

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	NRM2026546692
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 32.104444 Longitude -103.838889
(NAD 83 in decimal degrees to 5 decimal places)

Site Name PLU 25 Brushy Draw West TB	Site Type Tank Battery
Date Release Discovered 9/8/2020	API# (if applicable)

Unit Letter	Section	Township	Range	County
F	25	25S	30E	Eddy

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

Nature and Volume of Release

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

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls) 7.5	Volume Recovered (bbls) 7
<input type="checkbox"/> Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release Oil tank overfilled causing fluid to surge out of the thief hatch. 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> 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> Signature:  email: <u>Kyle_Littrell@xtoenergy.com</u>	Title: <u>SH&E Supervisor</u> Date: <u>9-15-20</u> Telephone: <u>432-221-7331</u>
OCD Only Received by: <u>Ramona Marcus</u> Date: <u>9/21/2020</u>	

NRM2026546692

Location:	PLU 25 BD WEST TB	
Spill Date:	9/8/2020	
Area 1		
Approximate Area =	27.90	cu. ft.
Average Saturation (or depth) of spill =	0.00	inches
Average Porosity Factor =	0.00	
VOLUME OF LEAK		
Total Crude Oil =	5.00	bbls
Area 2		
Approximate Area =	5624.00	sq. ft.
Average Saturation (or depth) of spill =	1.00	inches
Average Porosity Factor =	0.03	
VOLUME OF LEAK		
Total Crude Oil =	2.50	bbls
TOTAL VOLUME OF LEAK		
Total Crude Oil =	7.50	bbls
TOTAL VOLUME RECOVERED		
Total Crude Oil =	7.00	bbls

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Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	>100 (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

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

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

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

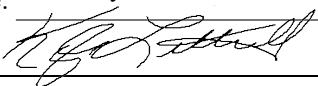
If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods,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

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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: 03/29/2021
email: Kyle_Littrell@xtoenergy.com Telephone: 432-221-7331

OCD Only

Received by: _____ Date: _____

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Application ID	

Closure

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

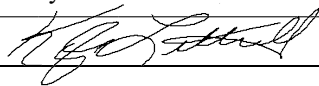
Closure Report Attachment Checklist: Each of the following items must be included in the closure report.

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

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

Printed Name: Kyle Littrell

Title: SH&E Supervisor

Signature: 

Date: 03/29/2021

email: Kyle_Littrell@xtoenergy.com

Telephone: 432-221-7331

OCD Only

Received by: _____

Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____

Title: _____

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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 19.15.29.12NMAC.

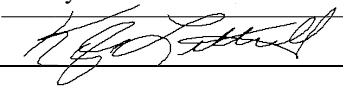
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Printed Name: Kyle Littrell

Title: SH&E Supervisor

Signature: 

Date: 03/29/2021

email: Kyle_Littrell@xtoenergy.com

Telephone: 432-221-7331

OCD Only

Received by: Robert Hamlet

Date: 7/16/2021

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

Closure Approved by: Robert Hamlet

Date: 7/16/2021

Printed Name: Robert Hamlet

Title: Environmental Specialist - Advanced



WSP USA

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

March 30, 2021

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

RE: Closure Request
PLU 25 Brushy Draw West Tank Battery
Incident Number NRM2026546692
Eddy County, New Mexico

To Whom It May Concern:

WSP USA Inc. (WSP) on behalf of XTO Energy, Inc. (XTO), presents the following Closure Request detailing site assessment, excavation, and soil sampling activities at the PLU 25 Brushy Draw West Tank Battery (TB) (Site) in Unit F, Section 25, Township 25 South, Range 30 East, in Eddy County, New Mexico (Figure 1). The purpose of the site assessment, excavation, and soil sampling activities was to address impacts to soil following a release of crude oil at the Site. Based on the excavation 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 NRM2026546692.

RELEASE BACKGROUND

On September 8, 2020, an oil tank overfilled causing fluid to release out of the thief hatch. Approximately 7.5 barrels (bbls) of crude oil were released. A vacuum truck was immediately dispatched to the Site to recover free-standing fluids; approximately 7 bbls of crude oil were recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 (Form C-141) on September 15, 2020. The release was assigned Incident Number NRM2026546692.

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). Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted groundwater well with depth to groundwater data is New Mexico Office of the State Engineer (NMOSE) well C-03781, located approximately 1.3 miles north of the Site. The groundwater well was most recently measured in January 2015 has a reported depth to groundwater of 325 feet bgs and a total depth of 720 feet bgs. Ground surface elevation at the groundwater well location is 3,308



feet above mean sea level (amsl), which is approximately 33 feet lower in elevation than the Site. All wells used for depth to groundwater determination are depicted on Figure 1 and the referenced well records are included in Attachment 1.

During February 2021, in an effort to confirm depth to water in the area, a borehole (C-04498) was advanced to a depth of 109.7 feet bgs via truck-mounted hollow stem auger. The borehole was located approximately 0.29 miles south of the Site. The location of borehole C-04498 is provided on Figure 1. A WSP geologist logged and described soils continuously. The borehole lithologic/soil sampling log is included in Attachment 2. The borehole was left open for over 72 hours to allow for potential slow infill of groundwater. On February 22, 2021, after the 72-hour waiting period without observing groundwater, it was confirmed that groundwater beneath the Site is greater than 109.7 feet bgs. The borehole was properly abandoned utilizing hydrated bentonite chips.

The closest continuously flowing water or significant watercourse to the Site is an intermittent stream, located approximately 552 feet southwest of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (low potential karst designation area). Site receptors are identified on Figure 1.

CLOSURE CRITERIA

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

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

SITE ASSESSMENT ACTIVITIES AND ANALYTICAL RESULTS

On September 30, 2020, WSP personnel visited the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. WSP personnel collected four preliminary assessment soil samples (SS01 through SS04) within the release extent from a depth of approximately 0.5 feet bgs to assess the lateral extent of the impacted soil. The preliminary soil samples were field screened for volatile aromatic hydrocarbons and chloride utilizing a



calibrated photoionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. The release extent and preliminary soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2.

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

Laboratory analytical results for preliminary soil samples SS01 through SS04, indicated that BTEX and/or TPH-GRO/TPH-DRO and TPH concentrations exceeded the Site Closure Criteria. Based on visible staining in the release area, elevated field screening results, and laboratory analytical results for the preliminary soil samples, excavation activities were warranted.

EXCAVATION SOIL SAMPLING ACTIVITIES

Between November 24 and November 30, 2020, WSP personnel returned to the Site to oversee excavation activities. Impacted soil was excavated from the release area as indicated by visible staining, field screening activities, and laboratory analytical results for the preliminary soil samples. Excavation activities were performed using track-mounted backhoe, transport vehicle, and hydrovac. The excavation occurred on pad in between the two tank batteries. To direct excavation activities, WSP screened soil for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach® chloride QuanTab® test strips, respectively. Photographic documentation is included in Attachment 3.

Following removal of impacted soil, WSP collected 5-point composite soil samples every 200 square feet from the floor of the excavation. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples FS01 through FS05 were collected from the floor of the excavation from a depth of 1 foot bgs. Due to the shallow depth of the excavation, the soil samples were representative of the floor and sidewalls of the excavation. The excavation soil samples were collected, handled, and analyzed following the same procedures as described above. The excavation extent and excavation soil sample locations are presented on Figure 3.

The excavation measured approximately 830 square feet. A total of approximately 30 cubic yards of impacted soil was removed during the excavation activities. The impacted soil was transported and properly disposed of at the R360 Facility in Hobbs, New Mexico. After completion of confirmation sampling, the excavation areas were backfilled.

District II
Page 4**SOIL ANALYTICAL RESULTS**

Laboratory analytical results for preliminary soil samples SS01 through SS04, indicated that BTEX and/or TPH-GRO/TPH-DRO and TPH concentrations exceeded the Site Closure Criteria. Based on laboratory analytical results for the preliminary soil samples, excavation of impacted soil was conducted.

Laboratory analytical results for excavation floor samples FS01 through FS05 indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Laboratory analytical results are summarized in Table 1 and laboratory analytical reports are included as Attachment 4.

CLOSURE REQUEST

Site assessment and excavation activities were conducted at the Site to address the September 8, 2020 release of crude oil. Laboratory analytical results for 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. Based on the laboratory analytical results, no further remediation was required.

