft	674445-003
BH04	S	10.06.2020 10:24	2 ft	674445-004
BH05	S	10.06.2020 10:31	2 ft	674445-005
BH06	S	10.06.2020 10:47	0.5 ft	674445-006
BH01 A	S	10.06.2020 11:50	4 ft	674445-007
BH02 A	S	10.06.2020 11:55	4 ft	674445-008
BH03 A	S	10.06.2020 11:58	4 ft	674445-009
BH04 A	S	10.06.2020 12:01	4 ft	674445-010
BH05 A	S	10.06.2020 12:03	4 ft	674445-011



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 129 Flowine

Project ID: 012920136
Work Order Number(s): 674445

Report Date: 01.14.2021
Date Received: 10.06.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 674445

LT Environmental, Inc., Arvada, CO

PLU 129 Flowline

Sample Id: **BH01** Matrix: Soil Date Received: 10.06.2020 14:30
 Lab Sample Id: 674445-001 Date Collected: 10.06.2020 09:55 Sample Depth: 1 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 10.06.2020 16:50 % Moisture:
 Seq Number: 3139046 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3420	49.9	mg/kg	10.06.2020 17:26		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH
 Analyst: DHE Date Prep: 10.06.2020 15:30 % Moisture:
 Seq Number: 3138974 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	10.06.2020 19:07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	10.06.2020 19:07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	10.06.2020 19:07	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	10.06.2020 19:07	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	10.06.2020 19:07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	10.06.2020 19:07	
o-Terphenyl	84-15-1	104	%	70-135	10.06.2020 19:07	



Certificate of Analytical Results 674445

LT Environmental, Inc., Arvada, CO

PLU 129 Flowine

Sample Id: **BH01**
Lab Sample Id: 674445-001

Matrix: Soil
Date Collected: 10.06.2020 09:55

Date Received: 10.06.2020 14:30
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 10.06.2020 16:00

% Moisture:
Basis: Wet Weight

Seq Number: 3139043

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	10.06.2020 19:00	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	10.06.2020 19:00	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	10.06.2020 19:00	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	10.06.2020 19:00	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	10.06.2020 19:00	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	10.06.2020 19:00	U	1
Total BTEX		<0.00198	0.00198	mg/kg	10.06.2020 19:00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	86	%	70-130	10.06.2020 19:00	
1,4-Difluorobenzene	540-36-3	100	%	70-130	10.06.2020 19:00	



Certificate of Analytical Results 674445

LT Environmental, Inc., Arvada, CO

PLU 129 Flowline

Sample Id: **BH02** Matrix: Soil Date Received: 10.06.2020 14:30
 Lab Sample Id: 674445-002 Date Collected: 10.06.2020 10:02 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 10.06.2020 16:50 % Moisture:
 Seq Number: 3139046 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6580	50.1	mg/kg	10.06.2020 17:32		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH
 Analyst: DHE Date Prep: 10.06.2020 15:30 % Moisture:
 Seq Number: 3138974 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	10.06.2020 19:27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	10.06.2020 19:27	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	10.06.2020 19:27	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	10.06.2020 19:27	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	10.06.2020 19:27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	10.06.2020 19:27	
o-Terphenyl	84-15-1	106	%	70-135	10.06.2020 19:27	



Certificate of Analytical Results 674445

LT Environmental, Inc., Arvada, CO

PLU 129 Flowine

Sample Id: **BH02**
Lab Sample Id: 674445-002

Matrix: Soil
Date Collected: 10.06.2020 10:02

Date Received: 10.06.2020 14:30
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 10.06.2020 16:00

% Moisture:
Basis: Wet Weight

Seq Number: 3139043

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.06.2020 19:22	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.06.2020 19:22	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.06.2020 19:22	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	10.06.2020 19:22	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.06.2020 19:22	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.06.2020 19:22	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.06.2020 19:22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	86	%	70-130	10.06.2020 19:22	
1,4-Difluorobenzene	540-36-3	96	%	70-130	10.06.2020 19:22	



Certificate of Analytical Results 674445

LT Environmental, Inc., Arvada, CO

PLU 129 Flowline

Sample Id: **BH03** Matrix: Soil Date Received: 10.06.2020 14:30
 Lab Sample Id: 674445-003 Date Collected: 10.06.2020 10:17 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 10.06.2020 16:50 % Moisture:
 Seq Number: 3139046 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	12.1	9.92	mg/kg	10.06.2020 17:38		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH
 Analyst: DTH Date Prep: 10.06.2020 15:30 % Moisture:
 Seq Number: 3139030 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	10.06.2020 19:07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	10.06.2020 19:07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	10.06.2020 19:07	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	10.06.2020 19:07	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	10.06.2020 19:07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	10.06.2020 19:07	
o-Terphenyl	84-15-1	89	%	70-135	10.06.2020 19:07	



Certificate of Analytical Results 674445

LT Environmental, Inc., Arvada, CO

PLU 129 Flowine

Sample Id: **BH03**
Lab Sample Id: 674445-003

Matrix: Soil
Date Collected: 10.06.2020 10:17

Date Received: 10.06.2020 14:30
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 10.06.2020 16:00

% Moisture:
Basis: Wet Weight

Seq Number: 3139043

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	10.06.2020 19:44	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	10.06.2020 19:44	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	10.06.2020 19:44	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	10.06.2020 19:44	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	10.06.2020 19:44	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	10.06.2020 19:44	U	1
Total BTEX		<0.00202	0.00202	mg/kg	10.06.2020 19:44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	10.06.2020 19:44	
4-Bromofluorobenzene	460-00-4	87	%	70-130	10.06.2020 19:44	



Certificate of Analytical Results 674445

LT Environmental, Inc., Arvada, CO

PLU 129 Flowine

Sample Id: **BH04** Matrix: Soil Date Received: 10.06.2020 14:30
 Lab Sample Id: 674445-004 Date Collected: 10.06.2020 10:24 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 10.06.2020 16:50 % Moisture:
 Seq Number: 3139046 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3390	49.8	mg/kg	10.06.2020 17:44		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH
 Analyst: DTH Date Prep: 10.06.2020 15:30 % Moisture:
 Seq Number: 3139030 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	10.06.2020 21:08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	10.06.2020 21:08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	10.06.2020 21:08	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	10.06.2020 21:08	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	10.06.2020 21:08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	10.06.2020 21:08	
o-Terphenyl	84-15-1	104	%	70-135	10.06.2020 21:08	



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LT Environmental, Inc., Arvada, CO

PLU 129 Flowine

Sample Id: **BH04**
Lab Sample Id: 674445-004

Matrix: Soil
Date Collected: 10.06.2020 10:24

Date Received: 10.06.2020 14:30
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 10.06.2020 16:00

% Moisture:
Basis: Wet Weight

Seq Number: 3139043

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.06.2020 20:07	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.06.2020 20:07	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.06.2020 20:07	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	10.06.2020 20:07	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.06.2020 20:07	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.06.2020 20:07	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.06.2020 20:07	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	100	%	70-130	10.06.2020 20:07		
4-Bromofluorobenzene	460-00-4	87	%	70-130	10.06.2020 20:07		



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LT Environmental, Inc., Arvada, CO

PLU 129 Flowline

Sample Id: **BH05** Matrix: Soil Date Received: 10.06.2020 14:30
 Lab Sample Id: 674445-005 Date Collected: 10.06.2020 10:31 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 10.06.2020 16:50 % Moisture:
 Seq Number: 3139046 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	17.8	9.98	mg/kg	10.06.2020 17:50		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH
 Analyst: DTH Date Prep: 10.06.2020 15:30 % Moisture:
 Seq Number: 3139030 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	10.06.2020 21:28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	10.06.2020 21:28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	10.06.2020 21:28	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	10.06.2020 21:28	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	10.06.2020 21:28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	10.06.2020 21:28	
o-Terphenyl	84-15-1	79	%	70-135	10.06.2020 21:28	



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LT Environmental, Inc., Arvada, CO

PLU 129 Flowine

Sample Id: **BH05**
Lab Sample Id: 674445-005

Matrix: Soil
Date Collected: 10.06.2020 10:31

Date Received: 10.06.2020 14:30
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 10.06.2020 16:00

% Moisture:
Basis: Wet Weight

Seq Number: 3139043

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	10.06.2020 20:29	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	10.06.2020 20:29	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	10.06.2020 20:29	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	10.06.2020 20:29	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	10.06.2020 20:29	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	10.06.2020 20:29	U	1
Total BTEX		<0.00201	0.00201	mg/kg	10.06.2020 20:29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	84	%	70-130	10.06.2020 20:29	
1,4-Difluorobenzene	540-36-3	99	%	70-130	10.06.2020 20:29	



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LT Environmental, Inc., Arvada, CO

PLU 129 Flowine

Sample Id: **BH06** Matrix: Soil Date Received: 10.06.2020 14:30
 Lab Sample Id: 674445-006 Date Collected: 10.06.2020 10:47 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 10.06.2020 16:50 % Moisture:
 Seq Number: 3139046 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	194	9.98	mg/kg	10.06.2020 17:56		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH
 Analyst: DTH Date Prep: 10.06.2020 15:30 % Moisture:
 Seq Number: 3139030 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	10.06.2020 21:49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	10.06.2020 21:49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	10.06.2020 21:49	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	10.06.2020 21:49	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	10.06.2020 21:49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	10.06.2020 21:49	
o-Terphenyl	84-15-1	88	%	70-135	10.06.2020 21:49	



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LT Environmental, Inc., Arvada, CO

PLU 129 Flowine

Sample Id: **BH06**
Lab Sample Id: 674445-006

Matrix: Soil
Date Collected: 10.06.2020 10:47

Date Received: 10.06.2020 14:30
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 10.06.2020 16:00

% Moisture:
Basis: Wet Weight

Seq Number: 3139043

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	10.06.2020 20:52	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	10.06.2020 20:52	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	10.06.2020 20:52	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	10.06.2020 20:52	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	10.06.2020 20:52	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	10.06.2020 20:52	U	1
Total BTEX		<0.00199	0.00199	mg/kg	10.06.2020 20:52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	86	%	70-130	10.06.2020 20:52	
1,4-Difluorobenzene	540-36-3	100	%	70-130	10.06.2020 20:52	



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LT Environmental, Inc., Arvada, CO

PLU 129 Flowine

Sample Id: **BH01 A** Matrix: Soil Date Received: 10.06.2020 14:30
 Lab Sample Id: 674445-007 Date Collected: 10.06.2020 11:50 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 10.06.2020 16:50 % Moisture:
 Seq Number: 3139046 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	46.6	9.92	mg/kg	10.06.2020 18:02		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH
 Analyst: DTH Date Prep: 10.06.2020 15:30 % Moisture:
 Seq Number: 3139030 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	10.06.2020 22:09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	10.06.2020 22:09	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.06.2020 22:09	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	10.06.2020 22:09	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.06.2020 22:09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	10.06.2020 22:09	
o-Terphenyl	84-15-1	80	%	70-135	10.06.2020 22:09	



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LT Environmental, Inc., Arvada, CO

PLU 129 Flowine

Sample Id: **BH01 A**
Lab Sample Id: 674445-007

Matrix: Soil
Date Collected: 10.06.2020 11:50

Date Received: 10.06.2020 14:30
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 10.06.2020 17:37

% Moisture:
Basis: Wet Weight

Seq Number: 3139044

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	10.07.2020 04:35	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	10.07.2020 04:35	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	10.07.2020 04:35	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	10.07.2020 04:35	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	10.07.2020 04:35	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	10.07.2020 04:35	U	1
Total BTEX		<0.00199	0.00199	mg/kg	10.07.2020 04:35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	10.07.2020 04:35	
4-Bromofluorobenzene	460-00-4	113	%	70-130	10.07.2020 04:35	



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PLU 129 Flowine

Sample Id: **BH02 A** Matrix: Soil Date Received: 10.06.2020 14:30
 Lab Sample Id: 674445-008 Date Collected: 10.06.2020 11:55 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 10.06.2020 16:50 % Moisture:
 Seq Number: 3139046 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	311	9.98	mg/kg	10.06.2020 18:08		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH
 Analyst: DTH Date Prep: 10.06.2020 15:30 % Moisture:
 Seq Number: 3139030 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	10.06.2020 22:29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	10.06.2020 22:29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.06.2020 22:29	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	10.06.2020 22:29	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.06.2020 22:29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	10.06.2020 22:29	
o-Terphenyl	84-15-1	79	%	70-135	10.06.2020 22:29	



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LT Environmental, Inc., Arvada, CO

PLU 129 Flowine

Sample Id: **BH02 A**
Lab Sample Id: 674445-008

Matrix: Soil
Date Collected: 10.06.2020 11:55

Date Received: 10.06.2020 14:30
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 10.06.2020 17:37

