

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	NRM2020924128
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 32.01871 Longitude -103.93655
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Ross Draw 25 North	Site Type Tank Battery
Date Release Discovered 7-10-2020	API# (if applicable)

Unit Letter	Section	Township	Range	County
B	25	26S	29E	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 type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 40	Volume Recovered (bbls) 40
	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)

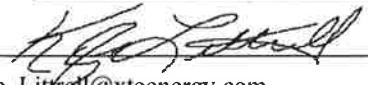
Cause of Release
A 10" Victaulic tee leaked produced water inside the lined containment of the battery. An inspection of the liner determined that it was not in working condition. A third-party contractor has been retained for remediation activities.

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Was this a major release as defined by 19.15.29.7(A) NMAC? <input type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? A release equal to or greater than 25 barrels.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Yes, by Kyle Littrell to 'Bratcher, Mike, EMNRD'; 'Venegas, Victoria, EMNRD'; 'Hamlet, Robert, EMNRD'; 'Griswold, Jim, EMNRD'; Morgan, Crisha A; blm_nm_cfo_spill@blm.gov via email on Saturday, July 11, 2020 8:25 AM.	

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: NA	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: <u>Kyle Littrell</u>	Title: <u>SH&E Supervisor</u>
Signature: <u></u>	Date: <u>7-23-20</u>
email: <u>Kyle_Littrell@xtoenergy.com</u>	Telephone: <u>432-221-7331</u>
OCD Only Received by: <u>Ramona Marcus</u> Date: <u>7/27/2020</u>	

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State of New Mexico

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Oil Conservation Division

Incident ID	NRM2020924128
District RP	
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Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	51-100 (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 checked="" type="checkbox"/> Yes <input 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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State of New Mexico

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Oil Conservation Division

Incident ID	NRM2020924128
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Printed Name: Kyle LittrellTitle: Environmental ManagerSignature: Date: 05/18/2021email: Kyle.Littrell@exxonmobil.comTelephone: 432-221-7331**OCD Only**

Received by: _____

Date: _____

Form C-141

State of New Mexico

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Oil Conservation Division

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Remediation Plan

Remediation Plan Checklist: *Each of the following items must be included in the plan.*

- ☐ Detailed description of proposed remediation technique
- ☐ Scaled sitemap with GPS coordinates showing delineation points
- ☐ Estimated volume of material to be remediated
- ☐ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☐ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: *Each of the following items must be confirmed as part of any request for deferral of remediation.*

- ☒ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☒ Extents of contamination must be fully delineated.
- ☒ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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Printed Name: Kyle LittrellTitle: Environmental ManagerSignature: Date: 05/18/2021email: kyle.littrell@exxonmobil.comTelephone: 432-221-7331**OCD Only**

Received by: _____ Date: _____

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: _____

Date: _____

NRM2020924128

Location:	Ross Draw 25 North CTB		
Spill Date:	7/10/2020		
Area 1			
Approximate Area =		224.58	cu.ft.
VOLUME OF LEAK			
Total Produced Water =		40.00	bbls
TOTAL VOLUME OF LEAK			
Total Produced Water =		40.00	bbls
TOTAL VOLUME RECOVERED			
Total Produced Water =		40.00	bbls

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Printed Name: Kyle Littrell Title: Environmental Manager
Signature: _____ Date: 05/18/2021
email: kyle.littrell@exxonmobil.com Telephone: 432-221-7331

OCD Only

Received by: Robert Hamlet Date: 8/18/2021

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☒ Deferral Approved

Signature: Robert Hamlet Date: 8/18/2021

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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 32.01871 Longitude -103.93655
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Ross Draw 25 North	Site Type	Tank Battery
Date Release Discovered	7-10-2020	API#	(if applicable)

Unit Letter	Section	Township	Range	County
B	25	26S	29E	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 type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 40	Volume Recovered (bbls) 40
	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 A 10" Victaulic tee leaked produced water inside the lined containment of the battery. An inspection of the liner determined that it was not in working condition. A third-party contractor has been retained for remediation activities.