Initial response efforts which included removal of freestanding 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, the environment, and groundwater. As such, XTO respectfully requests no further action for Incident Number NRM2026546692.

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 "Elizabeth Naka".

Elizabeth Naka
Assistant Consultant, Environmental Scientist

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

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

cc: Kyle Littrell, XTO
Bureau of Land Management

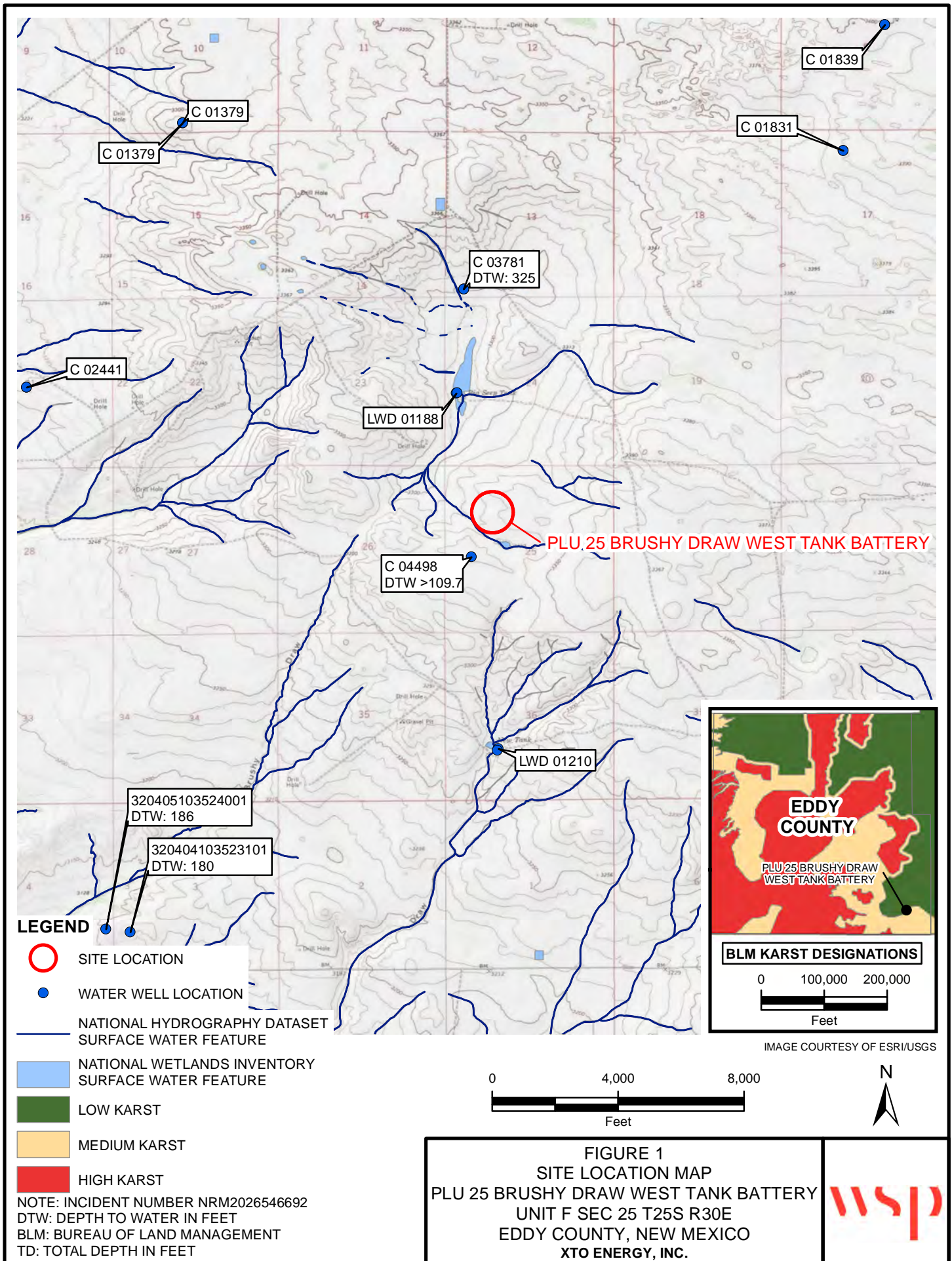


District II
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Attachments:

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

FIGURES



P:\XTO Energy\GIS\MXD\012920141_PLU 25_BRUSHY DRAW WEST_TB\012920141_FIG01_SL_RECEPTOR_2020.mxd

**LEGEND**

IMAGE COURTESY OF ESRI

- PRELIMINARY SOIL SAMPLE WITH CONCENTRATIONS EXCEEDING APPLICABLE CLOSURE CRITERIA
- RELEASE EXTENT
- WELLPAD EXTENT
- INFRASTRUCTURE

NOTE: INCIDENT NUMBER NRM2026546692
 SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)

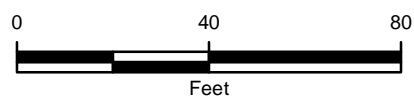


FIGURE 2
 PRELIMINARY SOIL SAMPLE LOCATIONS
 PLU 25 BRUSHY DRAW WEST TANK BATTERY
 UNIT F SEC 25 T25S R30E
 EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.



P:\XTO Energy\GIS\IMXD\012920141_PLU 25_BRUSHY DRAW WEST_TB\012920141_FIG02_PRELIMINARY_2020.mxd

**LEGEND**

- FLOOR SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- EXCAVATION EXTENT
- WELLPAD EXTENT
- INFRASTRUCTURE

NOTE: INCIDENT NUMBER NRM2026546692

IMAGE COURTESY OF ESRI

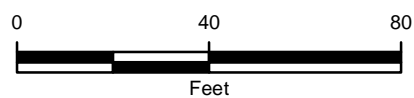


FIGURE 3
EXCAVATION SOIL SAMPLE LOCATIONS
PLU 25 BRUSHY DRAW WEST TANK BATTERY
UNIT F SEC 25 T25S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.



TABLES

Table 1

Soil Analytical Results
 PLU 25 Brushy Draw West TB
 Incident Number: NRM2026546692
 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
Surface Samples										
SS01	09/30/2020	0.5	<0.0502	11.7	14,900	571	832	15,500	16,300	191
SS02	09/30/2020	0.5	<0.0503	51.3	37,200	4,520	2,140	41,700	43,900	69.5
SS03	09/30/2020	0.5	<0.00201	0.0180	7,380	<251	447	7,380	7,830	388
SS04	09/30/2020	0.5	<0.0503	57.9	23,200	2,830	1,480	26,000	27,500	556
Excavation Floor Samples										
FS01	11/30/2020	1	<0.00200	<0.002000	490	<50.2	<50.2	490	490	77.5
FS02	11/30/2020	1	<0.00200	<0.002000	266	<50.0	<50.0	266	266	53.3
FS03	11/30/2020	1	<0.00201	<0.002010	488	<50.2	<50.2	488	488	72.9
FS04	11/30/2020	1	<0.00198	<0.001980	219	<50.0	<50.0	219	219	48.1
FS05	11/30/2020	1	<0.00200	<0.002000	691	<50.2	56.6	691	747	73.6

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

Text

impacted soil was removed

ATTACHMENT 1: REFERENCED WELL RECORD




New Mexico Office of the State Engineer

Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

Well Tag	POD Number	Q64 Q16 Q4	Sec	Tws	Rng	X	Y
C	03781 POD1	3	3	3	13 25S 30E	609306	3554761 

Driller License:	331	Driller Company:	SBQ2, LLC DBA STEWART BROTHERS DRILLING CO.
Driller Name:	STEWART, JOEL H.		