% Moisture:
Basis: Wet Weight

Seq Number: 3139044

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	10.07.2020 04:57	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	10.07.2020 04:57	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	10.07.2020 04:57	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	10.07.2020 04:57	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	10.07.2020 04:57	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	10.07.2020 04:57	U	1
Total BTEX		<0.00199	0.00199	mg/kg	10.07.2020 04:57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	10.07.2020 04:57	
4-Bromofluorobenzene	460-00-4	116	%	70-130	10.07.2020 04:57	



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PLU 129 Flowine

Sample Id: **BH03 A** Matrix: Soil Date Received: 10.06.2020 14:30
 Lab Sample Id: 674445-009 Date Collected: 10.06.2020 11:58 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 10.06.2020 16:50 % Moisture:
 Seq Number: 3139046 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	13.0	10.0	mg/kg	10.06.2020 18:38		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH
 Analyst: DTH Date Prep: 10.06.2020 15:30 % Moisture:
 Seq Number: 3139030 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	10.06.2020 22:49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	10.06.2020 22:49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	10.06.2020 22:49	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	10.06.2020 22:49	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	10.06.2020 22:49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	10.06.2020 22:49	
o-Terphenyl	84-15-1	82	%	70-135	10.06.2020 22:49	



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LT Environmental, Inc., Arvada, CO

PLU 129 Flowine

Sample Id: **BH03 A**
Lab Sample Id: 674445-009

Matrix: Soil
Date Collected: 10.06.2020 11:58

Date Received: 10.06.2020 14:30
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 10.06.2020 17:37

% Moisture:
Basis: Wet Weight

Seq Number: 3139044

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	10.07.2020 05:20	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	10.07.2020 05:20	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	10.07.2020 05:20	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	10.07.2020 05:20	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	10.07.2020 05:20	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	10.07.2020 05:20	U	1
Total BTEX		<0.00202	0.00202	mg/kg	10.07.2020 05:20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	10.07.2020 05:20	
1,4-Difluorobenzene	540-36-3	86	%	70-130	10.07.2020 05:20	



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PLU 129 Flowine

Sample Id: **BH04 A** Matrix: Soil Date Received: 10.06.2020 14:30
 Lab Sample Id: 674445-010 Date Collected: 10.06.2020 12:01 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 10.06.2020 16:50 % Moisture:
 Seq Number: 3139046 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	37.0	10.0	mg/kg	10.06.2020 18:44		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH
 Analyst: DTH Date Prep: 10.06.2020 15:30 % Moisture:
 Seq Number: 3139030 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	10.06.2020 23:30	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	10.06.2020 23:30	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	10.06.2020 23:30	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	10.06.2020 23:30	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	10.06.2020 23:30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	10.06.2020 23:30	
o-Terphenyl	84-15-1	92	%	70-135	10.06.2020 23:30	



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PLU 129 Flowine

Sample Id: **BH04 A**
Lab Sample Id: 674445-010

Matrix: Soil
Date Collected: 10.06.2020 12:01

Date Received: 10.06.2020 14:30
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 10.06.2020 17:37

% Moisture:
Basis: Wet Weight

Seq Number: 3139044

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.07.2020 05:42	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.07.2020 05:42	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.07.2020 05:42	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	10.07.2020 05:42	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.07.2020 05:42	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.07.2020 05:42	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.07.2020 05:42	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	109	%	70-130	10.07.2020 05:42		
4-Bromofluorobenzene	460-00-4	120	%	70-130	10.07.2020 05:42		



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PLU 129 Flowine

Sample Id: **BH05 A** Matrix: Soil Date Received: 10.06.2020 14:30
 Lab Sample Id: 674445-011 Date Collected: 10.06.2020 12:03 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 10.06.2020 16:50 % Moisture:
 Seq Number: 3139046 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	102	9.92	mg/kg	10.06.2020 18:50		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH
 Analyst: DTH Date Prep: 10.06.2020 15:30 % Moisture:
 Seq Number: 3139030 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	10.06.2020 23:50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	10.06.2020 23:50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	10.06.2020 23:50	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	10.06.2020 23:50	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	10.06.2020 23:50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	10.06.2020 23:50	
o-Terphenyl	84-15-1	85	%	70-135	10.06.2020 23:50	



Certificate of Analytical Results 674445

LT Environmental, Inc., Arvada, CO

PLU 129 Flowine

Sample Id: **BH05 A**
Lab Sample Id: 674445-011

Matrix: Soil
Date Collected: 10.06.2020 12:03

Date Received: 10.06.2020 14:30
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 10.06.2020 17:37

% Moisture:
Basis: Wet Weight

Seq Number: 3139044

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	10.07.2020 06:05	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	10.07.2020 06:05	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	10.07.2020 06:05	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	10.07.2020 06:05	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	10.07.2020 06:05	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	10.07.2020 06:05	U	1
Total BTEX		<0.00202	0.00202	mg/kg	10.07.2020 06:05	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	122	%	70-130	10.07.2020 06:05		
1,4-Difluorobenzene	540-36-3	102	%	70-130	10.07.2020 06:05		

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



LT Environmental, Inc.

PLU 129 Flowine

Analytical Method: Chloride by EPA 300

Seq Number: 3139046

MB Sample Id: 7712754-1-BLK

Matrix: Solid

LCS Sample Id: 7712754-1-BKS

Prep Method: E300P

Date Prep: 10.06.2020

LCSD Sample Id: 7712754-1-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	261	104	262	105	90-110	0	20	mg/kg	10.06.2020 16:26	

Analytical Method: Chloride by EPA 300

Seq Number: 3139046

Parent Sample Id: 674318-001

Matrix: Soil

MS Sample Id: 674318-001 S

Prep Method: E300P

Date Prep: 10.06.2020

MSD Sample Id: 674318-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1510	200	1700	95	1700	94	90-110	0	20	mg/kg	10.06.2020 16:44	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3138974

MB Sample Id: 7712719-1-BLK

Matrix: Solid

LCS Sample Id: 7712719-1-BKS

Prep Method: SW8015P

Date Prep: 10.06.2020

LCSD Sample Id: 7712719-1-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	906	91	894	89	70-135	1	35	mg/kg	10.06.2020 11:04	
Diesel Range Organics (DRO)	<50.0	1000	1010	101	1020	102	70-135	1	35	mg/kg	10.06.2020 11:04	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	104		111		111		70-135	%	10.06.2020 11:04
o-Terphenyl	101		101		105		70-135	%	10.06.2020 11:04

Analytical Method: TPH by SW8015 Mod

Seq Number: 3139030

MB Sample Id: 7712740-1-BLK

Matrix: Solid

LCS Sample Id: 7712740-1-BKS

Prep Method: SW8015P

Date Prep: 10.06.2020

LCSD Sample Id: 7712740-1-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	1140	114	1150	115	70-135	1	35	mg/kg	10.06.2020 11:04	
Diesel Range Organics (DRO)	<50.0	1000	1060	106	1090	109	70-135	3	35	mg/kg	10.06.2020 11:04	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	95		117		115		70-135	%	10.06.2020 11:04
o-Terphenyl	86		83		85		70-135	%	10.06.2020 11:04

Analytical Method: TPH by SW8015 Mod

Seq Number: 3138974

Matrix: Solid
MB Sample Id: 7712719-1-BLK

Prep Method: SW8015P

Date Prep: 10.06.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	10.06.2020 11:44	

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

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

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

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



LT Environmental, Inc.

PLU 129 Flowine

Analytical Method: TPH by SW8015 Mod

Seq Number: 3139030

Matrix: Solid

Prep Method: SW8015P

Date Prep: 10.06.2020

MB Sample Id: 7712740-1-BLK

Parameter

Motor Oil Range Hydrocarbons (MRO)

**MB
Result**

<50.0

Units

mg/kg

**Analysis
Date**

10.06.2020 11:44

Flag**Analytical Method: TPH by SW8015 Mod**

Seq Number: 3138974

Matrix: Soil

Prep Method: SW8015P

Date Prep: 10.06.2020

Parent Sample Id: 674352-001

MS Sample Id: 674352-001 S

MSD Sample Id: 674352-001 SD

Parameter

Gasoline Range Hydrocarbons (GRO)

**Parent
Result**

<49.8

**Spike
Amount**

995

**MS
Result**

1140

**MS
%Rec**

115

**MSD
Result**

1140

**MSD
%Rec**

114

Limits

70-135

%RPD

0

**RPD
Limit**

35

Units

mg/kg

**Analysis
Date**

10.06.2020 12:25

Flag

Diesel Range Organics (DRO)

<49.8

995

1330

134

1330

133

70-135

0

35

mg/kg

10.06.2020 12:25

Surrogate

1-Chlorooctane

**MS
%Rec**

132

**MS
Flag****MSD
%Rec**

131

**MSD
Flag****Limits**

70-135

Units

%

**Analysis
Date**

10.06.2020 12:25

o-Terphenyl

121

121

70-135

%

10.06.2020 12:25

Analytical Method: TPH by SW8015 Mod

Seq Number: 3139030

Matrix: Soil

Prep Method: SW8015P

Date Prep: 10.06.2020

Parent Sample Id: 674445-003

MS Sample Id: 674445-003 S

MSD Sample Id: 674445-003 SD

Parameter

Gasoline Range Hydrocarbons (GRO)

**Parent
Result**

<50.1

**Spike
Amount**

1000

**MS
Result**

1340

**MS
%Rec**

134

**MSD
Result**

1320

**MSD
%Rec**

133

Limits

70-135

%RPD

2

**RPD
Limit**

35

Units

mg/kg

**Analysis
Date**

10.06.2020 19:27

Flag

Diesel Range Organics (DRO)

<50.1

1000

1210

121

1240

125

70-135

2

35

mg/kg

10.06.2020 19:27

Surrogate

1-Chlorooctane

**MS
%Rec**

129

**MS
Flag****MSD
%Rec**

131

**MSD
Flag****Limits**

70-135

Units

%

**Analysis
Date**

10.06.2020 19:27

o-Terphenyl

123

116

70-135

%

10.06.2020 19:27

Analytical Method: BTEX by EPA 8021B

Seq Number: 3139043

Matrix: Solid

Prep Method: SW5035A

Date Prep: 10.06.2020

MB Sample Id: 7712707-1-BLK

LCS Sample Id: 7712707-1-BKS

LCSD Sample Id: 7712707-1-BSD

Parameter

Benzene

**MB
Result**

<0.00200

**Spike
Amount**

0.100

**LCS
Result**

0.110

**LCS
%Rec**

110

**LCSD
Result**

0.101

**LCSD
%Rec**

101

Limits

70-130

%RPD

9

**RPD
Limit**

35

Units

mg/kg

**Analysis
Date**

10.06.2020 10:47

Flag

Toluene

<0.00200

0.100

0.105

105

0.0976

98

70-130

7

35

mg/kg

10.06.2020 10:47

Ethylbenzene

<0.00200

0.100

0.0966

97

0.0909

91

71-129

6

35

mg/kg

10.06.2020 10:47

m,p-Xylenes

<0.00400

0.200

0.194

97

0.183

92

70-135

6

35

mg/kg

10.06.2020 10:47

o-Xylene

<0.00200

0.100

0.0965

97

0.0905

91

71-133

6

35

mg/kg

10.06.2020 10:47

Surrogate

1,4-Difluorobenzene

**MB
%Rec**

98

**MB
Flag****LCS
%Rec**

97

**LCS
Flag****LCSD
%Rec**

97

**LCSD
Flag****Limits**

70-130

Units

%

**Analysis
Date**

10.06.2020 10:47

4-Bromofluorobenzene

84

84

88

70-130

%

10.06.2020 10:47

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

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

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

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



LT Environmental, Inc.
PLU 129 Flowine

Analytical Method: BTEX by EPA 8021B

Seq Number: 3139044

Matrix: Solid

Prep Method: SW5035A

Date Prep: 10.06.2020

MB Sample Id: 7712749-1-BLK

LCS Sample Id: 7712749-1-BKS

LCSD Sample Id: 7712749-1-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	0.0891	89	0.0928	93	70-130	4	35	mg/kg	10.07.2020 02:31	
Toluene	<0.00200	0.100	0.0853	85	0.0887	89	70-130	4	35	mg/kg	10.07.2020 02:31	
Ethylbenzene	<0.00200	0.100	0.0885	89	0.0912	91	71-129	3	35	mg/kg	10.07.2020 02:31	
m,p-Xylenes	<0.00400	0.200	0.178	89	0.186	93	70-135	4	35	mg/kg	10.07.2020 02:31	
o-Xylene	<0.00200	0.100	0.0868	87	0.0949	95	71-133	9	35	mg/kg	10.07.2020 02:31	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		102		98		70-130	%	10.07.2020 02:31
4-Bromofluorobenzene	114		107		105		70-130	%	10.07.2020 02:31