State of New Mexico
Oil Conservation Division

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Printed Name: Kyle Littrell	Title: SH&E Supervisor
Signature: 	Date: 7-23-20
email: Kyle_Littrell@xtoenergy.com	Telephone: 432-221-7331
<u>OCD Only</u>	
Received by: Ramona Marcus	Date: 7/27/2020

NRM2020924128

Location:	Ross Draw 25 North CTB	
Spill Date:	7/10/2020	
Area 1		
Approximate Area =	224.58	cu.ft.
VOLUME OF LEAK		
Total Produced Water =	40.00	bbls
TOTAL VOLUME OF LEAK		
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TOTAL VOLUME RECOVERED		
Total Produced Water =	40.00	bbls

Incident ID	NRM2020924128
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Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>51-100</u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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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
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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.

State of New Mexico
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Printed Name: Kyle Littrell Title: Environmental Manager

Signature: _____ Date: 05/18/2021

email: Kyle.Littrell@exxonmobil.com Telephone: 432-221-7331

OCD Only

Received by: _____ Date: _____

Incident ID	NRM2020924128
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Remediation Plan

Remediation Plan Checklist: *Each of the following items must be included in the plan.*

- ☐ Detailed description of proposed remediation technique
- ☐ Scaled sitemap with GPS coordinates showing delineation points
- ☐ Estimated volume of material to be remediated
- ☐ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☐ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

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- ☒ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☒ Extents of contamination must be fully delineated.
- ☒ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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Printed Name: Kyle Littrell Title: Environmental Manager
Signature: _____ Date: 05/18/2021
email: kyle.littrell@exxonmobil.com Telephone: 432-221-7331

OCD Only

Received by: _____ Date: _____

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: _____ Date: _____



WSP USA

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

May 17, 2021

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

**RE: Deferral Request
Ross Draw 25 North
Incident Number NRM2020924128
Eddy County, New Mexico**

To Whom it May Concern:

WSP USA Inc. (WSP), on behalf of XTO Energy, Inc. (XTO), presents the following Deferral Request detailing site assessment and soil sampling activities at the Ross Draw 25 North (Site) in Unit B, Section 25, Township 26 South, Range 29 East, in Eddy County, New Mexico (Figure 1). The purpose of the site assessment and soil sampling activities was to assess the presence or absence of impact to soil resulting from a release of produced water within lined containment at the Site. Based on field observations, field screening, and laboratory analytical results from soil sampling activities, XTO is submitting this Deferral Request describing site assessment and delineation activities that have occurred and requesting deferral of final remediation for Incident Number NRM2020924128 until the Site is reconstructed, and/or the well pad is abandoned.

RELEASE BACKGROUND

On July 10, 2020, a 10-inch Victaulic tee failed and released approximately 40 barrels (bbls) of produced water into the lined containment of the tank battery. The fluids were recovered, and a subsequent visual inspection of liner integrity determined the liner was not in working condition. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) via email on July 11, 2020 and submitted a Form C-141 on July 23, 2020. The release assigned Incident Number NRM2020924128.

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 between 51 to 100 feet below ground surface (bgs) based on the nearest groundwater well data and regional depth to water determination. The closest permitted groundwater well with depth to groundwater data is United States Geologic Survey (USGS) well 320154103562301, located approximately 0.91 miles north of the Site. The water well has an approved reported depth to groundwater from 1998 of



66.42 feet bgs. Within a 1.6-mile radius from the Site, there are three additional water wells that indicate regional depth to groundwater is between 51 to 100 feet bgs. USGS well 320106103555301 was most recently measured in January 2013. USGS well 320106103555301 is located 1.52 miles southwest of the Site and has a reported depth to water of 57.81 feet bgs. All water wells used for depth to groundwater determination are depicted on Figure 1 and are referenced in Attachment 1. The closest continuously flowing or significant watercourse to the Site is an intermittent riverine, located approximately 2,413 feet southeast 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, and church. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is located in a high-potential karst area. Potential receptors identified during Site Characterization are displayed in Figure 1.

CLOSURE CRITERIA

Based on the initial desktop results of the Site Characterization, including a high-potential karst designation, 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): 100 mg/kg; and
- Chloride: 600 mg/kg

SITE ASSESSMENT ACTIVITIES

On July 17, 2020, WSP personnel conducted site assessment activities to evaluate the subject release extent. Additionally, WSP reviewed and verified the Form C-141 incident descriptions (release source and release location) with visual impacts present onsite; it was confirmed that the subject release was contained to the lined containment.