Drill Start Date:	01/08/2015	Drill Finish Date:	01/10/2015	Plug Date:	
Log File Date:	02/19/2015	PCW Rcv Date:		Source:	Artesian
Pump Type:		Pipe Discharge Size:		Estimated Yield:	
Casing Size:	8.63	Depth Well:	720 feet	Depth Water:	325 feet

Water Bearing Stratifications:	Top	Bottom	Description
	200	370	Sandstone/Gravel/Conglomerate
	370	390	Sandstone/Gravel/Conglomerate
	390	410	Sandstone/Gravel/Conglomerate
	410	440	Sandstone/Gravel/Conglomerate
	440	460	Shale/Mudstone/Siltstone
	460	470	Shale/Mudstone/Siltstone
	470	490	Shale/Mudstone/Siltstone
	490	500	Shale/Mudstone/Siltstone
	500	510	Sandstone/Gravel/Conglomerate
	510	530	Shale/Mudstone/Siltstone
	530	660	Shale/Mudstone/Siltstone
	660	690	Shale/Mudstone/Siltstone
	690	700	Shale/Mudstone/Siltstone
	700	720	Shale/Mudstone/Siltstone

Casing Perforations:	Top	Bottom
	340	720

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

ATTACHMENT 2: LITHOLOGIC/SOIL SAMPLING LOGS

 WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220				BH or PH Name:		Date:			
				BH01		2/24/2021			
				Site Name:		PLU 25 BD 202H, 121H, 901H			
				RP or Incident Number:		NRM2011453506			
				LTE Job Number:		TE012920069			
LITHOLOGIC / SOIL SAMPLING LOG						Logged By SL		Method: Hollow Stem Auger	
Lat/Long: 32.100897, -103.840412				Field Screening: N/A		Hole Diameter: 6.5"		Total Depth: 109.7'	
Comments: No field screening, only logged lithology, well screened from 89.7' - 109.7'									
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks	
D			N			0	CCHE	0-34' Caliche, tan, no odor, no stain, gravel, dry	
						5			
						10			
						15			
						20			
						25			
						30			
						35			
D			N			40	SP-SM	34'-40' sand/ caliche, tan, no odor, no stain, m-f grain, well sorted, dry	
						45	SP-SM	40' - 56' sand, tan, no odor, no stain, m-f grain, well sorted, dry	
50									
55									
D			N			60	SS	56' - 72' sandstone, low consolidation, tan, no odor, no stain, m-f grain, well sorted, dry	
65									
70									
						75	SP-SM	72' - 79' sand, tan, no odor, no stain, m-f grain, well sorted, dry	
						80			
M			N			85	SS	79' - 109.7' sandstone, low - medium consolidation, tan, no odor, m-f grained, well sorted, moist	
						90			
						95			
						100			
						105			
						110			
						115		TD @ 109.7'	
						120			

ATTACHMENT 3: PHOTOGRAPHIC LOG



PHOTOGRAPHIC LOG

XTO Energy, Inc.	PLU 25 Brushy Draw West Tank Battery Eddy County, New Mexico	NRM2026546692
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Photo No.	Date	
1	September 30, 2020	
View of release area facing east.		 A photograph showing an industrial site with large storage tanks, pipes, and a yellow staircase. The ground is dry and dusty. The view is facing east.

Photo No.	Date	
2	September 30, 2020	
View of impacted area facing northwest		 A photograph showing an industrial site with large storage tanks, pipes, and a yellow staircase. The ground is dry and dusty. The view is facing northwest.



PHOTOGRAPHIC LOG

XTO Energy, Inc.	PLU 25 Brushy Draw West Tank Battery Eddy County, New Mexico	NRM2026546692
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Photo No.	Date	
3	November 25, 2020	
View of final excavation facing east.		 A photograph showing a deep, rectangular excavation pit. The pit is filled with loose, brown soil and some rocks. A large, dark, cylindrical object, possibly a pipe or a piece of machinery, is visible on the right side of the pit. In the background, there are some industrial structures and a yellow crane.


Photo No.	Date	
4	November 25, 2020	
View of final excavation facing North.		 A photograph showing a deep, rectangular excavation pit. The pit is filled with loose, brown soil and some rocks. A large, dark, cylindrical object, possibly a pipe or a piece of machinery, is visible on the right side of the pit. In the background, there are some industrial structures and a yellow crane.



PHOTOGRAPHIC LOG


XTO Energy, Inc.	PLU 25 Brushy Draw West Tank Battery Eddy County, New Mexico	NRM2026546692
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Photo No.	Date	
3	November 25, 2020	
View of final excavation facing northeast.		

Photo No.	Date	
4	November 25, 2020	
View of final backfill.		

**PHOTOGRAPHIC LOG**

XTO Energy, Inc.	PLU 25 Brushy Draw West TB Eddy County, New Mexico	NRM2026546692
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Photo No.	Date	
5	November 25, 2020	
View of final backfill.		 A photograph showing a large area of sandy, light-brown soil with distinct, wavy, parallel tracks from heavy machinery, likely a bulldozer, indicating recent backfilling. In the background, there are industrial structures, including a tall metal tower and various pipes and equipment, under a clear blue sky.

ATTACHMENT 4: LABORATORY ANALYTICAL RESULTS



Certificate of Analysis Summary 674010

LT Environmental, Inc., Arvada, CO

Project Name: PLU 25 Bushy Draw West TB

Project Id: 012920141

Contact: Dan Moir

Project Location:

Date Received in Lab: Wed 09.30.2020 16:15

Report Date: 10.05.2020 13:08

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	674010-001	674010-002	674010-003	674010-004		
	Field Id:	SS01	SS02	SS03	SS04		
	Depth:	0.5- ft	0.5- ft	0.5- ft	0.5- ft		
	Matrix:	SOIL	SOIL	SOIL	SOIL		
	Sampled:	09.30.2020 13:00	09.30.2020 13:10	09.30.2020 13:20	09.30.2020 13:30		
BTEX by EPA 8021B	Extracted:	10.01.2020 17:05	10.01.2020 17:05	10.01.2020 17:05	10.01.2020 17:05		
	Analyzed:	10.02.2020 08:45	10.02.2020 09:07	10.02.2020 08:22	10.02.2020 09:30		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
		mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Benzene		<0.0502 0.0502	<0.0503 0.0503	<0.00201 0.00201	<0.0503 0.0503		
Toluene		<0.0502 0.0502	3.85 0.201	<0.00201 0.00201	2.72 0.201		
Ethylbenzene		4.56 0.201	4.85 0.201	<0.00201 0.00201	8.52 0.201		
m,p-Xylenes		5.37 0.402	33.8 0.402	0.0138 0.00402	36.9 0.402		
o-Xylene		1.78 0.201	8.79 0.201	0.00420 0.00201	9.79 0.201		
Total Xylenes		7.15 0.201	42.6 0.201	0.0180 0.00201	46.7 0.201		
Total BTEX		11.7 0.0502	51.3 0.0503	0.0180 0.00201	57.9 0.0503		
Chloride by EPA 300	Extracted:	10.01.2020 10:00	10.01.2020 10:00	10.01.2020 10:00	10.01.2020 10:00		
	Analyzed:	10.01.2020 12:19	10.01.2020 12:24	10.01.2020 12:41	10.01.2020 12:46		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
		mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		191 49.7	69.5 49.9	388 49.8	556 49.9		
TPH by SW8015 Mod	Extracted:	10.02.2020 17:30	10.02.2020 17:30	10.01.2020 11:00	10.02.2020 17:30		
	Analyzed:	10.03.2020 03:42	10.03.2020 04:22	10.01.2020 21:38	10.03.2020 04:02		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
		mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Gasoline Range Hydrocarbons (GRO)		571 251	4520 501	<251 251	2830 249		
Diesel Range Organics (DRO)		14900 251	37200 501	7380 251	23200 249		
Motor Oil Range Hydrocarbons (MRO)		832 251	2140 501	447 251	1480 249		
Total GRO-DRO		15500 251	41700 501	7380 251	26000 249		
Total TPH		16300 251	43900 501	7830 251	27500 249		

BRL - Below Reporting Limit

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

Jessica Kramer



Analytical Report 674010

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU 25 Bushy Draw West TB

012920141

10.05.2020

Collected By: Client

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

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

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

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



10.05.2020

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: Eurofins Xenco, LLC Report No(s): **674010**

PLU 25 Bushy Draw West TB

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) 674010. 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. 674010 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 674010****LT Environmental, Inc., Arvada, CO**

PLU 25 Bushy Draw West TB

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	09.30.2020 13:00	0.5 ft	674010-001
SS02	S	09.30.2020 13:10	0.5 ft	674010-002
SS03	S	09.30.2020 13:20	0.5 ft	674010-003
SS04	S	09.30.2020 13:30	0.5 ft	674010-004



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 25 Bushy Draw West TB

Project ID: 012920141
Work Order Number(s): 674010

Report Date: 10.05.2020
Date Received: 09.30.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 674010

LT Environmental, Inc., Arvada, CO

PLU 25 Bushy Draw West TB

Sample Id: **SS01** Matrix: Soil Date Received: 09.30.2020 16:15
 Lab Sample Id: 674010-001 Date Collected: 09.30.2020 13:00 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 10.01.2020 10:00 Basis: Wet Weight
 Seq Number: 3138619