Analytical Method: BTEX by EPA 8021B

Seq Number: 3139043

Matrix: Soil

Prep Method: SW5035A

Date Prep: 10.06.2020

Parent Sample Id: 674355-001

MS Sample Id: 674355-001 S

MSD Sample Id: 674355-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.123	122	0.100	100	70-130	21	35	mg/kg	10.06.2020 11:31	
Toluene	<0.00202	0.101	0.120	119	0.0967	97	70-130	22	35	mg/kg	10.06.2020 11:31	
Ethylbenzene	<0.00202	0.101	0.112	111	0.0883	88	71-129	24	35	mg/kg	10.06.2020 11:31	
m,p-Xylenes	<0.00403	0.202	0.226	112	0.179	89	70-135	23	35	mg/kg	10.06.2020 11:31	
o-Xylene	<0.00202	0.101	0.109	108	0.0852	85	71-133	25	35	mg/kg	10.06.2020 11:31	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		98		70-130	%	10.06.2020 11:31
4-Bromofluorobenzene	90		87		70-130	%	10.06.2020 11:31

Analytical Method: BTEX by EPA 8021B

Seq Number: 3139044

Matrix: Soil

Prep Method: SW5035A

Date Prep: 10.06.2020

Parent Sample Id: 674445-007

MS Sample Id: 674445-007 S

MSD Sample Id: 674445-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.113	113	0.109	109	70-130	4	35	mg/kg	10.07.2020 03:15	
Toluene	<0.00200	0.100	0.107	107	0.0994	99	70-130	7	35	mg/kg	10.07.2020 03:15	
Ethylbenzene	<0.00200	0.100	0.110	110	0.108	108	71-129	2	35	mg/kg	10.07.2020 03:15	
m,p-Xylenes	<0.00401	0.200	0.219	110	0.212	106	70-135	3	35	mg/kg	10.07.2020 03:15	
o-Xylene	<0.00200	0.100	0.109	109	0.105	105	71-133	4	35	mg/kg	10.07.2020 03:15	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		99		70-130	%	10.07.2020 03:15
4-Bromofluorobenzene	109		106		70-130	%	10.07.2020 03:15

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

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

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

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



Chain of Custody

Work Order No: 674445

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 2

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

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

Project Name:	PLU 129	Turn Around	☒
Project Number:	012920136	Rush:	
P.O. Number:		Due Date:	
Sampler's Name:	Travis Casey		

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	Correction Factor:	-0.2		
Cooler Custody Seals:	Yes ☒ No ☐ N/A	Total Containers:	17		
Sample Custody Seals:	Yes ☒ No ☐ N/A				

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
BH01	S	10/6/20	0955	1'	1	✓	✓	✓
BH02			1002	2'	1	✓	✓	✓
BH03			1017	2'	1	✓	✓	✓
BH04			1024	2'	1	✓	✓	✓
BH05			1031	2'	1	✓	✓	✓
BH06			1047	0.5'	1	✓	✓	✓

ANALYSIS REQUEST															
Work Order Notes															

Total 200.7 / 6010 200.8 / 6020:

Circle Method(s) and Metal(s) to be analyzed: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn

1631 / 245.1 / 7470 / 7471 : Hg

Relinquished by: (Signature) Travis Casey Received by: (Signature) Joe Littlell Date/Time 10/6/20 1430

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.

Work Order No: 674445

Page 2 of 2

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

[illegible]

Number of Containers	
A 8015)	
PA 8021)	
(EPA 300.0)	
TAT starts the day received by the	

[illegible][illegible]

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
[Signature]	[Signature]	10.6.20 1430			

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 10.06.2020 02:30.00 PM

Work Order #: 674445

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)?	1.4
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	No
#18 Water VOC samples have zero headspace?	N/A

Samples received in bulk containers.

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

Analyst:

PH Device/Lot#:

Checklist completed by:



Cloe Clifton

Date: 10.06.2020

Checklist reviewed by:



Jessica Kramer

Date: 10.07.2020

Certificate of Analysis Summary 674591

LT Environmental, Inc., Arvada, CO

Project Name: PLU 129 Flowline

Project Id: 012920136
 Contact: Joseph Hernandez
 Project Location:

Date Received in Lab: Wed 10.07.2020 14:50
 Report Date: 01.14.2021 14:11
 Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	674591-001	674591-002	674591-003	674591-004		
	<i>Field Id:</i>	BH07	BH07 A	BH08	BH08 A		
	<i>Depth:</i>	1- ft	4- ft	1- ft	4- ft		
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	10.07.2020 06:55	10.07.2020 07:29	10.07.2020 07:05	10.07.2020 07:38		
BTEX by EPA 8021B	<i>Extracted:</i>	10.07.2020 17:08	10.07.2020 17:08	10.07.2020 17:08	10.07.2020 17:08		
	<i>Analyzed:</i>	10.08.2020 01:40	10.08.2020 02:03	10.08.2020 02:25	10.08.2020 02:48		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Benzene		<0.00202 0.00202	<0.00198 0.00198	<0.00198 0.00198	<0.00202 0.00202		
Toluene		<0.00202 0.00202	<0.00198 0.00198	<0.00198 0.00198	<0.00202 0.00202		
Ethylbenzene		<0.00202 0.00202	<0.00198 0.00198	<0.00198 0.00198	<0.00202 0.00202		
m,p-Xylenes		<0.00403 0.00403	<0.00397 0.00397	<0.00397 0.00397	<0.00404 0.00404		
o-Xylene		<0.00202 0.00202	<0.00198 0.00198	<0.00198 0.00198	<0.00202 0.00202		
Total Xylenes		<0.00202 0.00202	<0.00198 0.00198	<0.00198 0.00198	<0.00202 0.00202		
Total BTEX		<0.00202 0.00202	<0.00198 0.00198	<0.00198 0.00198	<0.00202 0.00202		
Chloride by EPA 300	<i>Extracted:</i>	10.07.2020 17:00	10.07.2020 17:00	10.07.2020 17:00	10.07.2020 17:00		
	<i>Analyzed:</i>	10.07.2020 17:48	10.07.2020 17:54	10.07.2020 18:00	10.07.2020 18:06		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		<10.0 10.0	12.4 9.98	14.2 10.1	15.0 10.0		
TPH by SW8015 Mod	<i>Extracted:</i>	10.07.2020 16:00	10.07.2020 16:00	10.07.2020 16:00	10.07.2020 16:00		
	<i>Analyzed:</i>	10.07.2020 19:20	10.07.2020 18:40	10.07.2020 18:59	10.07.2020 19:20		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Gasoline Range Hydrocarbons (GRO)		<50.1 50.1	<49.8 49.8	<49.8 49.8	<49.9 49.9		
Diesel Range Organics (DRO)		<50.1 50.1	<49.8 49.8	<49.8 49.8	<49.9 49.9		
Motor Oil Range Hydrocarbons (MRO)		<50.1 50.1	<49.8 49.8	<49.8 49.8	<49.9 49.9		
Total GRO-DRO		<50.1 50.1	<49.8 49.8	<49.8 49.8	<49.9 49.9		
Total TPH		<50.1 50.1	<49.8 49.8	<49.8 49.8	<49.9 49.9		

BRL - Below Reporting Limit

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





Analytical Report 674591

for

LT Environmental, Inc.

Project Manager: Joseph Hernandez

PLU 129 Flowline

012920136

01.14.2021

Collected By: Client

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

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-24)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-20-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



01.14.2021

Project Manager: **Joseph Hernandez**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: Eurofins Xenco, LLC Report No(s): **674591**

PLU 129 Flowline

Project Address:

Joseph Hernandez:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 674591. 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. 674591 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

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

Jessica Kramer

Project Manager

A Small Business and Minority Company

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

**Sample Cross Reference 674591****LT Environmental, Inc., Arvada, CO**

PLU 129 Flowline

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH07	S	10.07.2020 06:55	1 ft	674591-001
BH07 A	S	10.07.2020 07:29	4 ft	674591-002
BH08	S	10.07.2020 07:05	1 ft	674591-003
BH08 A	S	10.07.2020 07:38	4 ft	674591-004



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 129 Flowline

Project ID: 012920136
Work Order Number(s): 674591

Report Date: 01.14.2021
Date Received: 10.07.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3139072 TPH by SW8015 Mod

Surrogate 1-Chlorooctane recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 674591-002.



Certificate of Analytical Results 674591

LT Environmental, Inc., Arvada, CO

PLU 129 Flowline

Sample Id: **BH07** Matrix: Soil Date Received: 10.07.2020 14:50
 Lab Sample Id: 674591-001 Date Collected: 10.07.2020 06:55 Sample Depth: 1 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 10.07.2020 17:00 % Moisture:
 Seq Number: 3139135 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<10.0	10.0	mg/kg	10.07.2020 17:48	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH
 Analyst: DTH Date Prep: 10.07.2020 16:00 % Moisture:
 Seq Number: 3139079 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	10.07.2020 19:20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	10.07.2020 19:20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	10.07.2020 19:20	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	10.07.2020 19:20	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	10.07.2020 19:20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	10.07.2020 19:20	
o-Terphenyl	84-15-1	93	%	70-135	10.07.2020 19:20	



Certificate of Analytical Results 674591

LT Environmental, Inc., Arvada, CO

PLU 129 Flowline

Sample Id: **BH07**
Lab Sample Id: 674591-001

Matrix: Soil
Date Collected: 10.07.2020 06:55

Date Received: 10.07.2020 14:50
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 10.07.2020 17:08

% Moisture:
Basis: Wet Weight

Seq Number: 3139134

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	10.08.2020 01:40	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	10.08.2020 01:40	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	10.08.2020 01:40	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	10.08.2020 01:40	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	10.08.2020 01:40	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	10.08.2020 01:40	U	1
Total BTEX		<0.00202	0.00202	mg/kg	10.08.2020 01:40	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	118	%	70-130	10.08.2020 01:40		
1,4-Difluorobenzene	540-36-3	107	%	70-130	10.08.2020 01:40		



Certificate of Analytical Results 674591

LT Environmental, Inc., Arvada, CO

PLU 129 Flowline

Sample Id: **BH07 A** Matrix: Soil Date Received: 10.07.2020 14:50
 Lab Sample Id: 674591-002 Date Collected: 10.07.2020 07:29 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 10.07.2020 17:00 % Moisture:
 Seq Number: 3139135 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	12.4	9.98	mg/kg	10.07.2020 17:54		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH
 Analyst: DTH Date Prep: 10.07.2020 16:00 % Moisture:
 Seq Number: 3139072 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	10.07.2020 18:40	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	10.07.2020 18:40	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	10.07.2020 18:40	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	10.07.2020 18:40	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	10.07.2020 18:40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	140	%	70-135	10.07.2020 18:40	**
o-Terphenyl	84-15-1	117	%	70-135	10.07.2020 18:40	



Certificate of Analytical Results 674591

LT Environmental, Inc., Arvada, CO

PLU 129 Flowline

Sample Id: **BH07 A**
 Lab Sample Id: 674591-002

Matrix: Soil
 Date Collected: 10.07.2020 07:29

Date Received: 10.07.2020 14:50
 Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 10.07.2020 17:08

% Moisture:
 Basis: Wet Weight

Seq Number: 3139134

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	10.08.2020 02:03	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	10.08.2020 02:03	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	10.08.2020 02:03	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	10.08.2020 02:03	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	10.08.2020 02:03	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	10.08.2020 02:03	U	1
Total BTEX		<0.00198	0.00198	mg/kg	10.08.2020 02:03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	10.08.2020 02:03	
4-Bromofluorobenzene	460-00-4	115	%	70-130	10.08.2020 02:03	



Certificate of Analytical Results 674591

LT Environmental, Inc., Arvada, CO

PLU 129 Flowline

Sample Id: **BH08** Matrix: Soil Date Received: 10.07.2020 14:50
 Lab Sample Id: 674591-003 Date Collected: 10.07.2020 07:05 Sample Depth: 1 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 10.07.2020 17:00 % Moisture:
 Seq Number: 3139135 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	14.2	10.1	mg/kg	10.07.2020 18:00		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH
 Analyst: DTH Date Prep: 10.07.2020 16:00 % Moisture:
 Seq Number: 3139072 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	10.07.2020 18:59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	10.07.2020 18:59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	10.07.2020 18:59	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	10.07.2020 18:59	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	10.07.2020 18:59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	10.07.2020 18:59	
o-Terphenyl	84-15-1	98	%	70-135	10.07.2020 18:59	



Certificate of Analytical Results 674591

LT Environmental, Inc., Arvada, CO

PLU 129 Flowline

Sample Id: **BH08**
Lab Sample Id: 674591-003

Matrix: Soil
Date Collected: 10.07.2020 07:05

Date Received: 10.07.2020 14:50
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 10.07.2020 17:08