DELINEATION SOIL SAMPLING ACTIVITIES

On July 22, 2020, WSP personnel visited the Site to conduct initial delineation activities. In an effort to identify the vertical extent of impacts, one borehole (BH01) was advanced utilizing a hand auger to a limited depth of 1-foot bgs due to auger refusal. Soil from the borehole was field screened at 0.5-foot intervals for volatile aromatic hydrocarbons and chloride utilizing a calibrated photo-ionization detector (PID) and Hach® chloride QuanTab® test strips. Two delineation soil samples were collected from the borehole based on field screening results. One soil sample was collected from the soil interval with the highest field screening (0.5-foot bgs) and the terminus of the borehole soil sample (1-foot bgs). The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler initials, method of analysis, and immediately placed on ice. The soil samples were shipped at or below 4 degrees Celsius (°C)



under strict chain-of-custody (COC) procedures to Xenco Laboratories (Xenco) in Carlsbad, New Mexico, for analysis of BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH following EPA Method 8015M/D; and chloride following EPA Method 300.0. Field screening results and observations for the borehole were recorded on a lithologic/soil sampling log and is presented in Attachment 2. The delineation soil sample location is presented on Figure 2. Photographic documentation from initial delineation activities is included in Attachment 3.

Laboratory analytical results indicated benzene, BTEX, and TPH concentrations were below detection limits in soil sample BH01 at 0.5-foot bgs and 1-foot bgs. Chloride concentrations exceeded the Closure Criteria for soil sample BH01 at 0.5-foot bgs and 1-foot bgs at 2,480 mg/kg and 2,290 mg/kg, respectively.

CORE DRILLING AND SOIL SAMPLING ACTIVITIES

On September 16, 2020, WSP was permitted to continue assessing the vertical extent of impacted soil that could not be easily accessed during initial delineation activities via hand auger advancement method. WSP utilized a Shaw Tool, Ltd Portable Core Drill to install one delineation soil sample in the area associated with BH01 (BH01B) to determine the vertical extent of impact and four delineation soil samples (CH01 through CH04) outside of the containment to investigate lithology and confirm lateral delineation. A review of the Site and Site conditions identified hazards requiring a Hot Work Permit to implement safety control measures. Due to the location of the release, a Hot Work Permit was necessary to conduct investigative motor or electric powered drilling methods within 35 feet of any hydrocarbon sources. In coordination with XTO, an XTO safety representative was retained to conduct air monitoring as part of the permit process for investigative core drilling activities.

The soil samples were field screened, at minimum, from every 2-foot interval for volatile aromatic hydrocarbons and chloride utilizing a calibrated PID and Hach® chloride QuanTab® test strips. Up to two soil samples were collected from each delineation soil sample location based on field screening results. One sample was collected from the soil interval with the highest field screening result (0.5-foot bgs) and/or one soil sample was collected from the soil interval with field screening results indicating a clean vertical depth (2 feet bgs). Soil samples were collected, handled, and analyzed as previously described. Field screening results and observations for each delineation soil sample were recorded on lithologic/soil sampling logs and are presented in Attachment 2. The additional delineation soil sample locations are presented on Figure 2. Photographic documentation from continued delineation activities is included in Attachment 3.

Laboratory analytical results indicated full vertical delineation with concentrations of benzene, BTEX, TPH, and chloride below the Closure Criteria in the area associated with soil sample BH01B at 2 feet bgs. Laboratory analytical results associated with lateral delineation soil samples (CH01 through CH04) were below detection limits for benzene, BTEX, and TPH and ranged from 17.3 mg/kg to 300 mg/kg for chloride.



ANALYTICAL RESULTS

Final laboratory analytical results indicated that identified chloride exceedances within the subject release footprint did not extend below 2 feet bgs. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included in Attachment 4. Elevated chloride exists under the liner to 1-foot bgs. The chloride concentrations are delineated vertically and laterally around the containment.

DEFERRAL REQUEST

Based on the data collected from the final delineation soil samples and further review of the receptors that affect the Closure Criteria at this Site, XTO requests to defer the elevated chloride concentrations in place beneath the containment liner. Approximately 291 cubic yards of chloride impacted soil remains in place beneath the liner assuming a maximum 1-foot depth. The impacted soil is delineated vertically by delineation soil sample BH01B and laterally by delineation soil samples CH01 through CH04. The impacted soil is limited to the area immediately beneath the lined containment and active production equipment, where remediation would require a major facility deconstruction. The deferral area is shown on Figure 3. WSP and XTO believe deferment is equally protective of public health and environment for the following reasons:

- The remaining chloride concentrations in the subject area release range from 2,480 mg/kg in soil sample BH01 at 0.5-foot bgs to 37.9 mg/kg in soil sample BH01B at 2 feet bgs. Depth to groundwater is estimated to be greater than 50 feet deep based on the nearest well data and regional depth to water determination. All chloride concentrations meet Table 1 Closure Criteria applicable for a depth to water of greater than 50 feet bgs.
- Table 1 Closure Criteria defined by a depth to water of greater than 50 feet is appropriate for the chloride impacts identified at the location of soil sample BH01 and BH01A.
- The residual chloride concentrations are restricted to the upper portions of an indurated caliche. The lithologic properties of this rock suggest little pore space, fracturing, or voids. Additional migration in the caliche is unlikely. The high karst designation stipulates the application of the most stringent Table 1 Closure Criteria at this Site. However, the exceeding chloride concentrations exist above 2 feet bgs only. The absence of karst features at this depth suggests the shallow subsurface is not affected by karst. Therefore, Table 1 Closure Criteria defined by a depth to water of greater than 50 feet is appropriate for the chloride impacts identified at soil sample BH01 at 0.5-foot bgs and soil sample BH01A at 1-foot bgs.
- The remaining chloride concentrations will not affect surface receptors because impacted soil is beneath a liner. The liner has been repaired by XTO and will prevent infiltration by precipitation. In addition to XTO's regular inspections associated with its Spill Prevention, Control, and Countermeasure (SPCC) Program, XTO will periodically monitor the repaired

District II
Page 5

liner associated with the subject area to ensure integrity and limit potential vertical or lateral migration of any remaining impacts.

- Removal of impacted soil is not a practical means of remediation due to the location of the release and surrounding production equipment. WSP and XTO argue the potential consequences that could arise from utilizing mechanical, manual, or non-destructive methods. Manual or non-destructive efforts would be limited due to the documented refusal area and would only address the surface and not up to 2 feet bgs. Attempting these efforts would warrant further breaching the liner, which is designed to protect the surface beneath the staged equipment and surface lines. Repairing efforts would naturally degrade the integrity of the liner as a result of reconstructions from its original state. The reconstructed areas could later form a potential conduit to the subsurface that could be greater than leaving the impacts in place.

Due to the presence of active aboveground production equipment and surface pipelines within the release footprint, safety restrictions prevent the ability to remove all impacted soil associated with chloride exceedances. Based on the data indicating chloride impacts are fully delineated, supportive evidence that any remaining chloride concentration are equally protective of public health and environment, limited pathway to any potential surface or subsurface receptors, and decreasing chloride concentrations associated with soil sample BH01 with depth, XTO requests deferral of final remediation for Incident Number NRM2020924128 until final reclamation of the well pad or major construction, whichever comes first.

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, appearing to read 'Fatima Smith'.

Fatima Smith
Associate Consultant, Geologist

A handwritten signature in black ink, appearing to read 'Ashley L. Ager'.