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	191	49.7	mg/kg	10.01.2020 12:19		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 10.02.2020 17:30 Basis: Wet Weight
 Seq Number: 3138825

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	571	251	mg/kg	10.03.2020 03:42		5
Diesel Range Organics (DRO)	C10C28DRO	14900	251	mg/kg	10.03.2020 03:42		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	832	251	mg/kg	10.03.2020 03:42		5
Total GRO-DRO	PHC628	15500	251	mg/kg	10.03.2020 03:42		5
Total TPH	PHC635	16300	251	mg/kg	10.03.2020 03:42		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	129	%	70-135	10.03.2020 03:42	
o-Terphenyl	84-15-1	127	%	70-135	10.03.2020 03:42	



Certificate of Analytical Results 674010

LT Environmental, Inc., Arvada, CO

PLU 25 Bushy Draw West TB

Sample Id: **SS01**
Lab Sample Id: 674010-001

Matrix: Soil
Date Collected: 09.30.2020 13:00

Date Received: 09.30.2020 16:15
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 10.01.2020 17:05

Basis: Wet Weight

Seq Number: 3138736

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0502	0.0502	mg/kg	10.02.2020 08:45	U	100
Toluene	108-88-3	<0.0502	0.0502	mg/kg	10.02.2020 08:45	U	100
Ethylbenzene	100-41-4	4.56	0.201	mg/kg	10.02.2020 08:45		100
m,p-Xylenes	179601-23-1	5.37	0.402	mg/kg	10.02.2020 08:45		100
o-Xylene	95-47-6	1.78	0.201	mg/kg	10.02.2020 08:45		100
Total Xylenes	1330-20-7	7.15	0.201	mg/kg	10.02.2020 08:45		100
Total BTEX		11.7	0.0502	mg/kg	10.02.2020 08:45		100
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	95	%	70-130	10.02.2020 08:45		
4-Bromofluorobenzene	460-00-4	115	%	70-130	10.02.2020 08:45		



Certificate of Analytical Results 674010

LT Environmental, Inc., Arvada, CO

PLU 25 Bushy Draw West TB

Sample Id: **SS02** Matrix: Soil Date Received: 09.30.2020 16:15
 Lab Sample Id: 674010-002 Date Collected: 09.30.2020 13:10 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 10.01.2020 10:00 Basis: Wet Weight
 Seq Number: 3138619

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	69.5	49.9	mg/kg	10.01.2020 12:24		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 10.02.2020 17:30 Basis: Wet Weight
 Seq Number: 3138825

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	4520	501	mg/kg	10.03.2020 04:22		10
Diesel Range Organics (DRO)	C10C28DRO	37200	501	mg/kg	10.03.2020 04:22		10
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	2140	501	mg/kg	10.03.2020 04:22		10
Total GRO-DRO	PHC628	41700	501	mg/kg	10.03.2020 04:22		10
Total TPH	PHC635	43900	501	mg/kg	10.03.2020 04:22		10

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	10.03.2020 04:22	
o-Terphenyl	84-15-1	98	%	70-135	10.03.2020 04:22	



Certificate of Analytical Results 674010

LT Environmental, Inc., Arvada, CO

PLU 25 Bushy Draw West TB

Sample Id: **SS02**
Lab Sample Id: 674010-002

Matrix: Soil
Date Collected: 09.30.2020 13:10

Date Received: 09.30.2020 16:15
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 10.01.2020 17:05

Basis: Wet Weight

Seq Number: 3138736

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0503	0.0503	mg/kg	10.02.2020 09:07	U	100
Toluene	108-88-3	3.85	0.201	mg/kg	10.02.2020 09:07		100
Ethylbenzene	100-41-4	4.85	0.201	mg/kg	10.02.2020 09:07		100
m,p-Xylenes	179601-23-1	33.8	0.402	mg/kg	10.02.2020 09:07		100
o-Xylene	95-47-6	8.79	0.201	mg/kg	10.02.2020 09:07		100
Total Xylenes	1330-20-7	42.6	0.201	mg/kg	10.02.2020 09:07		100
Total BTEX		51.3	0.0503	mg/kg	10.02.2020 09:07		100
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	107	%	70-130	10.02.2020 09:07		
1,4-Difluorobenzene	540-36-3	92	%	70-130	10.02.2020 09:07		



Certificate of Analytical Results 674010

LT Environmental, Inc., Arvada, CO

PLU 25 Bushy Draw West TB

Sample Id: **SS03**
Lab Sample Id: 674010-003

Matrix: Soil
Date Collected: 09.30.2020 13:20

Date Received: 09.30.2020 16:15
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3138619

Date Prep: 10.01.2020 10:00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	388	49.8	mg/kg	10.01.2020 12:41		5

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3138645

Date Prep: 10.01.2020 11:00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<251	251	mg/kg	10.01.2020 21:38	U	5
Diesel Range Organics (DRO)	C10C28DRO	7380	251	mg/kg	10.01.2020 21:38		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	447	251	mg/kg	10.01.2020 21:38		5
Total GRO-DRO	PHC628	7380	251	mg/kg	10.01.2020 21:38		5
Total TPH	PHC635	7830	251	mg/kg	10.01.2020 21:38		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	10.01.2020 21:38	
o-Terphenyl	84-15-1	122	%	70-135	10.01.2020 21:38	



Certificate of Analytical Results 674010

LT Environmental, Inc., Arvada, CO

PLU 25 Bushy Draw West TB

Sample Id: **SS03**
Lab Sample Id: 674010-003

Matrix: Soil
Date Collected: 09.30.2020 13:20

Date Received: 09.30.2020 16:15
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 10.01.2020 17:05

Basis: Wet Weight

Seq Number: 3138736

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	10.02.2020 08:22	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	10.02.2020 08:22	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	10.02.2020 08:22	U	1
m,p-Xylenes	179601-23-1	0.0138	0.00402	mg/kg	10.02.2020 08:22		1
o-Xylene	95-47-6	0.00420	0.00201	mg/kg	10.02.2020 08:22		1
Total Xylenes	1330-20-7	0.0180	0.00201	mg/kg	10.02.2020 08:22		1
Total BTEX		0.0180	0.00201	mg/kg	10.02.2020 08:22		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	97	%	70-130	10.02.2020 08:22		
4-Bromofluorobenzene	460-00-4	94	%	70-130	10.02.2020 08:22		



Certificate of Analytical Results 674010

LT Environmental, Inc., Arvada, CO

PLU 25 Bushy Draw West TB

Sample Id: **SS04** Matrix: Soil Date Received: 09.30.2020 16:15
 Lab Sample Id: 674010-004 Date Collected: 09.30.2020 13:30 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 10.01.2020 10:00 Basis: Wet Weight
 Seq Number: 3138619

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	556	49.9	mg/kg	10.01.2020 12:46		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 10.02.2020 17:30 Basis: Wet Weight
 Seq Number: 3138825

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	2830	249	mg/kg	10.03.2020 04:02		5
Diesel Range Organics (DRO)	C10C28DRO	23200	249	mg/kg	10.03.2020 04:02		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	1480	249	mg/kg	10.03.2020 04:02		5
Total GRO-DRO	PHC628	26000	249	mg/kg	10.03.2020 04:02		5
Total TPH	PHC635	27500	249	mg/kg	10.03.2020 04:02		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	10.03.2020 04:02	
o-Terphenyl	84-15-1	86	%	70-135	10.03.2020 04:02	



Certificate of Analytical Results 674010

LT Environmental, Inc., Arvada, CO

PLU 25 Bushy Draw West TB

Sample Id: **SS04**
Lab Sample Id: 674010-004

Matrix: Soil
Date Collected: 09.30.2020 13:30

Date Received: 09.30.2020 16:15
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 10.01.2020 17:05

Basis: Wet Weight

Seq Number: 3138736

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0503	0.0503	mg/kg	10.02.2020 09:30	U	100
Toluene	108-88-3	2.72	0.201	mg/kg	10.02.2020 09:30		100
Ethylbenzene	100-41-4	8.52	0.201	mg/kg	10.02.2020 09:30		100
m,p-Xylenes	179601-23-1	36.9	0.402	mg/kg	10.02.2020 09:30		100
o-Xylene	95-47-6	9.79	0.201	mg/kg	10.02.2020 09:30		100
Total Xylenes	1330-20-7	46.7	0.201	mg/kg	10.02.2020 09:30		100
Total BTEX		57.9	0.0503	mg/kg	10.02.2020 09:30		100
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	115	%	70-130	10.02.2020 09:30		
1,4-Difluorobenzene	540-36-3	92	%	70-130	10.02.2020 09:30		