% Moisture:
Basis: Wet Weight

Seq Number: 3139134

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	10.08.2020 02:25	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	10.08.2020 02:25	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	10.08.2020 02:25	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	10.08.2020 02:25	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	10.08.2020 02:25	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	10.08.2020 02:25	U	1
Total BTEX		<0.00198	0.00198	mg/kg	10.08.2020 02:25	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	10.08.2020 02:25		
4-Bromofluorobenzene	460-00-4	114	%	70-130	10.08.2020 02:25		



Certificate of Analytical Results 674591

LT Environmental, Inc., Arvada, CO

PLU 129 Flowline

Sample Id: **BH08 A** Matrix: Soil Date Received: 10.07.2020 14:50
 Lab Sample Id: 674591-004 Date Collected: 10.07.2020 07:38 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 10.07.2020 17:00 % Moisture:
 Seq Number: 3139135 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	15.0	10.0	mg/kg	10.07.2020 18:06		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH
 Analyst: DTH Date Prep: 10.07.2020 16:00 % Moisture:
 Seq Number: 3139072 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	10.07.2020 19:20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	10.07.2020 19:20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	10.07.2020 19:20	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	10.07.2020 19:20	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	10.07.2020 19:20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	126	%	70-135	10.07.2020 19:20	
o-Terphenyl	84-15-1	90	%	70-135	10.07.2020 19:20	



Certificate of Analytical Results 674591

LT Environmental, Inc., Arvada, CO

PLU 129 Flowline

Sample Id: **BH08 A**
Lab Sample Id: 674591-004

Matrix: Soil
Date Collected: 10.07.2020 07:38

Date Received: 10.07.2020 14:50
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 10.07.2020 17:08

% Moisture:
Basis: Wet Weight

Seq Number: 3139134

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	10.08.2020 02:48	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	10.08.2020 02:48	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	10.08.2020 02:48	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	10.08.2020 02:48	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	10.08.2020 02:48	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	10.08.2020 02:48	U	1
Total BTEX		<0.00202	0.00202	mg/kg	10.08.2020 02:48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	70-130	10.08.2020 02:48	
4-Bromofluorobenzene	460-00-4	118	%	70-130	10.08.2020 02:48	

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



LT Environmental, Inc.

PLU 129 Flowline

Analytical Method: Chloride by EPA 300

Seq Number: 3139135

MB Sample Id: 7712801-1-BLK

Matrix: Solid

LCS Sample Id: 7712801-1-BKS

Prep Method: E300P

Date Prep: 10.07.2020

LCSD Sample Id: 7712801-1-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	262	105	90-110	1	20	mg/kg	10.07.2020 15:07	

Analytical Method: Chloride by EPA 300

Seq Number: 3139135

Parent Sample Id: 674482-003

Matrix: Soil

MS Sample Id: 674482-003 S

Prep Method: E300P

Date Prep: 10.07.2020

MSD Sample Id: 674482-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	58.0	199	264	104	264	103	90-110	0	20	mg/kg	10.07.2020 15:25	

Analytical Method: Chloride by EPA 300

Seq Number: 3139135

Parent Sample Id: 674482-013

Matrix: Soil

MS Sample Id: 674482-013 S

Prep Method: E300P

Date Prep: 10.07.2020

MSD Sample Id: 674482-013 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1060	201	1250	95	1250	95	90-110	0	20	mg/kg	10.07.2020 16:49	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3139072

MB Sample Id: 7712800-1-BLK

Matrix: Solid

LCS Sample Id: 7712800-1-BKS

Prep Method: SW8015P

Date Prep: 10.07.2020

LCSD Sample Id: 7712800-1-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	1210	121	1170	117	70-135	3	35	mg/kg	10.07.2020 10:37	
Diesel Range Organics (DRO)	<50.0	1000	1340	134	1310	131	70-135	2	35	mg/kg	10.07.2020 10:37	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	108		129		124		70-135	%	10.07.2020 10:37
o-Terphenyl	104		113		111		70-135	%	10.07.2020 10:37

Analytical Method: TPH by SW8015 Mod

Seq Number: 3139079

MB Sample Id: 7712802-1-BLK

Matrix: Solid

LCS Sample Id: 7712802-1-BKS

Prep Method: SW8015P

Date Prep: 10.07.2020

LCSD Sample Id: 7712802-1-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	908	91	934	93	70-135	3	35	mg/kg	10.07.2020 10:37	
Diesel Range Organics (DRO)	<50.0	1000	1010	101	1040	104	70-135	3	35	mg/kg	10.07.2020 10:37	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	108		111		114		70-135	%	10.07.2020 10:37
o-Terphenyl	108		102		104		70-135	%	10.07.2020 10:37

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

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

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

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



LT Environmental, Inc.

PLU 129 Flowline

Analytical Method: TPH by SW8015 Mod

Seq Number: 3139072

Matrix: Solid

Prep Method: SW8015P

Date Prep: 10.07.2020

MB Sample Id: 7712800-1-BLK

Parameter

Motor Oil Range Hydrocarbons (MRO)

MB
Result

<50.0

Units

mg/kg

Analysis
Date

10.07.2020 10:17

Flag

Analytical Method: TPH by SW8015 Mod

Seq Number: 3139072

Matrix: Solid

Prep Method: SW8015P

Date Prep: 10.07.2020

MB Sample Id: 7712802-1-BLK

Parameter

Motor Oil Range Hydrocarbons (MRO)

MB
Result

<50.0

Units

mg/kg

Analysis
Date

10.07.2020 11:17

Flag

Analytical Method: TPH by SW8015 Mod

Seq Number: 3139072

Matrix: Soil

Prep Method: SW8015P

Date Prep: 10.07.2020

Parent Sample Id: 674465-004

MS Sample Id: 674465-004 S

MSD Sample Id: 674465-004 SD

Parameter

Gasoline Range Hydrocarbons (GRO)

Parent
Result

<50.2

Spike
Amount

1000

MS
Result

968

MS
%Rec

97

MSD
Result

1110

MSD
%Rec

110

Limits

70-135

%RPD

14

RPD
Limit

35

Units

mg/kg

Analysis
Date

10.07.2020 12:18

Flag

Diesel Range Organics (DRO)

<50.2

1000

1150

115

1290

128

70-135

11

35

mg/kg

10.07.2020 12:18

Surrogate

1-Chlorooctane

MS
%Rec

127

MS
FlagMSD
%Rec

131

MSD
Flag

Limits

70-135

Units

%

Analysis
Date

10.07.2020 12:18

o-Terphenyl

120

129

70-135

%

10.07.2020 12:18

Analytical Method: TPH by SW8015 Mod

Seq Number: 3139079

Matrix: Soil

Prep Method: SW8015P

Date Prep: 10.07.2020

Parent Sample Id: 674479-001

MS Sample Id: 674479-001 S

MSD Sample Id: 674479-001 SD

Parameter

Gasoline Range Hydrocarbons (GRO)

Parent
Result

<50.1

Spike
Amount

1000

MS
Result

904

MS
%Rec

90

MSD
Result

908

MSD
%Rec

91

Limits

70-135

%RPD

0

RPD
Limit

35

Units

mg/kg

Analysis
Date

10.07.2020 12:18

Flag

Diesel Range Organics (DRO)

<50.1

1000

1010

101

1030

103

70-135

2

35

mg/kg

10.07.2020 12:18

Surrogate

1-Chlorooctane

MS
%Rec

131

MS
FlagMSD
%Rec

133

MSD
Flag

Limits

70-135

Units

%

Analysis
Date

10.07.2020 12:18

o-Terphenyl

116

124

70-135

%

10.07.2020 12:18

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

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

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

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



LT Environmental, Inc.
PLU 129 Flowline

Analytical Method: BTEX by EPA 8021B

Seq Number: 3139134

Matrix: Solid

Prep Method: SW5035A

Date Prep: 10.07.2020

MB Sample Id: 7712803-1-BLK

LCS Sample Id: 7712803-1-BKS

LCSD Sample Id: 7712803-1-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	0.104	104	70-130	3	35	mg/kg	10.07.2020 16:39	
Toluene	<0.00200	0.100	0.0988	99	0.0994	99	70-130	1	35	mg/kg	10.07.2020 16:39	
Ethylbenzene	<0.00200	0.100	0.105	105	0.101	101	71-129	4	35	mg/kg	10.07.2020 16:39	
m,p-Xylenes	<0.00400	0.200	0.209	105	0.206	103	70-135	1	35	mg/kg	10.07.2020 16:39	
o-Xylene	<0.00200	0.100	0.105	105	0.102	102	71-133	3	35	mg/kg	10.07.2020 16:39	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		98		103		70-130	%	10.07.2020 16:39
4-Bromofluorobenzene	106		106		107		70-130	%	10.07.2020 16:39

Analytical Method: BTEX by EPA 8021B

Seq Number: 3139134

Matrix: Soil

Prep Method: SW5035A

Date Prep: 10.07.2020

Parent Sample Id: 674482-003

MS Sample Id: 674482-003 S

MSD Sample Id: 674482-003 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	0.108	108	0.0961	96	70-130	12	35	mg/kg	10.07.2020 17:24	
Toluene	<0.00200	0.100	0.0996	100	0.0901	90	70-130	10	35	mg/kg	10.07.2020 17:24	
Ethylbenzene	<0.00200	0.100	0.102	102	0.0908	91	71-129	12	35	mg/kg	10.07.2020 17:24	
m,p-Xylenes	<0.00400	0.200	0.209	105	0.184	92	70-135	13	35	mg/kg	10.07.2020 17:24	
o-Xylene	<0.00200	0.100	0.103	103	0.0914	91	71-133	12	35	mg/kg	10.07.2020 17:24	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		104		70-130	%	10.07.2020 17:24
4-Bromofluorobenzene	110		109		70-130	%	10.07.2020 17:24

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

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

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

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

Work Order No. 1274591

Page 1 of 1
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Work Order Comments	
Program: UST/PST ☐ RP ☐ Brownfields ☐ RC ☐ Superfund ☐	
State of Project: NM	
Reporting Level II ☐ Level III ☐ PST/UST ☐ RRP ☐ Level IV ☐	
Deliverables: EDD ☐ ADAPT ☐ Other:	

[illegible]

	Number of Containers
	EPA 8015)
	EPA 8021)
	le (EPA 300.0)
TAT starts the day received by the lab, if received by 4:30pm	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number	TPH (E)	BTEX (C)	Chloride	Sample Comments
BH07	S	10/07/20	0655	1'	1	✓	✓	✓	Discard
BH07A	S		0729	4'	1	✓	✓	✓	
BH08	S	1	0705	1'	1	✓	✓	✓	
BH08A	S		0738	4'	1	✓	✓	✓	
									

[illegible]

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time

10-7-20	1450	2			
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[illegible]

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 10.07.2020 02:50.00 PM

Work Order #: 674591

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T_NM_007

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

Samples received in bulk containers.

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

Analyst:

PH Device/Lot#:

Checklist completed by:



Cloe Clifton

Date: 10.07.2020

Checklist reviewed by:



Jessica Kramer

Date: 10.08.2020

Certificate of Analysis Summary 675918



LT Environmental, Inc., Arvada, CO

Project Name: PLU 129 Flowline

Project Id: 012920136

Date Received in Lab: Thu 10.22.2020 15:30

Contact: Dan Moir

Report Date: 10.26.2020 14:43

Project Location:

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	675918-001	675918-002	675918-003	675918-004	675918-005	675918-006
	<i>Field Id:</i>	SW01	SW02	SW03	SW04	SW05	SW06
	<i>Depth:</i>	0-4 ft	0-4 ft	0-4 ft	0-4 ft	0-4 ft	0-2 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	10.21.2020 09:55	10.21.2020 10:00	10.21.2020 13:35	10.21.2020 14:10	10.21.2020 14:15	10.21.2020 14:30
BTEX by EPA 8021B	<i>Extracted:</i>	10.23.2020 09:36	10.23.2020 09:36	10.23.2020 09:36	10.23.2020 09:36	10.23.2020 09:36	10.23.2020 09:36
	<i>Analyzed:</i>	10.23.2020 23:25	10.23.2020 23:48	10.24.2020 00:10	10.24.2020 00:32	10.24.2020 00:55	10.24.2020 01:17
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00202 0.00202
Toluene		<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00202 0.00202
Ethylbenzene		<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00202 0.00202
m,p-Xylenes		<0.00402 0.00402	<0.00398 0.00398	<0.00400 0.00400	<0.00401 0.00401	<0.00396 0.00396	<0.00404 0.00404
o-Xylene		<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00202 0.00202
Total Xylenes		<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00202 0.00202
Total BTEX		<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00202 0.00202
Chloride by EPA 300	<i>Extracted:</i>	10.23.2020 13:07	10.23.2020 13:07	10.23.2020 13:07	10.23.2020 13:07	10.23.2020 13:07	10.23.2020 13:07
	<i>Analyzed:</i>	10.23.2020 14:03	10.23.2020 14:09	10.23.2020 14:15	10.23.2020 14:21	10.23.2020 14:27	10.23.2020 14:33
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		20.2 9.90	332 9.98	35.7 10.0	218 10.1	184 10.0	221 9.96
TPH by SW8015 Mod	<i>Extracted:</i>	10.22.2020 17:00	10.22.2020 17:00	10.22.2020 17:00	10.22.2020 17:00	10.22.2020 17:00	10.22.2020 17:00
	<i>Analyzed:</i>	10.23.2020 15:41	10.23.2020 16:01	10.23.2020 16:42	10.23.2020 17:01	10.23.2020 17:22	10.23.2020 17:42
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.2 50.2	<50.1 50.1	<50.3 50.3	<49.9 49.9	<49.8 49.8	<50.2 50.2
Diesel Range Organics (DRO)		<50.2 50.2	<50.1 50.1	<50.3 50.3	<49.9 49.9	<49.8 49.8	<50.2 50.2
Motor Oil Range Hydrocarbons (MRO)		<50.2 50.2	<50.1 50.1	<50.3 50.3	<49.9 49.9	<49.8 49.8	<50.2 50.2
Total GRO-DRO		<50.2 50.2	<50.1 50.1	<50.3 50.3	<49.9 49.9	<49.8 49.8	<50.2 50.2
Total TPH		<50.2 50.2	<50.1 50.1	<50.3 50.3	<49.9 49.9	<49.8 49.8	<50.2 50.2