Ashley L. Ager, P.G.
Assistant Vice President, Geologist



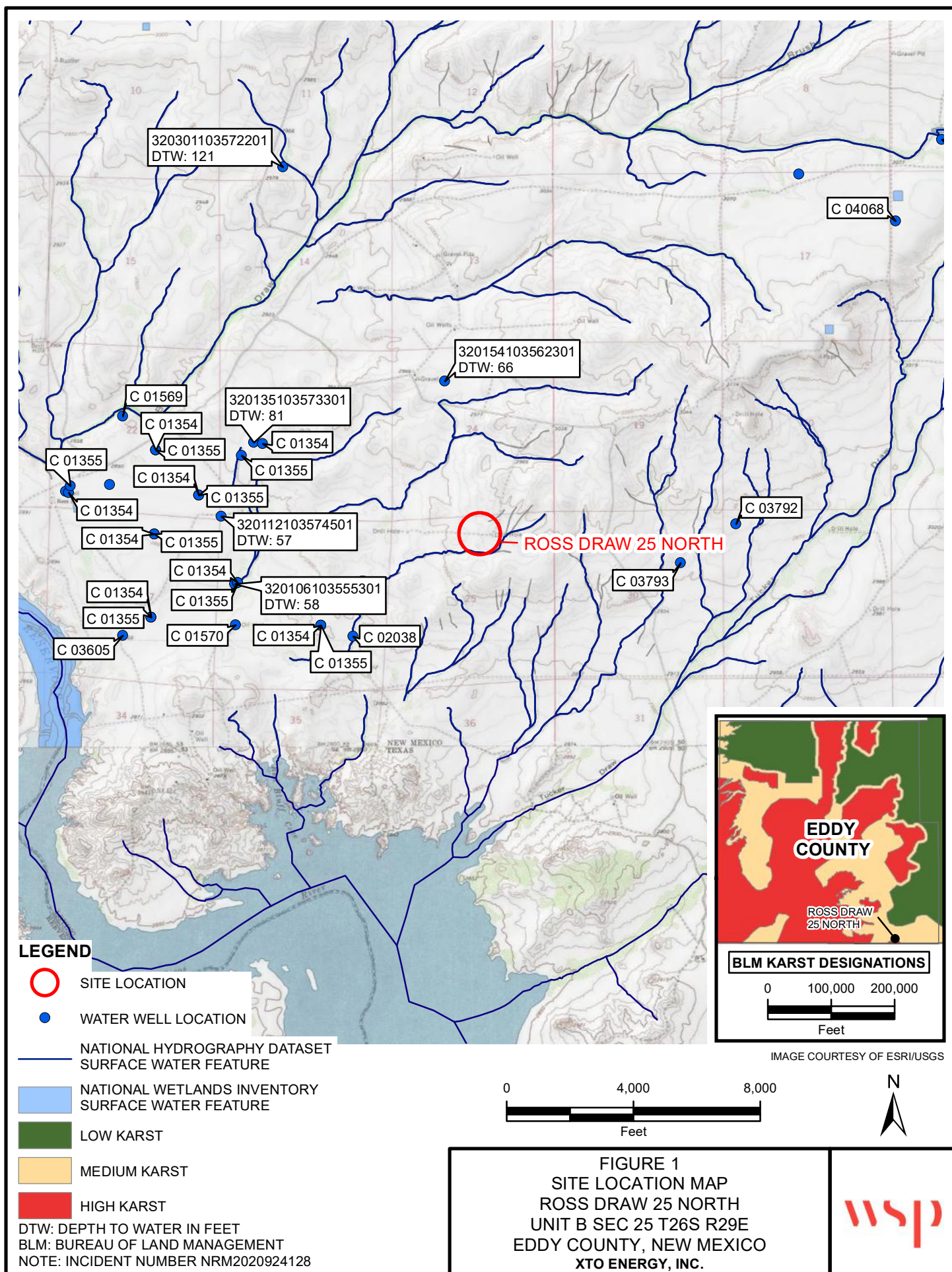
District II
Page 6

cc: Kyle Littrell, XTO
Bureau of Land Management

Attachments:

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

FIGURES

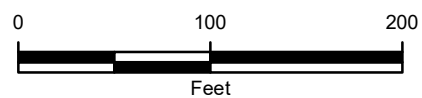


P:\XTO Energy\GIS\MXD\012921016_ROSS DRAW 25 N BATTERY\012921016_FIG01_SL_RECEPTOR_2020.mxd

**LEGEND**

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

IMAGE COURTESY OF ESRI



NOTE: INCIDENT NUMBER NRM2020924128
 SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)

FIGURE 2
 DELINEATION SOIL SAMPLE LOCATIONS
 ROSS DRAW 25 NORTH
 UNIT B SEC 25 T26S R29E
 EDDY COUNTY, NEW MEXICO
 XTO ENERGY, INC.



**LEGEND**

DELINEATION SOIL SAMPLE WITH CONCENTRATIONS
PREVIOUSLY EXCEEDING APPLICABLE CLOSURE CRITERIA

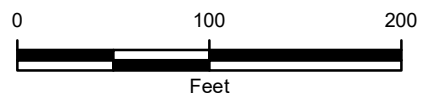


DELINEATION SOIL SAMPLE IN COMPLIANCE
WITH APPLICABLE CLOSURE CRITERIA



DEFERRAL AREA

IMAGE COURTESY OF ESRI



NOTE: INCIDENT NUMBER NRM2020924128
SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)
ESTIMATED VOLUME OF SOIL REMAINING 291 CUBIC YARDS

FIGURE 3
DEFERRAL AREA
ROSS DRAW 25 NORTH
UNIT B SEC 25 T26S R29E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.