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 25 Bushy Draw West TB

Analytical Method: Chloride by EPA 300

Seq Number: 3138619

MB Sample Id: 7712430-1-BLK

Matrix: Solid

LCS Sample Id: 7712430-1-BKS

Prep Method: E300P

Date Prep: 10.01.2020

LCSD Sample Id: 7712430-1-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	249	100	251	100	90-110	1	20	mg/kg	10.01.2020 10:14	

Analytical Method: Chloride by EPA 300

Seq Number: 3138619

Parent Sample Id: 674026-001

Matrix: Soil

MS Sample Id: 674026-001 S

Prep Method: E300P

Date Prep: 10.01.2020

MSD Sample Id: 674026-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	36.4	200	241	102	241	102	90-110	0	20	mg/kg	10.01.2020 11:13	

Analytical Method: Chloride by EPA 300

Seq Number: 3138619

Parent Sample Id: 674026-011

Matrix: Soil

MS Sample Id: 674026-011 S

Prep Method: E300P

Date Prep: 10.01.2020

MSD Sample Id: 674026-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	748	200	938	95	942	97	90-110	0	20	mg/kg	10.01.2020 12:08	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3138645

MB Sample Id: 7712464-1-BLK

Matrix: Solid

LCS Sample Id: 7712464-1-BKS

Prep Method: SW8015P

Date Prep: 10.01.2020

LCSD Sample Id: 7712464-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1080	108	1080	108	70-135	0	35	mg/kg	10.01.2020 11:07	
Diesel Range Organics (DRO)	<50.0	1000	1140	114	1120	112	70-135	2	35	mg/kg	10.01.2020 11:07	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	110		125		127		70-135	%	10.01.2020 11:07
o-Terphenyl	99		111		109		70-135	%	10.01.2020 11:07

Analytical Method: TPH by SW8015 Mod

Seq Number: 3138825

MB Sample Id: 7712612-1-BLK

Matrix: Solid

LCS Sample Id: 7712612-1-BKS

Prep Method: SW8015P

Date Prep: 10.02.2020

LCSD Sample Id: 7712612-1-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	1010	101	982	98	70-135	3	35	mg/kg	10.02.2020 19:56	
Diesel Range Organics (DRO)	<50.0	1000	1090	109	1070	107	70-135	2	35	mg/kg	10.02.2020 19:56	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	96		125		119		70-135	%	10.02.2020 19:56
o-Terphenyl	90		108		104		70-135	%	10.02.2020 19:56

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 25 Bushy Draw West TB

Analytical Method: TPH by SW8015 Mod

Seq Number: 3138645

Matrix: Solid

Prep Method: SW8015P

Date Prep: 10.01.2020

MB Sample Id: 7712464-1-BLK

Parameter

Motor Oil Range Hydrocarbons (MRO)

**MB
Result**

<50.0

Units

mg/kg

**Analysis
Date**

10.01.2020 11:47

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

Seq Number: 3138825

Matrix: Solid

Prep Method: SW8015P

Date Prep: 10.02.2020

MB Sample Id: 7712612-1-BLK

Parameter

Motor Oil Range Hydrocarbons (MRO)

**MB
Result**

<50.0

Units

mg/kg

**Analysis
Date**

10.02.2020 20:37

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

Seq Number: 3138645

Matrix: Soil

Prep Method: SW8015P

Date Prep: 10.01.2020

Parent Sample Id: 674009-002

MS Sample Id: 674009-002 S

MSD Sample Id: 674009-002 SD

Parameter

Gasoline Range Hydrocarbons (GRO)

**Parent
Result**

<49.9

**Spike
Amount**

998

**MS
Result**

1130

**MS
%Rec**

113

**MSD
Result**

1100

**MSD
%Rec**

111

Limits

70-135

%RPD

3

**RPD
Limit**

35

Units

mg/kg

**Analysis
Date**

10.01.2020 12:27

Flag

Diesel Range Organics (DRO)

100

998

1260

116

1210

112

70-135

4

35

mg/kg

10.01.2020 12:27

Surrogate

1-Chlorooctane

**MS
%Rec**

134

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

133

**MSD
Flag****Limits**

70-135

Units

%

**Analysis
Date**

10.01.2020 12:27

o-Terphenyl

116

111

70-135

%

10.01.2020 12:27

Analytical Method: TPH by SW8015 Mod

Seq Number: 3138825

Matrix: Soil

Prep Method: SW8015P

Date Prep: 10.02.2020

Parent Sample Id: 674035-001

MS Sample Id: 674035-001 S

MSD Sample Id: 674035-001 SD

Parameter

Gasoline Range Hydrocarbons (GRO)

**Parent
Result**

<49.8

**Spike
Amount**

996

**MS
Result**

995

**MS
%Rec**

100

**MSD
Result**

977

**MSD
%Rec**

98

Limits

70-135

%RPD

2

**RPD
Limit**

35

Units

mg/kg

**Analysis
Date**

10.02.2020 21:17

Flag

Diesel Range Organics (DRO)

<49.8

996

1070

107

1070

107

70-135

0

35

mg/kg

10.02.2020 21:17

Surrogate

1-Chlorooctane

**MS
%Rec**

124

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

121

**MSD
Flag****Limits**

70-135

Units

%

**Analysis
Date**

10.02.2020 21:17

o-Terphenyl

108

106

70-135

%

10.02.2020 21:17

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 25 Bushy Draw West TB

Analytical Method: BTEX by EPA 8021B

Seq Number: 3138736

Matrix: Solid

Prep Method: SW5035A

Date Prep: 10.01.2020

MB Sample Id: 7712469-1-BLK

LCS Sample Id: 7712469-1-BKS

LCSD Sample Id: 7712469-1-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	0.113	113	0.116	116	70-130	3	35	mg/kg	10.01.2020 23:26	
Toluene	<0.00200	0.100	0.108	108	0.112	112	70-130	4	35	mg/kg	10.01.2020 23:26	
Ethylbenzene	<0.00200	0.100	0.0992	99	0.103	103	71-129	4	35	mg/kg	10.01.2020 23:26	
m,p-Xylenes	<0.00400	0.200	0.200	100	0.208	104	70-135	4	35	mg/kg	10.01.2020 23:26	
o-Xylene	<0.00200	0.100	0.0994	99	0.103	103	71-133	4	35	mg/kg	10.01.2020 23:26	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		98		98		70-130	%	10.01.2020 23:26
4-Bromofluorobenzene	88		88		89		70-130	%	10.01.2020 23:26

Analytical Method: BTEX by EPA 8021B

Seq Number: 3138736

Matrix: Soil

Prep Method: SW5035A

Date Prep: 10.01.2020

Parent Sample Id: 674009-054

MS Sample Id: 674009-054 S

MSD Sample Id: 674009-054 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00198	0.0990	0.110	111	0.120	120	70-130	9	35	mg/kg	10.02.2020 09:52	
Toluene	<0.00198	0.0990	0.103	104	0.116	116	70-130	12	35	mg/kg	10.02.2020 09:52	
Ethylbenzene	<0.00198	0.0990	0.121	122	0.115	115	71-129	5	35	mg/kg	10.02.2020 09:52	
m,p-Xylenes	<0.00396	0.198	0.196	99	0.213	107	70-135	8	35	mg/kg	10.02.2020 09:52	
o-Xylene	<0.00198	0.0990	0.0964	97	0.104	104	71-133	8	35	mg/kg	10.02.2020 09:52	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		97		70-130	%	10.02.2020 09:52
4-Bromofluorobenzene	99		91		70-130	%	10.02.2020 09:52

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

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

Work Order No: 679810

www.xenco.com Page 1 of 1

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

Program: UST/PST	<input type="checkbox"/> PRP	<input type="checkbox"/> Brownfields	<input type="checkbox"/> RRC	<input type="checkbox"/> Superfund
State of Project:				
Reporting Level II	<input type="checkbox"/> Level III	<input type="checkbox"/> ST/UST	<input type="checkbox"/> RRP	<input type="checkbox"/> Level IV
Deliverables: EDD	<input type="checkbox"/> ADAPT	<input type="checkbox"/> Other:		