BRL - Below Reporting Limit

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

Certificate of Analysis Summary 675918

LT Environmental, Inc., Arvada, CO

Project Name: PLU 129 Flowline

Project Id: 012920136

Contact: Dan Moir

Project Location:

Date Received in Lab: Thu 10.22.2020 15:30

Report Date: 10.26.2020 14:43

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	675918-007	675918-008				
	Field Id:	SW07	SW08				
	Depth:	0-1 ft	0-1 ft				
	Matrix:	SOIL	SOIL				
	Sampled:	10.21.2020 14:35	10.21.2020 14:40				
BTEX by EPA 8021B	Extracted:	10.23.2020 09:36	10.23.2020 14:39				
	Analyzed:	10.24.2020 01:40	10.24.2020 05:41				
	Units/RL:	mg/kg RL	mg/kg RL				
		<0.00200 0.00200	<0.00200 0.00200				
Benzene		<0.00200 0.00200	<0.00200 0.00200				
Toluene		<0.00200 0.00200	<0.00200 0.00200				
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200				
m,p-Xylenes		<0.00399 0.00399	<0.00401 0.00401				
o-Xylene		<0.00200 0.00200	<0.00200 0.00200				
Total Xylenes		<0.00200 0.00200	<0.00200 0.00200				
Total BTEX		<0.00200 0.00200	<0.00200 0.00200				
Chloride by EPA 300	Extracted:	10.23.2020 13:07	10.23.2020 13:07				
	Analyzed:	10.23.2020 14:51	10.23.2020 14:57				
	Units/RL:	mg/kg RL	mg/kg RL				
		595 9.98	544 9.92				
Chloride							
TPH by SW8015 Mod	Extracted:	10.22.2020 17:00	10.22.2020 17:00				
	Analyzed:	10.23.2020 18:02	10.23.2020 18:22				
	Units/RL:	mg/kg RL	mg/kg RL				
		<50.1 50.1	<50.1 50.1				
Gasoline Range Hydrocarbons (GRO)		<50.1 50.1	<50.1 50.1				
Diesel Range Organics (DRO)		<50.1 50.1	<50.1 50.1				
Motor Oil Range Hydrocarbons (MRO)		<50.1 50.1	<50.1 50.1				
Total GRO-DRO		<50.1 50.1	<50.1 50.1				
Total TPH		<50.1 50.1	<50.1 50.1				

BRL - Below Reporting Limit

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





Analytical Report 675918

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU 129 Flowline

012920136

10.26.2020

Collected By: Client

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

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



10.26.2020

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: Eurofins Xenco, LLC Report No(s): **675918**

PLU 129 Flowline

Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 675918. 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. 675918 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

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

Jessica Kramer

Project Manager

A Small Business and Minority Company

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

**Sample Cross Reference 675918****LT Environmental, Inc., Arvada, CO**

PLU 129 Flowline

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW01	S	10.21.2020 09:55	0 - 4 ft	675918-001
SW02	S	10.21.2020 10:00	0 - 4 ft	675918-002
SW03	S	10.21.2020 13:35	0 - 4 ft	675918-003
SW04	S	10.21.2020 14:10	0 - 4 ft	675918-004
SW05	S	10.21.2020 14:15	0 - 4 ft	675918-005
SW06	S	10.21.2020 14:30	0 - 2 ft	675918-006
SW07	S	10.21.2020 14:35	0 - 1 ft	675918-007
SW08	S	10.21.2020 14:40	0 - 1 ft	675918-008



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 129 Flowline

Project ID: 012920136
Work Order Number(s): 675918

Report Date: 10.26.2020
Date Received: 10.22.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 675918

LT Environmental, Inc., Arvada, CO

PLU 129 Flowline

Sample Id: **SW01** Matrix: Soil Date Received: 10.22.2020 15:30
 Lab Sample Id: 675918-001 Date Collected: 10.21.2020 09:55 Sample Depth: 0 - 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 10.23.2020 13:07 % Moisture:
 Seq Number: 3140556 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	20.2	9.90	mg/kg	10.23.2020 14:03		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: MAB
 Analyst: CAC Date Prep: 10.22.2020 17:00 % Moisture:
 Seq Number: 3140538 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	10.23.2020 15:41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	10.23.2020 15:41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	10.23.2020 15:41	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	10.23.2020 15:41	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	10.23.2020 15:41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	10.23.2020 15:41	
o-Terphenyl	84-15-1	104	%	70-135	10.23.2020 15:41	



Certificate of Analytical Results 675918

LT Environmental, Inc., Arvada, CO

PLU 129 Flowline

Sample Id: **SW01**
Lab Sample Id: 675918-001

Matrix: Soil
Date Collected: 10.21.2020 09:55

Date Received: 10.22.2020 15:30
Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 10.23.2020 09:36

% Moisture:
Basis: Wet Weight

Seq Number: 3140543

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	10.23.2020 23:25	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	10.23.2020 23:25	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	10.23.2020 23:25	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	10.23.2020 23:25	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	10.23.2020 23:25	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	10.23.2020 23:25	U	1
Total BTEX		<0.00201	0.00201	mg/kg	10.23.2020 23:25	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	88	%	70-130	10.23.2020 23:25		
1,4-Difluorobenzene	540-36-3	102	%	70-130	10.23.2020 23:25		



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LT Environmental, Inc., Arvada, CO

PLU 129 Flowline

Sample Id: **SW02** Matrix: Soil Date Received: 10.22.2020 15:30
 Lab Sample Id: 675918-002 Date Collected: 10.21.2020 10:00 Sample Depth: 0 - 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 10.23.2020 13:07 % Moisture:
 Seq Number: 3140556 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	332	9.98	mg/kg	10.23.2020 14:09		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: MAB
 Analyst: CAC Date Prep: 10.22.2020 17:00 % Moisture:
 Seq Number: 3140538 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	10.23.2020 16:01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	10.23.2020 16:01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	10.23.2020 16:01	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	10.23.2020 16:01	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	10.23.2020 16:01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	124	%	70-135	10.23.2020 16:01	
o-Terphenyl	84-15-1	119	%	70-135	10.23.2020 16:01	



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LT Environmental, Inc., Arvada, CO

PLU 129 Flowline

Sample Id: **SW02**
 Lab Sample Id: 675918-002

Matrix: Soil
 Date Collected: 10.21.2020 10:00

Date Received: 10.22.2020 15:30
 Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 10.23.2020 09:36

% Moisture:
 Basis: Wet Weight

Seq Number: 3140543

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	10.23.2020 23:48	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	10.23.2020 23:48	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	10.23.2020 23:48	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	10.23.2020 23:48	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	10.23.2020 23:48	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	10.23.2020 23:48	U	1
Total BTEX		<0.00199	0.00199	mg/kg	10.23.2020 23:48	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	101	%	70-130	10.23.2020 23:48		
4-Bromofluorobenzene	460-00-4	89	%	70-130	10.23.2020 23:48		



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LT Environmental, Inc., Arvada, CO

PLU 129 Flowline

Sample Id: **SW03** Matrix: Soil Date Received: 10.22.2020 15:30
 Lab Sample Id: 675918-003 Date Collected: 10.21.2020 13:35 Sample Depth: 0 - 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 10.23.2020 13:07 % Moisture:
 Seq Number: 3140556 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	35.7	10.0	mg/kg	10.23.2020 14:15		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: MAB
 Analyst: CAC Date Prep: 10.22.2020 17:00 % Moisture:
 Seq Number: 3140538 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	10.23.2020 16:42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	10.23.2020 16:42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	10.23.2020 16:42	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	10.23.2020 16:42	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	10.23.2020 16:42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	121	%	70-135	10.23.2020 16:42	
o-Terphenyl	84-15-1	114	%	70-135	10.23.2020 16:42	



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LT Environmental, Inc., Arvada, CO

PLU 129 Flowline

Sample Id: **SW03**
Lab Sample Id: 675918-003

Matrix: Soil
Date Collected: 10.21.2020 13:35

Date Received: 10.22.2020 15:30
Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 10.23.2020 09:36

% Moisture:
Basis: Wet Weight

Seq Number: 3140543

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.24.2020 00:10	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.24.2020 00:10	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.24.2020 00:10	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	10.24.2020 00:10	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.24.2020 00:10	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.24.2020 00:10	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.24.2020 00:10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	10.24.2020 00:10	
4-Bromofluorobenzene	460-00-4	89	%	70-130	10.24.2020 00:10	



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LT Environmental, Inc., Arvada, CO

PLU 129 Flowline

Sample Id: **SW04** Matrix: Soil Date Received: 10.22.2020 15:30
 Lab Sample Id: 675918-004 Date Collected: 10.21.2020 14:10 Sample Depth: 0 - 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 10.23.2020 13:07 % Moisture:
 Seq Number: 3140556 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	218	10.1	mg/kg	10.23.2020 14:21		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: MAB
 Analyst: CAC Date Prep: 10.22.2020 17:00 % Moisture:
 Seq Number: 3140538 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	10.23.2020 17:01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	10.23.2020 17:01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	10.23.2020 17:01	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	10.23.2020 17:01	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	10.23.2020 17:01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	123	%	70-135	10.23.2020 17:01	
o-Terphenyl	84-15-1	126	%	70-135	10.23.2020 17:01	



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LT Environmental, Inc., Arvada, CO

PLU 129 Flowline

Sample Id: **SW04**
Lab Sample Id: 675918-004

Matrix: Soil
Date Collected: 10.21.2020 14:10

Date Received: 10.22.2020 15:30
Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 10.23.2020 09:36

% Moisture:
Basis: Wet Weight

Seq Number: 3140543

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.24.2020 00:32	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.24.2020 00:32	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.24.2020 00:32	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	10.24.2020 00:32	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.24.2020 00:32	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.24.2020 00:32	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.24.2020 00:32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	10.24.2020 00:32	
4-Bromofluorobenzene	460-00-4	87	%	70-130	10.24.2020 00:32	



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PLU 129 Flowline

Sample Id: **SW05** Matrix: Soil Date Received: 10.22.2020 15:30
 Lab Sample Id: 675918-005 Date Collected: 10.21.2020 14:15 Sample Depth: 0 - 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 10.23.2020 13:07 % Moisture:
 Seq Number: 3140556 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	184	10.0	mg/kg	10.23.2020 14:27		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: MAB
 Analyst: CAC Date Prep: 10.22.2020 17:00 % Moisture:
 Seq Number: 3140538 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	10.23.2020 17:22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	10.23.2020 17:22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	10.23.2020 17:22	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	10.23.2020 17:22	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	10.23.2020 17:22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	126	%	70-135	10.23.2020 17:22	
o-Terphenyl	84-15-1	124	%	70-135	10.23.2020 17:22	



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PLU 129 Flowline

Sample Id: **SW05**
 Lab Sample Id: 675918-005

Matrix: Soil
 Date Collected: 10.21.2020 14:15

Date Received: 10.22.2020 15:30
 Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 10.23.2020 09:36

% Moisture:
 Basis: Wet Weight

Seq Number: 3140543

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	10.24.2020 00:55	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	10.24.2020 00:55	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	10.24.2020 00:55	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	10.24.2020 00:55	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	10.24.2020 00:55	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	10.24.2020 00:55	U	1
Total BTEX		<0.00198	0.00198	mg/kg	10.24.2020 00:55	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	101	%	70-130	10.24.2020 00:55		
4-Bromofluorobenzene	460-00-4	90	%	70-130	10.24.2020 00:55		