Project Name:	PLU 25 8-544, Draw West TB	Turn Around	
Project Number:	012920141	Routine	<input checked="" type="checkbox"/>
P.O. Number:		Rush:	
Sampler's Name:	Spencer Lo	Due Date:	

Temperature (°C):	18.1°C	Temp Blank:	Yes	No	Wet Ice:	Yes	No
Received In tact:	Yes	No	Thermometer ID				
Cooler Custody Seals:	Yes	No	Correction Factor:	-0.2			
Sample Custody Seals:	Yes	No	Total Containers:	4			

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth
SS01	S	9.30.20	1300	0.5'
SS02	S	9.30.20	1310	0.5'
SS03	S	9.30.20	1320	0.5'
SS04	S	9.30.20	1330	0.5'

ANALYSIS REQUEST											Work Order Notes
Number of Containers											TAT starts the day received by the lab, if received by 4:30pm
TPH (EPA 8015)											
BTEX (EPA 0=8021)											
Chloride (EPA 300.0)											

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		9/30/20 16:15			



Certificate of Analysis Summary 679227

LT Environmental, Inc., Arvada, CO

Project Name: PLU 23 Brushy Draw West TB

Project Id: 012920141
Contact: Dan Moir
Project Location: Eddy County, New Mexico

Date Received in Lab: Mon 11.30.2020 11:15
Report Date: 12.02.2020 15:56
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	679227-001	679227-002	679227-003	679227-004	679227-005	679227-006
	<i>Field Id:</i>	FS01	FS02	FS03	FS04	FS05	SW01
	<i>Depth:</i>	1- ft	1- ft	1- ft	1- ft	1- ft	0-1 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	11.30.2020 08:35	11.30.2020 08:40	11.30.2020 08:45	11.30.2020 08:50	11.30.2020 08:55	11.30.2020 09:00
BTEX by EPA 8021B	<i>Extracted:</i>	12.01.2020 11:17	12.01.2020 11:17	12.01.2020 11:17	12.01.2020 11:17	12.01.2020 11:17	12.01.2020 11:17
	<i>Analyzed:</i>	12.01.2020 15:13	12.01.2020 15:35	12.01.2020 15:58	12.01.2020 16:20	12.01.2020 16:43	12.01.2020 17:05
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199
Toluene		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199
m,p-Xylenes		<0.00399 0.00399	<0.00401 0.00401	<0.00402 0.00402	<0.00396 0.00396	<0.00399 0.00399	<0.00398 0.00398
o-Xylene		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199
Total Xylenes		<0.002000 0.002000	<0.002000 0.002000	<0.002010 0.002010	<0.001980 0.001980	<0.002000 0.002000	<0.001990 0.001990
Total BTEX		<0.002000 0.002000	<0.002000 0.002000	<0.002010 0.002010	<0.001980 0.001980	<0.002000 0.002000	<0.001990 0.001990
Chloride by EPA 300	<i>Extracted:</i>	12.01.2020 12:40	12.01.2020 12:40	12.01.2020 12:40	12.01.2020 12:40	12.01.2020 12:40	12.01.2020 12:40
	<i>Analyzed:</i>	12.01.2020 16:42	12.01.2020 16:47	12.01.2020 16:52	12.01.2020 16:57	12.01.2020 17:13	12.01.2020 17:18
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		77.5 9.96	53.3 9.96	72.9 10.0	48.1 10.0	73.6 10.0	96.0 9.90
TPH by SW8015 Mod	<i>Extracted:</i>	11.30.2020 17:03	11.30.2020 17:03	11.30.2020 17:03	11.30.2020 17:03	11.30.2020 17:03	11.30.2020 17:03
	<i>Analyzed:</i>	12.01.2020 04:08	12.01.2020 04:29	12.01.2020 04:49	12.01.2020 05:09	12.01.2020 05:29	12.01.2020 05:49
	<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)		<50.2 50.2	<50.0 50.0	<50.2 50.2	<50.0 50.0	<50.2 50.2	<50.0 50.0
Diesel Range Organics (DRO)		490 50.2	266 50.0	488 50.2	219 50.0	691 50.2	569 50.0
Motor Oil Range Hydrocarbons (MRO)		<50.2 50.2	<50.0 50.0	<50.2 50.2	<50.0 50.0	56.6 50.2	<50.0 50.0
Total GRO-DRO		490.0 50.20	266.0 50.00	488.0 50.20	219.0 50.00	691.0 50.20	569.0 50.00
Total TPH		490.0 50.20	266.0 50.00	488.0 50.20	219.0 50.00	747.6 50.20	569.0 50.00

BRL - Below Reporting Limit

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

Jessica Kramer



Analytical Report 679227

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU 23 Brushy Draw West TB

012920141

12.02.2020

Collected By: Client

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

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

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

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



12.02.2020

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: Eurofins Xenco, LLC Report No(s): **679227**

PLU 23 Brushy Draw West TB

Project Address: Eddy County, New Mexico

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) 679227. 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. 679227 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 679227****LT Environmental, Inc., Arvada, CO**

PLU 23 Brushy Draw West TB

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	11.30.2020 08:35	1 ft	679227-001
FS02	S	11.30.2020 08:40	1 ft	679227-002
FS03	S	11.30.2020 08:45	1 ft	679227-003
FS04	S	11.30.2020 08:50	1 ft	679227-004
FS05	S	11.30.2020 08:55	1 ft	679227-005
SW01	S	11.30.2020 09:00	0 - 1 ft	679227-006



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 23 Brushy Draw West TB

Project ID: 012920141

Report Date: 12.02.2020

Work Order Number(s): 679227

Date Received: 11.30.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 679227

LT Environmental, Inc., Arvada, CO

PLU 23 Brushy Draw West TB

Sample Id: **FS01**
Lab Sample Id: 679227-001

Matrix: Soil
Date Collected: 11.30.2020 08:35

Date Received: 11.30.2020 11:15
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

Analyst: MAB

Date Prep: 12.01.2020 12:40

% Moisture:
Basis: Wet Weight

Seq Number: 3143660

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	77.5	9.96	mg/kg	12.01.2020 16:42		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: MAB

Analyst: CAC

Date Prep: 11.30.2020 17:03

% Moisture:
Basis: Wet Weight

Seq Number: 3143541

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	12.01.2020 04:08	U	1
Diesel Range Organics (DRO)	C10C28DRO	490	50.2	mg/kg	12.01.2020 04:08		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	12.01.2020 04:08	U	1
Total GRO-DRO	PHC628	490.0	50.20	mg/kg	12.01.2020 04:08		1
Total TPH	PHC635	490.0	50.20	mg/kg	12.01.2020 04:08		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	12.01.2020 04:08	
o-Terphenyl	84-15-1	108	%	70-135	12.01.2020 04:08	



Certificate of Analytical Results 679227

LT Environmental, Inc., Arvada, CO

PLU 23 Brushy Draw West TB

Sample Id: **FS01**
Lab Sample Id: 679227-001

Matrix: Soil
Date Collected: 11.30.2020 08:35

Date Received: 11.30.2020 11:15
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 12.01.2020 11:17

% Moisture:
Basis: Wet Weight

Seq Number: 3143649

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.01.2020 15:13	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.01.2020 15:13	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.01.2020 15:13	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	12.01.2020 15:13	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.01.2020 15:13	U	1
Total Xylenes	1330-20-7	<0.002000	0.002000	mg/kg	12.01.2020 15:13	U	1
Total BTEX		<0.002000	0.002000	mg/kg	12.01.2020 15:13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	12.01.2020 15:13	
4-Bromofluorobenzene	460-00-4	116	%	70-130	12.01.2020 15:13	



Certificate of Analytical Results 679227

LT Environmental, Inc., Arvada, CO

PLU 23 Brushy Draw West TB

Sample Id: **FS02**
Lab Sample Id: 679227-002

Matrix: Soil
Date Collected: 11.30.2020 08:40

Date Received: 11.30.2020 11:15
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

Analyst: MAB

Date Prep: 12.01.2020 12:40

% Moisture:
Basis: Wet Weight

Seq Number: 3143660

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	53.3	9.96	mg/kg	12.01.2020 16:47		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: MAB