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PLU 129 Flowline

Sample Id: **SW06** Matrix: Soil Date Received: 10.22.2020 15:30
 Lab Sample Id: 675918-006 Date Collected: 10.21.2020 14:30 Sample Depth: 0 - 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 10.23.2020 13:07 % Moisture:
 Seq Number: 3140556 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	221	9.96	mg/kg	10.23.2020 14:33		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: MAB
 Analyst: CAC Date Prep: 10.22.2020 17:00 % Moisture:
 Seq Number: 3140538 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	10.23.2020 17:42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	10.23.2020 17:42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	10.23.2020 17:42	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	10.23.2020 17:42	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	10.23.2020 17:42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	121	%	70-135	10.23.2020 17:42	
o-Terphenyl	84-15-1	118	%	70-135	10.23.2020 17:42	



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PLU 129 Flowline

Sample Id: **SW06**
Lab Sample Id: 675918-006

Matrix: Soil
Date Collected: 10.21.2020 14:30

Date Received: 10.22.2020 15:30
Sample Depth: 0 - 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 10.23.2020 09:36

% Moisture:
Basis: Wet Weight

Seq Number: 3140543

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	10.24.2020 01:17	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	10.24.2020 01:17	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	10.24.2020 01:17	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	10.24.2020 01:17	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	10.24.2020 01:17	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	10.24.2020 01:17	U	1
Total BTEX		<0.00202	0.00202	mg/kg	10.24.2020 01:17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	10.24.2020 01:17	
4-Bromofluorobenzene	460-00-4	89	%	70-130	10.24.2020 01:17	



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PLU 129 Flowline

Sample Id: **SW07** Matrix: Soil Date Received: 10.22.2020 15:30
 Lab Sample Id: 675918-007 Date Collected: 10.21.2020 14:35 Sample Depth: 0 - 1 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 10.23.2020 13:07 % Moisture:
 Seq Number: 3140556 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	595	9.98	mg/kg	10.23.2020 14:51		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: MAB
 Analyst: CAC Date Prep: 10.22.2020 17:00 % Moisture:
 Seq Number: 3140538 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	10.23.2020 18:02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	10.23.2020 18:02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	10.23.2020 18:02	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	10.23.2020 18:02	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	10.23.2020 18:02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	128	%	70-135	10.23.2020 18:02	
o-Terphenyl	84-15-1	129	%	70-135	10.23.2020 18:02	



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PLU 129 Flowline

Sample Id: **SW07**
Lab Sample Id: 675918-007

Matrix: Soil
Date Collected: 10.21.2020 14:35

Date Received: 10.22.2020 15:30
Sample Depth: 0 - 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 10.23.2020 09:36

% Moisture:
Basis: Wet Weight

Seq Number: 3140543

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.24.2020 01:40	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.24.2020 01:40	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.24.2020 01:40	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	10.24.2020 01:40	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.24.2020 01:40	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.24.2020 01:40	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.24.2020 01:40	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	90	%	70-130	10.24.2020 01:40		
1,4-Difluorobenzene	540-36-3	101	%	70-130	10.24.2020 01:40		



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PLU 129 Flowline

Sample Id: **SW08** Matrix: Soil Date Received: 10.22.2020 15:30
 Lab Sample Id: 675918-008 Date Collected: 10.21.2020 14:40 Sample Depth: 0 - 1 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 10.23.2020 13:07 % Moisture:
 Seq Number: 3140556 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	544	9.92	mg/kg	10.23.2020 14:57		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: MAB
 Analyst: CAC Date Prep: 10.22.2020 17:00 % Moisture:
 Seq Number: 3140538 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	10.23.2020 18:22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	10.23.2020 18:22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	10.23.2020 18:22	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	10.23.2020 18:22	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	10.23.2020 18:22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	119	%	70-135	10.23.2020 18:22	
o-Terphenyl	84-15-1	107	%	70-135	10.23.2020 18:22	



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PLU 129 Flowline

Sample Id: **SW08**
Lab Sample Id: 675918-008

Matrix: Soil
Date Collected: 10.21.2020 14:40

Date Received: 10.22.2020 15:30
Sample Depth: 0 - 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 10.23.2020 14:39

% Moisture:
Basis: Wet Weight

Seq Number: 3140545

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.24.2020 05:41	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.24.2020 05:41	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.24.2020 05:41	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	10.24.2020 05:41	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.24.2020 05:41	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.24.2020 05:41	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.24.2020 05:41	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	102	%	70-130	10.24.2020 05:41		
4-Bromofluorobenzene	460-00-4	111	%	70-130	10.24.2020 05:41		

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



LT Environmental, Inc.

PLU 129 Flowline

Analytical Method: Chloride by EPA 300

Seq Number: 3140556

MB Sample Id: 7713819-1-BLK

Matrix: Solid

LCS Sample Id: 7713819-1-BKS

Prep Method: E300P

Date Prep: 10.23.2020

LCSD Sample Id: 7713819-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	253	101	246	98	90-110	3	20	mg/kg	10.23.2020 12:57	

Analytical Method: Chloride by EPA 300

Seq Number: 3140556

Parent Sample Id: 675916-018

Matrix: Soil

MS Sample Id: 675916-018 S

Prep Method: E300P

Date Prep: 10.23.2020

MSD Sample Id: 675916-018 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	339	199	528	95	527	94	90-110	0	20	mg/kg	10.23.2020 13:15	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3140538

MB Sample Id: 7713814-1-BLK

Matrix: Solid

LCS Sample Id: 7713814-1-BKS

Prep Method: SW8015P

Date Prep: 10.22.2020

LCSD Sample Id: 7713814-1-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	920	92	883	88	70-135	4	35	mg/kg	10.23.2020 11:18	
Diesel Range Organics (DRO)	<50.0	1000	1020	102	1010	101	70-135	1	35	mg/kg	10.23.2020 11:18	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	96		126		124		70-135	%	10.23.2020 11:18
o-Terphenyl	99		99		100		70-135	%	10.23.2020 11:18

Analytical Method: TPH by SW8015 Mod

Seq Number: 3140538

Matrix: Solid

MB Sample Id: 7713814-1-BLK

Prep Method: SW8015P

Date Prep: 10.22.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	10.23.2020 10:58	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3140538

Matrix: Soil

Parent Sample Id: 675916-015

MS Sample Id: 675916-015 S

Prep Method: SW8015P

Date Prep: 10.22.2020

MSD Sample Id: 675916-015 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	1130	113	1070	107	70-135	5	35	mg/kg	10.23.2020 12:39	
Diesel Range Organics (DRO)	<50.1	1000	1260	126	1100	110	70-135	14	35	mg/kg	10.23.2020 12:39	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	124		133		70-135	%	10.23.2020 12:39
o-Terphenyl	120		134		70-135	%	10.23.2020 12:39

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

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

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

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



LT Environmental, Inc.
PLU 129 Flowline

Analytical Method: BTEX by EPA 8021B

Seq Number: 3140543

Matrix: Solid

Prep Method: SW5035A

Date Prep: 10.23.2020

MB Sample Id: 7713816-1-BLK

LCS Sample Id: 7713816-1-BKS

LCSD Sample Id: 7713816-1-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	0.0992	99	0.104	104	70-130	5	35	mg/kg	10.23.2020 10:33	
Toluene	<0.00200	0.100	0.113	113	0.123	123	70-130	8	35	mg/kg	10.23.2020 10:33	
Ethylbenzene	<0.00200	0.100	0.0886	89	0.0929	93	71-129	5	35	mg/kg	10.23.2020 10:33	
m,p-Xylenes	<0.00400	0.200	0.178	89	0.188	94	70-135	5	35	mg/kg	10.23.2020 10:33	
o-Xylene	<0.00200	0.100	0.0881	88	0.0924	92	71-133	5	35	mg/kg	10.23.2020 10:33	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	95		97		98		70-130	%	10.23.2020 10:33
4-Bromofluorobenzene	76		84		88		70-130	%	10.23.2020 10:33

Analytical Method: BTEX by EPA 8021B

Seq Number: 3140545

Matrix: Solid

Prep Method: SW5035A

Date Prep: 10.23.2020

MB Sample Id: 7713817-1-BLK

LCS Sample Id: 7713817-1-BKS

LCSD Sample Id: 7713817-1-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	0.0993	99	0.0980	98	70-130	1	35	mg/kg	10.24.2020 03:37	
Toluene	<0.00200	0.100	0.0951	95	0.0962	96	70-130	1	35	mg/kg	10.24.2020 03:37	
Ethylbenzene	<0.00200	0.100	0.0966	97	0.0962	96	71-129	0	35	mg/kg	10.24.2020 03:37	
m,p-Xylenes	<0.00400	0.200	0.197	99	0.194	97	70-135	2	35	mg/kg	10.24.2020 03:37	
o-Xylene	<0.00200	0.100	0.0982	98	0.0965	97	71-133	2	35	mg/kg	10.24.2020 03:37	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		99		102		70-130	%	10.24.2020 03:37
4-Bromofluorobenzene	117		108		110		70-130	%	10.24.2020 03:37

Analytical Method: BTEX by EPA 8021B

Seq Number: 3140543

Matrix: Soil

Prep Method: SW5035A

Date Prep: 10.23.2020

Parent Sample Id: 675916-010

MS Sample Id: 675916-010 S

MSD Sample Id: 675916-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.101	0.0809	80	0.105	105	70-130	26	35	mg/kg	10.23.2020 11:18	
Toluene	<0.00201	0.101	0.0965	96	0.116	116	70-130	18	35	mg/kg	10.23.2020 11:18	
Ethylbenzene	<0.00201	0.101	0.0713	71	0.0934	93	71-129	27	35	mg/kg	10.23.2020 11:18	
m,p-Xylenes	<0.00402	0.201	0.143	71	0.188	94	70-135	27	35	mg/kg	10.23.2020 11:18	
o-Xylene	<0.00201	0.101	0.0771	76	0.0935	94	71-133	19	35	mg/kg	10.23.2020 11:18	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		99		70-130	%	10.23.2020 11:18
4-Bromofluorobenzene	86		86		70-130	%	10.23.2020 11:18

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

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

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

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

LT Environmental, Inc.
 PLU 129 Flowline
Analytical Method: BTEX by EPA 8021B

Seq Number: 3140545

Parent Sample Id: 675918-008

Matrix: Soil

MS Sample Id: 675918-008 S

Prep Method: SW5035A

Date Prep: 10.23.2020

MSD Sample Id: 675918-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.109	109	0.111	111	70-130	2	35	mg/kg	10.24.2020 04:21	
Toluene	<0.00200	0.100	0.0991	99	0.101	101	70-130	2	35	mg/kg	10.24.2020 04:21	
Ethylbenzene	<0.00200	0.100	0.0886	89	0.0867	87	71-129	2	35	mg/kg	10.24.2020 04:21	
m,p-Xylenes	<0.00400	0.200	0.199	100	0.201	101	70-135	1	35	mg/kg	10.24.2020 04:21	
o-Xylene	<0.00200	0.100	0.101	101	0.101	101	71-133	0	35	mg/kg	10.24.2020 04:21	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		103		70-130	%	10.24.2020 04:21
4-Bromofluorobenzene	108		108		70-130	%	10.24.2020 04:21

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

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

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

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



Chain of Custody

Work Order No: 6275918

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

www.xenco.com

Page 1 of 1

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Little
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A St Bldg 1, Unit 222	Address:	3104 E Greene St.
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM
Phone:	(432) 701-2610	Email:	dmoir@ltenv.com rmcatee@ltenv.com

ANALYSIS REQUEST

Work Order Notes

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

Project Name:	PLU 129 Flowline	Turn Around	☒
Project Number:	012920136	Routine	☒
P.O. Number:		Rush:	
Sampler's Name:	Robert McAfee	Due Date:	

SAMPLE RECEIPT	Temp Blank:	Yes	No	Wet Ice:	Yes	No
Temperature (°C):	3.6/3.4			Thermometer ID		
Received In tact:	Yes	No			Correction Factor:	0.2
Cooler Custody Seals:	Yes	No	N/A			Total Containers:
Sample Custody Seals:	Yes	No	N/A			8

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers									
SW01	S	10/21/2018	0955	0-4'	TPH (EPA 8015)	X	X	X						
SW02			1000	0-4'	BTEX (EPA 8021)	X	X	X						
SW03			1335	0-4'	Chloride (EPA 300.0)	X	X	X						
SW04			1410	0-4'		X	X	X						
SW05			1415	0-4'		X	X	X						
SW06			1430	0-2'		X	X	X						
SW07			1435	0-1'		X	X	X						
SW08			1440	0-1'		X	X	X						

Sample Comments

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

Composite

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SIO2 Na Sr Ti Sn U V Zn
 Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U 1631 / 245.1 / 7470 / 7471 : Hg

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>Bob Taylor</i>	<i>Joe Cuffitt</i>	10-22-20 1538			

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 10.22.2020 03.30.00 PM

Work Order #: 675918

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)?	3.4
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	No
#18 Water VOC samples have zero headspace?	N/A

Samples received in bulk containers.

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

Analyst:

PH Device/Lot#:

Checklist completed by:



Cloe Clifton

Date: 10.22.2020

Checklist reviewed by:



Jessica Kramer

Date: 10.23.2020

Certificate of Analysis Summary 675920



LT Environmental, Inc., Arvada, CO

Project Name: PLU 129 Flowline

Project Id: 01292016

Date Received in Lab: Thu 10.22.2020 15:30

Contact: Dan Moir

Report Date: 10.26.2020 16:19

Project Location:

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	675920-001	675920-002	675920-003	675920-004	675920-005	675920-006
	<i>Field Id:</i>	FS01	FS02	FS03	FS04	FS05	FS06
	<i>Depth:</i>	1- ft	1- ft	4- ft	4- ft	4- ft	4- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	10.21.2020 14:56	10.21.2020 14:59	10.21.2020 15:02	10.21.2020 15:04	10.21.2020 15:06	10.21.2020 15:09
BTEX by EPA 8021B	<i>Extracted:</i>	10.23.2020 14:39	10.23.2020 14:39	10.23.2020 14:39	10.23.2020 14:39	10.23.2020 14:39	10.23.2020 14:39
	<i>Analyzed:</i>	10.24.2020 06:04	10.24.2020 06:26	10.24.2020 06:48	10.24.2020 07:11	10.24.2020 07:33	10.24.2020 07:56
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00199 0.00199	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202	<0.00200 0.00200
Toluene		<0.00199 0.00199	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202	<0.00200 0.00200
Ethylbenzene		<0.00199 0.00199	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202	<0.00200 0.00200
m,p-Xylenes		<0.00398 0.00398	<0.00404 0.00404	<0.00399 0.00399	<0.00398 0.00398	<0.00404 0.00404	<0.00401 0.00401
o-Xylene		<0.00199 0.00199	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202	<0.00200 0.00200
Total Xylenes		<0.00199 0.00199	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202	<0.00200 0.00200
Total BTEX		<0.00199 0.00199	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202	<0.00200 0.00200
Chloride by EPA 300	<i>Extracted:</i>	10.23.2020 13:07	10.23.2020 13:07	10.23.2020 13:07	10.23.2020 13:07	10.23.2020 13:07	10.23.2020 13:07
	<i>Analyzed:</i>	10.23.2020 15:03	10.23.2020 15:09	10.23.2020 15:27	10.23.2020 15:33	10.23.2020 15:39	10.23.2020 15:45
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		1450 50.4	406 10.1	1610 50.3	4120 49.6	6500 49.7	993 9.96
TPH by SW8015 Mod	<i>Extracted:</i>	10.22.2020 17:00	10.22.2020 17:00	10.22.2020 17:00	10.22.2020 17:00	10.23.2020 17:49	10.23.2020 17:49
	<i>Analyzed:</i>	10.23.2020 18:42	10.23.2020 19:03	10.23.2020 19:23	10.23.2020 19:43	10.23.2020 21:24	10.23.2020 22:25
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.2 50.2	<50.1 50.1	<49.9 49.9	<50.3 50.3	<50.2 50.2	<50.2 50.2
Diesel Range Organics (DRO)		58.8 50.2	<50.1 50.1	<49.9 49.9	<50.3 50.3	<50.2 50.2	<50.2 50.2
Motor Oil Range Hydrocarbons (MRO)		<50.2 50.2	<50.1 50.1	<49.9 49.9	<50.3 50.3	<50.2 50.2	<50.2 50.2
Total GRO-DRO		58.8 50.2	<50.1 50.1	<49.9 49.9	<50.3 50.3	<50.2 50.2	<50.2 50.2
Total TPH		58.8 50.2	<50.1 50.1	<49.9 49.9	<50.3 50.3	<50.2 50.2	<50.2 50.2

BRL - Below Reporting Limit

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

Certificate of Analysis Summary 675920

LT Environmental, Inc., Arvada, CO

Project Name: PLU 129 Flowline

Project Id: 01292016

Contact: Dan Moir

Project Location:

Date Received in Lab: Thu 10.22.2020 15:30

Report Date: 10.26.2020 16:19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id: 675920-007 Field Id: FS07 Depth: 4- ft Matrix: SOIL Sampled: 10.21.2020 15:11					
BTEX by EPA 8021B	Extracted: 10.23.2020 14:39 Analyzed: 10.24.2020 08:18 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: 10.23.2020 13:07 Analyzed: 10.23.2020 15:51 Units/RL: mg/kg RL					
Chloride	37.6 9.98					
TPH by SW8015 Mod	Extracted: 10.23.2020 17:49 Analyzed: 10.23.2020 22:45 Units/RL: mg/kg RL					
Gasoline Range Hydrocarbons (GRO)	<50.0 50.0					
Diesel Range Organics (DRO)	<50.0 50.0					
Motor Oil Range Hydrocarbons (MRO)	<50.0 50.0					
Total GRO-DRO	<50.0 50.0					
Total TPH	<50.0 50.0					

BRL - Below Reporting Limit

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





Analytical Report 675920

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU 129 Flowline

01292016

10.26.2020

Collected By: Client

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

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



10.26.2020

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: Eurofins Xenco, LLC Report No(s): **675920**

PLU 129 Flowline

Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 675920. 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. 675920 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

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

Jessica Kramer

Project Manager

A Small Business and Minority Company

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

**Sample Cross Reference 675920****LT Environmental, Inc., Arvada, CO**

PLU 129 Flowline

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	10.21.2020 14:56	1 ft	675920-001
FS02	S	10.21.2020 14:59	1 ft	675920-002
FS03	S	10.21.2020 15:02	4 ft	675920-003
FS04	S	10.21.2020 15:04	4 ft	675920-004
FS05	S	10.21.2020 15:06	4 ft	675920-005
FS06	S	10.21.2020 15:09	4 ft	675920-006
FS07	S	10.21.2020 15:11	4 ft	675920-007



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 129 Flowline

Project ID: 01292016
Work Order Number(s): 675920

Report Date: 10.26.2020
Date Received: 10.22.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 675920

LT Environmental, Inc., Arvada, CO

PLU 129 Flowline

Sample Id: **FS01** Matrix: Soil Date Received: 10.22.2020 15:30
 Lab Sample Id: 675920-001 Date Collected: 10.21.2020 14:56 Sample Depth: 1 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 10.23.2020 13:07 % Moisture:
 Seq Number: 3140556 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1450	50.4	mg/kg	10.23.2020 15:03		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: MAB
 Analyst: CAC Date Prep: 10.22.2020 17:00 % Moisture:
 Seq Number: 3140538 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	10.23.2020 18:42	U	1
Diesel Range Organics (DRO)	C10C28DRO	58.8	50.2	mg/kg	10.23.2020 18:42		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	10.23.2020 18:42	U	1
Total GRO-DRO	PHC628	58.8	50.2	mg/kg	10.23.2020 18:42		1
Total TPH	PHC635	58.8	50.2	mg/kg	10.23.2020 18:42		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	10.23.2020 18:42	
o-Terphenyl	84-15-1	105	%	70-135	10.23.2020 18:42	



Certificate of Analytical Results 675920

LT Environmental, Inc., Arvada, CO

PLU 129 Flowline

Sample Id: **FS01** Matrix: Soil Date Received: 10.22.2020 15:30
 Lab Sample Id: 675920-001 Date Collected: 10.21.2020 14:56 Sample Depth: 1 ft
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A
 Tech: MAB
 Analyst: MAB Date Prep: 10.23.2020 14:39 % Moisture:
 Seq Number: 3140545 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	10.24.2020 06:04	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	10.24.2020 06:04	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	10.24.2020 06:04	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	10.24.2020 06:04	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	10.24.2020 06:04	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	10.24.2020 06:04	U	1
Total BTEX		<0.00199	0.00199	mg/kg	10.24.2020 06:04	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	103	%	70-130	10.24.2020 06:04		
4-Bromofluorobenzene	460-00-4	110	%	70-130	10.24.2020 06:04		



Certificate of Analytical Results 675920

LT Environmental, Inc., Arvada, CO

PLU 129 Flowline

Sample Id: **FS02** Matrix: Soil Date Received: 10.22.2020 15:30
 Lab Sample Id: 675920-002 Date Collected: 10.21.2020 14:59 Sample Depth: 1 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 10.23.2020 13:07 % Moisture:
 Seq Number: 3140556 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	406	10.1	mg/kg	10.23.2020 15:09		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: MAB
 Analyst: CAC Date Prep: 10.22.2020 17:00 % Moisture:
 Seq Number: 3140538 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	10.23.2020 19:03	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	10.23.2020 19:03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	10.23.2020 19:03	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	10.23.2020 19:03	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	10.23.2020 19:03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	134	%	70-135	10.23.2020 19:03	
o-Terphenyl	84-15-1	120	%	70-135	10.23.2020 19:03	



Certificate of Analytical Results 675920

LT Environmental, Inc., Arvada, CO

PLU 129 Flowline

Sample Id: **FS02**
 Lab Sample Id: 675920-002

Matrix: Soil
 Date Collected: 10.21.2020 14:59

Date Received: 10.22.2020 15:30
 Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 10.23.2020 14:39

% Moisture:
 Basis: Wet Weight

Seq Number: 3140545

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	10.24.2020 06:26	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	10.24.2020 06:26	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	10.24.2020 06:26	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	10.24.2020 06:26	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	10.24.2020 06:26	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	10.24.2020 06:26	U	1
Total BTEX		<0.00202	0.00202	mg/kg	10.24.2020 06:26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	114	%	70-130	10.24.2020 06:26	
1,4-Difluorobenzene	540-36-3	104	%	70-130	10.24.2020 06:26	



Certificate of Analytical Results 675920

LT Environmental, Inc., Arvada, CO

PLU 129 Flowline

Sample Id: **FS03** Matrix: Soil Date Received: 10.22.2020 15:30
 Lab Sample Id: 675920-003 Date Collected: 10.21.2020 15:02 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 10.23.2020 13:07 % Moisture:
 Seq Number: 3140556 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1610	50.3	mg/kg	10.23.2020 15:27		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: MAB
 Analyst: CAC Date Prep: 10.22.2020 17:00 % Moisture:
 Seq Number: 3140538 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	10.23.2020 19:23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	10.23.2020 19:23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	10.23.2020 19:23	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	10.23.2020 19:23	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	10.23.2020 19:23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	125	%	70-135	10.23.2020 19:23	
o-Terphenyl	84-15-1	129	%	70-135	10.23.2020 19:23	



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LT Environmental, Inc., Arvada, CO

PLU 129 Flowline

Sample Id: **FS03**
 Lab Sample Id: 675920-003

Matrix: Soil
 Date Collected: 10.21.2020 15:02

Date Received: 10.22.2020 15:30
 Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 10.23.2020 14:39

% Moisture:
 Basis: Wet Weight

Seq Number: 3140545

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.24.2020 06:48	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.24.2020 06:48	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.24.2020 06:48	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	10.24.2020 06:48	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.24.2020 06:48	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.24.2020 06:48	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.24.2020 06:48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	117	%	70-130	10.24.2020 06:48	
1,4-Difluorobenzene	540-36-3	108	%	70-130	10.24.2020 06:48	



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LT Environmental, Inc., Arvada, CO

PLU 129 Flowline

Sample Id: **FS04** Matrix: Soil Date Received: 10.22.2020 15:30
 Lab Sample Id: 675920-004 Date Collected: 10.21.2020 15:04 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 10.23.2020 13:07 % Moisture:
 Seq Number: 3140556 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	4120	49.6	mg/kg	10.23.2020 15:33		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: MAB
 Analyst: CAC Date Prep: 10.22.2020 17:00 % Moisture:
 Seq Number: 3140538 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	10.23.2020 19:43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	10.23.2020 19:43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	10.23.2020 19:43	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	10.23.2020 19:43	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	10.23.2020 19:43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-135	10.23.2020 19:43	
o-Terphenyl	84-15-1	108	%	70-135	10.23.2020 19:43	



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LT Environmental, Inc., Arvada, CO

PLU 129 Flowline

Sample Id: **FS04**
 Lab Sample Id: 675920-004

Matrix: Soil
 Date Collected: 10.21.2020 15:04

Date Received: 10.22.2020 15:30
 Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 10.23.2020 14:39

% Moisture:
 Basis: Wet Weight

Seq Number: 3140545

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	10.24.2020 07:11	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	10.24.2020 07:11	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	10.24.2020 07:11	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	10.24.2020 07:11	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	10.24.2020 07:11	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	10.24.2020 07:11	U	1
Total BTEX		<0.00199	0.00199	mg/kg	10.24.2020 07:11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	115	%	70-130	10.24.2020 07:11	
1,4-Difluorobenzene	540-36-3	103	%	70-130	10.24.2020 07:11	