Analyst: CAC

Date Prep: 11.30.2020 17:03

% Moisture:
Basis: Wet Weight

Seq Number: 3143541

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.01.2020 04:29	U	1
Diesel Range Organics (DRO)	C10C28DRO	266	50.0	mg/kg	12.01.2020 04:29		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.01.2020 04:29	U	1
Total GRO-DRO	PHC628	266.0	50.00	mg/kg	12.01.2020 04:29		1
Total TPH	PHC635	266.0	50.00	mg/kg	12.01.2020 04:29		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-135	12.01.2020 04:29	
o-Terphenyl	84-15-1	108	%	70-135	12.01.2020 04:29	



Certificate of Analytical Results 679227

LT Environmental, Inc., Arvada, CO

PLU 23 Brushy Draw West TB

Sample Id: **FS02**
Lab Sample Id: 679227-002

Matrix: Soil
Date Collected: 11.30.2020 08:40

Date Received: 11.30.2020 11:15
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 12.01.2020 11:17

% Moisture:
Basis: Wet Weight

Seq Number: 3143649

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.01.2020 15:35	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.01.2020 15:35	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.01.2020 15:35	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	12.01.2020 15:35	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.01.2020 15:35	U	1
Total Xylenes	1330-20-7	<0.002000	0.002000	mg/kg	12.01.2020 15:35	U	1
Total BTEX		<0.002000	0.002000	mg/kg	12.01.2020 15:35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	12.01.2020 15:35	
4-Bromofluorobenzene	460-00-4	111	%	70-130	12.01.2020 15:35	



Certificate of Analytical Results 679227

LT Environmental, Inc., Arvada, CO

PLU 23 Brushy Draw West TB

Sample Id: **FS03**
Lab Sample Id: 679227-003

Matrix: Soil
Date Collected: 11.30.2020 08:45

Date Received: 11.30.2020 11:15
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

Analyst: MAB

Date Prep: 12.01.2020 12:40

% Moisture:
Basis: Wet Weight

Seq Number: 3143660

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	72.9	10.0	mg/kg	12.01.2020 16:52		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: MAB

Analyst: CAC

Date Prep: 11.30.2020 17:03

% Moisture:
Basis: Wet Weight

Seq Number: 3143541

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	12.01.2020 04:49	U	1
Diesel Range Organics (DRO)	C10C28DRO	488	50.2	mg/kg	12.01.2020 04:49		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	12.01.2020 04:49	U	1
Total GRO-DRO	PHC628	488.0	50.20	mg/kg	12.01.2020 04:49		1
Total TPH	PHC635	488.0	50.20	mg/kg	12.01.2020 04:49		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	12.01.2020 04:49	
o-Terphenyl	84-15-1	105	%	70-135	12.01.2020 04:49	



Certificate of Analytical Results 679227

LT Environmental, Inc., Arvada, CO

PLU 23 Brushy Draw West TB

Sample Id: **FS03**
Lab Sample Id: 679227-003

Matrix: Soil
Date Collected: 11.30.2020 08:45

Date Received: 11.30.2020 11:15
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 12.01.2020 11:17

% Moisture:
Basis: Wet Weight

Seq Number: 3143649

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	12.01.2020 15:58	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	12.01.2020 15:58	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	12.01.2020 15:58	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	12.01.2020 15:58	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	12.01.2020 15:58	U	1
Total Xylenes	1330-20-7	<0.002010	0.002010	mg/kg	12.01.2020 15:58	U	1
Total BTEX		<0.002010	0.002010	mg/kg	12.01.2020 15:58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	12.01.2020 15:58	
4-Bromofluorobenzene	460-00-4	121	%	70-130	12.01.2020 15:58	



Certificate of Analytical Results 679227

LT Environmental, Inc., Arvada, CO

PLU 23 Brushy Draw West TB

Sample Id: **FS04**
Lab Sample Id: 679227-004

Matrix: Soil
Date Collected: 11.30.2020 08:50

Date Received: 11.30.2020 11:15
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

Analyst: MAB

Date Prep: 12.01.2020 12:40

% Moisture:
Basis: Wet Weight

Seq Number: 3143660

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	48.1	10.0	mg/kg	12.01.2020 16:57		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: MAB

Analyst: CAC

Date Prep: 11.30.2020 17:03

% Moisture:
Basis: Wet Weight

Seq Number: 3143541

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.01.2020 05:09	U	1
Diesel Range Organics (DRO)	C10C28DRO	219	50.0	mg/kg	12.01.2020 05:09		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.01.2020 05:09	U	1
Total GRO-DRO	PHC628	219.0	50.00	mg/kg	12.01.2020 05:09		1
Total TPH	PHC635	219.0	50.00	mg/kg	12.01.2020 05:09		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	12.01.2020 05:09	
o-Terphenyl	84-15-1	103	%	70-135	12.01.2020 05:09	



Certificate of Analytical Results 679227

LT Environmental, Inc., Arvada, CO

PLU 23 Brushy Draw West TB

Sample Id: **FS04**
Lab Sample Id: 679227-004

Matrix: Soil
Date Collected: 11.30.2020 08:50

Date Received: 11.30.2020 11:15
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 12.01.2020 11:17

% Moisture:
Basis: Wet Weight

Seq Number: 3143649

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.01.2020 16:20	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	12.01.2020 16:20	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	12.01.2020 16:20	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	12.01.2020 16:20	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	12.01.2020 16:20	U	1
Total Xylenes	1330-20-7	<0.001980	0.001980	mg/kg	12.01.2020 16:20	U	1
Total BTEX		<0.001980	0.001980	mg/kg	12.01.2020 16:20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	123	%	70-130	12.01.2020 16:20	
1,4-Difluorobenzene	540-36-3	101	%	70-130	12.01.2020 16:20	



Certificate of Analytical Results 679227

LT Environmental, Inc., Arvada, CO

PLU 23 Brushy Draw West TB

Sample Id: **FS05**
Lab Sample Id: 679227-005

Matrix: Soil
Date Collected: 11.30.2020 08:55

Date Received: 11.30.2020 11:15
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

Analyst: MAB

Date Prep: 12.01.2020 12:40

% Moisture:
Basis: Wet Weight

Seq Number: 3143660

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	73.6	10.0	mg/kg	12.01.2020 17:13		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: MAB

Analyst: CAC

Date Prep: 11.30.2020 17:03

% Moisture:
Basis: Wet Weight

Seq Number: 3143541

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	12.01.2020 05:29	U	1
Diesel Range Organics (DRO)	C10C28DRO	691	50.2	mg/kg	12.01.2020 05:29		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	56.6	50.2	mg/kg	12.01.2020 05:29		1
Total GRO-DRO	PHC628	691.0	50.20	mg/kg	12.01.2020 05:29		1
Total TPH	PHC635	747.6	50.20	mg/kg	12.01.2020 05:29		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-135	12.01.2020 05:29	
o-Terphenyl	84-15-1	117	%	70-135	12.01.2020 05:29	



Certificate of Analytical Results 679227

LT Environmental, Inc., Arvada, CO

PLU 23 Brushy Draw West TB

Sample Id: **FS05**
Lab Sample Id: 679227-005

Matrix: Soil
Date Collected: 11.30.2020 08:55

Date Received: 11.30.2020 11:15
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 12.01.2020 11:17

% Moisture:
Basis: Wet Weight

Seq Number: 3143649

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.01.2020 16:43	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.01.2020 16:43	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.01.2020 16:43	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	12.01.2020 16:43	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.01.2020 16:43	U	1
Total Xylenes	1330-20-7	<0.002000	0.002000	mg/kg	12.01.2020 16:43	U	1
Total BTEX		<0.002000	0.002000	mg/kg	12.01.2020 16:43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	12.01.2020 16:43	
4-Bromofluorobenzene	460-00-4	117	%	70-130	12.01.2020 16:43	



Certificate of Analytical Results 679227

LT Environmental, Inc., Arvada, CO

PLU 23 Brushy Draw West TB

Sample Id: **SW01**
Lab Sample Id: 679227-006

Matrix: Soil
Date Collected: 11.30.2020 09:00

Date Received: 11.30.2020 11:15
Sample Depth: 0 - 1 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

Analyst: MAB

Date Prep: 12.01.2020 12:40

% Moisture:
Basis: Wet Weight

Seq Number: 3143660

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	96.0	9.90	mg/kg	12.01.2020 17:18		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: MAB