Certificate of Analytical Results 675920

LT Environmental, Inc., Arvada, CO

PLU 129 Flowline

Sample Id: **FS05** Matrix: Soil Date Received: 10.22.2020 15:30
 Lab Sample Id: 675920-005 Date Collected: 10.21.2020 15:06 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 10.23.2020 13:07 % Moisture:
 Seq Number: 3140556 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6500	49.7	mg/kg	10.23.2020 15:39		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: MAB
 Analyst: CAC Date Prep: 10.23.2020 17:49 % Moisture:
 Seq Number: 3140587 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	10.23.2020 21:24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	10.23.2020 21:24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	10.23.2020 21:24	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	10.23.2020 21:24	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	10.23.2020 21:24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	130	%	70-135	10.23.2020 21:24	
o-Terphenyl	84-15-1	121	%	70-135	10.23.2020 21:24	



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LT Environmental, Inc., Arvada, CO

PLU 129 Flowline

Sample Id: **FS05**
 Lab Sample Id: 675920-005

Matrix: Soil
 Date Collected: 10.21.2020 15:06

Date Received: 10.22.2020 15:30
 Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 10.23.2020 14:39

% Moisture:
 Basis: Wet Weight

Seq Number: 3140545

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	10.24.2020 07:33	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	10.24.2020 07:33	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	10.24.2020 07:33	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	10.24.2020 07:33	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	10.24.2020 07:33	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	10.24.2020 07:33	U	1
Total BTEX		<0.00202	0.00202	mg/kg	10.24.2020 07:33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	122	%	70-130	10.24.2020 07:33	
1,4-Difluorobenzene	540-36-3	108	%	70-130	10.24.2020 07:33	



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LT Environmental, Inc., Arvada, CO

PLU 129 Flowline

Sample Id: **FS06** Matrix: Soil Date Received: 10.22.2020 15:30
 Lab Sample Id: 675920-006 Date Collected: 10.21.2020 15:09 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 10.23.2020 13:07 % Moisture:
 Seq Number: 3140556 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	993	9.96	mg/kg	10.23.2020 15:45		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: MAB
 Analyst: CAC Date Prep: 10.23.2020 17:49 % Moisture:
 Seq Number: 3140587 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	10.23.2020 22:25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	10.23.2020 22:25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	10.23.2020 22:25	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	10.23.2020 22:25	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	10.23.2020 22:25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	10.23.2020 22:25	
o-Terphenyl	84-15-1	109	%	70-135	10.23.2020 22:25	



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LT Environmental, Inc., Arvada, CO

PLU 129 Flowline

Sample Id: **FS06**
 Lab Sample Id: 675920-006

Matrix: Soil
 Date Collected: 10.21.2020 15:09

Date Received: 10.22.2020 15:30
 Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 10.23.2020 14:39

% Moisture:
 Basis: Wet Weight

Seq Number: 3140545

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.24.2020 07:56	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.24.2020 07:56	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.24.2020 07:56	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	10.24.2020 07:56	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.24.2020 07:56	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.24.2020 07:56	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.24.2020 07:56	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	116	%	70-130	10.24.2020 07:56		
1,4-Difluorobenzene	540-36-3	106	%	70-130	10.24.2020 07:56		



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LT Environmental, Inc., Arvada, CO

PLU 129 Flowline

Sample Id: **FS07** Matrix: Soil Date Received: 10.22.2020 15:30
 Lab Sample Id: 675920-007 Date Collected: 10.21.2020 15:11 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 10.23.2020 13:07 % Moisture:
 Seq Number: 3140556 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	37.6	9.98	mg/kg	10.23.2020 15:51		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: MAB
 Analyst: CAC Date Prep: 10.23.2020 17:49 % Moisture:
 Seq Number: 3140587 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	10.23.2020 22:45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	10.23.2020 22:45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.23.2020 22:45	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	10.23.2020 22:45	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.23.2020 22:45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	10.23.2020 22:45	
o-Terphenyl	84-15-1	105	%	70-135	10.23.2020 22:45	



Certificate of Analytical Results 675920

LT Environmental, Inc., Arvada, CO

PLU 129 Flowline

Sample Id: **FS07** Matrix: Soil Date Received: 10.22.2020 15:30
 Lab Sample Id: 675920-007 Date Collected: 10.21.2020 15:11 Sample Depth: 4 ft
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A
 Tech: MAB
 Analyst: MAB Date Prep: 10.23.2020 14:39 % Moisture:
 Seq Number: 3140545 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.24.2020 08:18	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.24.2020 08:18	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.24.2020 08:18	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	10.24.2020 08:18	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.24.2020 08:18	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.24.2020 08:18	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.24.2020 08:18	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	120	%	70-130	10.24.2020 08:18		
1,4-Difluorobenzene	540-36-3	110	%	70-130	10.24.2020 08:18		

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



LT Environmental, Inc.

PLU 129 Flowline

Analytical Method: Chloride by EPA 300

Seq Number: 3140556

MB Sample Id: 7713819-1-BLK

Matrix: Solid

LCS Sample Id: 7713819-1-BKS

Prep Method: E300P

Date Prep: 10.23.2020

LCSD Sample Id: 7713819-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	253	101	246	98	90-110	3	20	mg/kg	10.23.2020 12:57	

Analytical Method: Chloride by EPA 300

Seq Number: 3140556

Parent Sample Id: 675916-018

Matrix: Soil

MS Sample Id: 675916-018 S

Prep Method: E300P

Date Prep: 10.23.2020

MSD Sample Id: 675916-018 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	339	199	528	95	527	94	90-110	0	20	mg/kg	10.23.2020 13:15	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3140538

MB Sample Id: 7713814-1-BLK

Matrix: Solid

LCS Sample Id: 7713814-1-BKS

Prep Method: SW8015P

Date Prep: 10.22.2020

LCSD Sample Id: 7713814-1-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	920	92	883	88	70-135	4	35	mg/kg	10.23.2020 11:18	
Diesel Range Organics (DRO)	<50.0	1000	1020	102	1010	101	70-135	1	35	mg/kg	10.23.2020 11:18	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	96		126		124		70-135	%	10.23.2020 11:18
o-Terphenyl	99		99		100		70-135	%	10.23.2020 11:18

Analytical Method: TPH by SW8015 Mod

Seq Number: 3140587

MB Sample Id: 7713839-1-BLK

Matrix: Solid

LCS Sample Id: 7713839-1-BKS

Prep Method: SW8015P

Date Prep: 10.23.2020

LCSD Sample Id: 7713839-1-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	929	93	971	97	70-135	4	35	mg/kg	10.23.2020 20:44	
Diesel Range Organics (DRO)	<50.0	1000	988	99	949	95	70-135	4	35	mg/kg	10.23.2020 20:44	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	83		95		80		70-135	%	10.23.2020 20:44
o-Terphenyl	91		85		72		70-135	%	10.23.2020 20:44

Analytical Method: TPH by SW8015 Mod

Seq Number: 3140538

Matrix: Solid
MB Sample Id: 7713814-1-BLK

Prep Method: SW8015P

Date Prep: 10.22.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	10.23.2020 10:58	

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

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

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

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



LT Environmental, Inc.

PLU 129 Flowline

Analytical Method: TPH by SW8015 Mod

Seq Number: 3140587

Matrix: Solid

Prep Method: SW8015P

Date Prep: 10.23.2020

MB Sample Id: 7713839-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	10.23.2020 20:23	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3140538

Matrix: Soil

Prep Method: SW8015P

Date Prep: 10.22.2020

Parent Sample Id: 675916-015

MS Sample Id: 675916-015 S

MSD Sample Id: 675916-015 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	1130	113	1070	107	70-135	5	35	mg/kg	10.23.2020 12:39	
Diesel Range Organics (DRO)	<50.1	1000	1260	126	1100	110	70-135	14	35	mg/kg	10.23.2020 12:39	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	124		133		70-135	%	10.23.2020 12:39
o-Terphenyl	120		134		70-135	%	10.23.2020 12:39

Analytical Method: TPH by SW8015 Mod

Seq Number: 3140587

Matrix: Soil

Prep Method: SW8015P

Date Prep: 10.23.2020

Parent Sample Id: 675920-005

MS Sample Id: 675920-005 S

MSD Sample Id: 675920-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.3	1010	1000	99	914	91	70-135	9	35	mg/kg	10.23.2020 21:44	
Diesel Range Organics (DRO)	<50.3	1010	1090	108	951	95	70-135	14	35	mg/kg	10.23.2020 21:44	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	123		129		70-135	%	10.23.2020 21:44
o-Terphenyl	118		116		70-135	%	10.23.2020 21:44

Analytical Method: BTEX by EPA 8021B

Seq Number: 3140545

Matrix: Solid

Prep Method: SW5035A

Date Prep: 10.23.2020

MB Sample Id: 7713817-1-BLK

LCS Sample Id: 7713817-1-BKS

LCSD Sample Id: 7713817-1-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	0.0993	99	0.0980	98	70-130	1	35	mg/kg	10.24.2020 03:37	
Toluene	<0.00200	0.100	0.0951	95	0.0962	96	70-130	1	35	mg/kg	10.24.2020 03:37	
Ethylbenzene	<0.00200	0.100	0.0966	97	0.0962	96	71-129	0	35	mg/kg	10.24.2020 03:37	
m,p-Xylenes	<0.00400	0.200	0.197	99	0.194	97	70-135	2	35	mg/kg	10.24.2020 03:37	
o-Xylene	<0.00200	0.100	0.0982	98	0.0965	97	71-133	2	35	mg/kg	10.24.2020 03:37	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		99		102		70-130	%	10.24.2020 03:37
4-Bromofluorobenzene	117		108		110		70-130	%	10.24.2020 03:37

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

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

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

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

LT Environmental, Inc.

PLU 129 Flowline

Analytical Method: BTEX by EPA 8021B

Seq Number: 3140545

Parent Sample Id: 675918-008

Matrix: Soil

MS Sample Id: 675918-008 S

Prep Method: SW5035A

Date Prep: 10.23.2020

MSD Sample Id: 675918-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.109	109	0.111	111	70-130	2	35	mg/kg	10.24.2020 04:21	
Toluene	<0.00200	0.100	0.0991	99	0.101	101	70-130	2	35	mg/kg	10.24.2020 04:21	
Ethylbenzene	<0.00200	0.100	0.0886	89	0.0867	87	71-129	2	35	mg/kg	10.24.2020 04:21	
m,p-Xylenes	<0.00400	0.200	0.199	100	0.201	101	70-135	1	35	mg/kg	10.24.2020 04:21	
o-Xylene	<0.00200	0.100	0.101	101	0.101	101	71-133	0	35	mg/kg	10.24.2020 04:21	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		103		70-130	%	10.24.2020 04:21
4-Bromofluorobenzene	108		108		70-130	%	10.24.2020 04:21

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

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

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

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



Chain of Custody

Work Order No: 675920

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

www.xenco.com Page 1 of 1

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A St. Bldg 1, Unit 222	Address:	3104 E Greene St.
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM
Phone:	(432) 701-2610	Email:	dmoir@ltenv.com rmcalfree@ltenv.com

Work Order Comments Program: ☒ UST/PT ☐ PRP ☐ Brownfields ☐ RC ☐ Superfund State of Project: NM Reporting Level: ☐ Level II ☐ Level III ☐ UST/UST ☐ RRP ☐ Level IV ☐ Deliverables: EDD ☐ ADAPT ☐ Other:	
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Project Name:	PLU 129 Flowline	Turn Around	☒
Project Number:	012920136	Routine	☒
P.O. Number:		Rush:	
Sampler's Name:	Robert McAlfee	Due Date:	

SAMPLE RECEIPT	Temp Blank:	☒ Yes ☐ No	Wet Ice:	☒ Yes ☐ No
Temperature (°C):	3.6 / 3.4	Thermometer ID: TMM-007		
Received Intact:	☒ Yes ☐ No	Correction Factor: -0.2		
Cooler Custody Seals:	Yes ☒ No ☐ N/A	Total Containers: 7		

Sample Identification					Matrix	Date Sampled	Time Sampled	Depth	Number	TPH (EP	BTEX (E	Chloride											Sample Comments																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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Total 200.7 / 6010 200.8 / 6020:

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	10-22-20 1530			

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 10.22.2020 03.30.00 PM

Work Order #: 675920

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)?	3.4
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	No
#18 Water VOC samples have zero headspace?	N/A

Samples received in bulk containers.

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

Analyst:

PH Device/Lot#:

Checklist completed by:



Cloe Clifton

Date: 10.22.2020

Checklist reviewed by:



Jessica Kramer

Date: 10.23.2020

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 18277

CONDITIONS OF APPROVAL

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Building #5 Midland, TX79707	OGRID: 5380	Action Number: 18277	Action Type: C-141
OCD Reviewer chensley	Condition None		