Analyst: CAC

Date Prep: 11.30.2020 17:03

% Moisture:
Basis: Wet Weight

Seq Number: 3143541

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.01.2020 05:49	U	1
Diesel Range Organics (DRO)	C10C28DRO	569	50.0	mg/kg	12.01.2020 05:49		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.01.2020 05:49	U	1
Total GRO-DRO	PHC628	569.0	50.00	mg/kg	12.01.2020 05:49		1
Total TPH	PHC635	569.0	50.00	mg/kg	12.01.2020 05:49		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	12.01.2020 05:49	
o-Terphenyl	84-15-1	113	%	70-135	12.01.2020 05:49	



Certificate of Analytical Results 679227

LT Environmental, Inc., Arvada, CO

PLU 23 Brushy Draw West TB

Sample Id: **SW01**
Lab Sample Id: 679227-006

Matrix: Soil
Date Collected: 11.30.2020 09:00

Date Received: 11.30.2020 11:15
Sample Depth: 0 - 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 12.01.2020 11:17

% Moisture:
Basis: Wet Weight

Seq Number: 3143649

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.01.2020 17:05	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.01.2020 17:05	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	12.01.2020 17:05	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	12.01.2020 17:05	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	12.01.2020 17:05	U	1
Total Xylenes	1330-20-7	<0.001990	0.001990	mg/kg	12.01.2020 17:05	U	1
Total BTEX		<0.001990	0.001990	mg/kg	12.01.2020 17:05	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	114	%	70-130	12.01.2020 17:05		
1,4-Difluorobenzene	540-36-3	97	%	70-130	12.01.2020 17:05		



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 23 Brushy Draw West TB

Analytical Method: Chloride by EPA 300

Seq Number: 3143660

MB Sample Id: 7716174-1-BLK

Matrix: Solid

LCS Sample Id: 7716174-1-BKS

Prep Method: E300P

Date Prep: 12.01.2020

LCSD Sample Id: 7716174-1-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	241	96	239	96	90-110	1	20	mg/kg	12.01.2020 16:14	

Analytical Method: Chloride by EPA 300

Seq Number: 3143660

Parent Sample Id: 679158-041

Matrix: Soil

MS Sample Id: 679158-041 S

Prep Method: E300P

Date Prep: 12.01.2020

MSD Sample Id: 679158-041 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	306	200	493	94	485	90	90-110	2	20	mg/kg	12.01.2020 16:31	

Analytical Method: Chloride by EPA 300

Seq Number: 3143660

Parent Sample Id: 679266-002

Matrix: Soil

MS Sample Id: 679266-002 S

Prep Method: E300P

Date Prep: 12.01.2020

MSD Sample Id: 679266-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	58.9	200	255	98	248	94	90-110	3	20	mg/kg	12.01.2020 17:44	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3143541

MB Sample Id: 7716126-1-BLK

Matrix: Solid

LCS Sample Id: 7716126-1-BKS

Prep Method: SW8015P

Date Prep: 11.30.2020

LCSD Sample Id: 7716126-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1030	103	1000	100	70-135	3	35	mg/kg	12.01.2020 02:28	
Diesel Range Organics (DRO)	<50.0	1000	1070	107	1110	111	70-135	4	35	mg/kg	12.01.2020 02:28	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	107		110		103		70-135	%	12.01.2020 02:28
o-Terphenyl	105		118		117		70-135	%	12.01.2020 02:28

Analytical Method: TPH by SW8015 Mod

Seq Number: 3143541

Matrix: Solid

MB Sample Id: 7716126-1-BLK

Prep Method: SW8015P

Date Prep: 11.30.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	12.01.2020 02:08	

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 23 Brushy Draw West TB

Analytical Method: TPH by SW8015 Mod

Seq Number: 3143541

Parent Sample Id: 679158-041

Matrix: Soil

MS Sample Id: 679158-041 S

Prep Method: SW8015P

Date Prep: 11.30.2020

MSD Sample Id: 679158-041 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.9	997	1120	112	1060	106	70-135	6	35	mg/kg	12.01.2020 03:29	
Diesel Range Organics (DRO)	<49.9	997	1050	105	997	100	70-135	5	35	mg/kg	12.01.2020 03:29	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	109		105		70-135	%	12.01.2020 03:29
o-Terphenyl	112		109		70-135	%	12.01.2020 03:29

Analytical Method: BTEX by EPA 8021B

Seq Number: 3143649

MB Sample Id: 7716203-1-BLK

Matrix: Solid

LCS Sample Id: 7716203-1-BKS

Prep Method: SW5035A

Date Prep: 12.01.2020

LCSD Sample Id: 7716203-1-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	0.0953	95	0.0933	93	70-130	2	35	mg/kg	12.01.2020 12:46	
Toluene	<0.00200	0.100	0.0921	92	0.0885	89	70-130	4	35	mg/kg	12.01.2020 12:46	
Ethylbenzene	<0.00200	0.100	0.0950	95	0.0910	91	71-129	4	35	mg/kg	12.01.2020 12:46	
m,p-Xylenes	<0.00400	0.200	0.197	99	0.189	95	70-135	4	35	mg/kg	12.01.2020 12:46	
o-Xylene	<0.00200	0.100	0.0984	98	0.0939	94	71-133	5	35	mg/kg	12.01.2020 12:46	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		97		100		70-130	%	12.01.2020 12:46
4-Bromofluorobenzene	115		109		107		70-130	%	12.01.2020 12:46

Analytical Method: BTEX by EPA 8021B

Seq Number: 3143649

Parent Sample Id: 679158-041

Matrix: Soil

MS Sample Id: 679158-041 S

Prep Method: SW5035A

Date Prep: 12.01.2020

MSD Sample Id: 679158-041 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	0.106	106	0.101	101	70-130	5	35	mg/kg	12.01.2020 13:31	
Toluene	<0.00200	0.100	0.0999	100	0.0935	94	70-130	7	35	mg/kg	12.01.2020 13:31	
Ethylbenzene	<0.00200	0.100	0.102	102	0.0992	99	71-129	3	35	mg/kg	12.01.2020 13:31	
m,p-Xylenes	<0.00401	0.200	0.211	106	0.201	100	70-135	5	35	mg/kg	12.01.2020 13:31	
o-Xylene	<0.00200	0.100	0.104	104	0.0974	97	71-133	7	35	mg/kg	12.01.2020 13:31	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		97		70-130	%	12.01.2020 13:31
4-Bromofluorobenzene	116		110		70-130	%	12.01.2020 13:31

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

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

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

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



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

Chain of Custody

Work Order No: 1679227

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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 Street	Address:	522 West Mermond
City, State ZIP:	Midland, Tx 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	enaka@ltenv.com, dmoir@ltenv.com

Project Name:	PLU 25 Brashy Draw West TB	Turn Around	
Project Number:	012920141	Routine	<input checked="" type="checkbox"/>
P.O. Number:	Eddy County	Rush:	
Sampler's Name:	Elizabeth Naka	Due Date:	

SAMPLE RECEIPT	Temp Blank:	Yes	No	Wet Ice:	Yes	No
Temperature (°C):	10/0.8	Thermometer ID				
Received In tact:	Yes	No	Correction Factor: -0.2			
Cooler Custody Seals:	Yes	No	Total Containers: 6			
Sample Custody Seals:	Yes	No				

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)											Sample Comments
ES01	S	4/30/20	0835	1'	1	X	X	X											Comp. OK
ES02			0840	1'															
ES03			0845	1'															
ES04			0850	1'															
ES05			0855	1'															
SW01			0900	0'-1'															
Gladwin Area																			

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

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>Elizabeth Naka</i>	<i>Chae Clarke</i>	11-30-20 1115			

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 11.30.2020 11.15.00 AM

Work Order #: 679227

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T_NM_007

Sample Receipt Checklist**Comments**

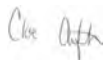
#1 *Temperature of cooler(s)?	.8	
#2 *Shipping container in good condition?	Yes	
#3 *Samples received on ice?	Yes	
#4 *Custody Seals intact on shipping container/ cooler?	Yes	
#5 Custody Seals intact on sample bottles?	Yes	
#6 *Custody Seals Signed and dated?	Yes	
#7 *Chain of Custody present?	Yes	
#8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

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

Analyst:

PH Device/Lot#:

Checklist completed by:



Cloe Clifton

Date: 11.30.2020

Checklist reviewed by:



Jessica Kramer

Date: 11.30.2020

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 23926

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 23926
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	We have received your closure report and final C-141 for Incident #NRM2026546692 PLU 25 BRUSHY DRAW WEST TB, thank you. This closure is approved.	7/16/2021