TABLES

Table 1

Soil Analytical Results
Ross Draw 25 North
Incident Number NRM2020924128
XTO Energy, Inc.
Eddy County, New Mexico

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	NE	100	600
Delineation Samples										
BH01	07/22/2020	0.5	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	2,480
BH01A	07/22/2020	1	<0.00202	<0.00202	<50.0	<50.0	<50.0	<50.0	<50.0	2,290
BH01B	09/16/2020	2	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	37.9
CH01	09/16/2020	0.5	<0.00201	<0.00201	<49.9	<49.9	<49.9	<49.9	<49.9	48.7
CH01A	09/16/2020	2	<0.00198	<0.00198	<49.8	<49.8	<49.8	<49.8	<49.8	17.3
CH02	09/16/2020	0.5	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	216
CH02A	09/16/2020	2	<0.00201	<0.00201	<49.8	<49.8	<49.8	<49.8	<49.8	22.6
CH03	09/16/2020	0.5	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	300
CH03A	09/16/2020	2	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	145
CH04	09/16/2020	0.5	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	273
CH04A	09/16/2020	2	<0.00201	<0.00201	<50.0	<50.0	<50.0	<50.0	<50.0	78.1

Notes

ft - feet/foot

mg/kg - milligrams per kilograms

BTEX - benzene, toluene, ethylbenzene, and total xylenes

TPH - total petroleum hydrocarbons

DRO - diesel range organics

GRO - gasoline range organics

ORO - motor oil range organics

NMOCD - New Mexico Oil Conservation Division

NMAC - New Mexico Administrative Code

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

NE - Not Established

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

Greyed data represents samples that were excavated

ATTACHMENT 1: REFERENCED WELL RECORD



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site_no list =

- 320154103562301

Minimum number of levels = 1
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USGS 320154103562301 26S.29E.22.23341

Eddy County, New Mexico
Latitude 32°01'54", Longitude 103°56'23" NAD27
Land-surface elevation 2,974 feet above NAVD88
The depth of the well is 200 feet below land surface.
This well is completed in the Rustler Formation (312RSLR) local aquifer.

Output formats

Table of data

Tab-separated data

Graph of data

Reselect period

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1975-12-09			D 61.45			2			U		U A
1976-01-16			D 64.75			2			U		U A
1977-01-14			D 63.41			2			U		U A
1978-02-23			D 65.47			2			U		U A
1983-01-26			D 66.44			2			U		U A
1987-10-14			D 49.81			2			U		U A
1992-11-04			D 59.28			2		S			U A
1998-01-22			D 66.42			2		S			U A

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level accuracy	2	Water level accuracy to nearest hundredth of a foot
Status		The reported water-level measurement represents a static level
Method of measurement	S	Steel-tape measurement.
Method of measurement	U	Unknown method.
Measuring agency		Not determined
Source of measurement	U	Source is unknown.
Water-level approval status	A	Approved for publication -- Processing and review completed.

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site_no list =

- 320135103573301

Minimum number of levels = 1
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USGS 320135103573301 26S.29E.23.31220

Eddy County, New Mexico
Latitude 32°01'35", Longitude 103°57'33" NAD27
Land-surface elevation 2,913 feet above NGVD29
The depth of the well is 170.00 feet below land surface.
This well is completed in the Forty-Niner Member of Rustler Formation (310FRNR) local aquifer.

Output formats

Table of data

Tab-separated data

Graph of data

Reselect period

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
1987-10-14		D	80.88			2		S		U	A

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level accuracy	2	Water level accuracy to nearest hundredth of a foot
Status		The reported water-level measurement represents a static level
Method of measurement	S	Steel-tape measurement.
Measuring agency		Not determined
Source of measurement	U	Source is unknown.
Water-level approval status	A	Approved for publication -- Processing and review completed.

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Agency code = usgs
site_no list =

- 320112103574501

Minimum number of levels = 1
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USGS 320112103574501 26S.29E.22.333242

Eddy County, New Mexico
Latitude 32°01'12", Longitude 103°57'45" NAD27
Land-surface elevation 2,892.0 feet above NGVD29

Output formats

Table of data

Tab-separated data

Graph of data

Reselect period

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
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1993-01-05	14:45 MST	m	57.38			2		S		U	A

Explanation

Section	Code	Description
Water-level date-time accuracy	m	Date is accurate to the Minute
Water-level accuracy	2	Water level accuracy to nearest hundredth of a foot
Status		The reported water-level measurement represents a static level
Method of measurement	S	Steel-tape measurement.
Measuring agency		Not determined
Source of measurement	U	Source is unknown.
Water-level approval status	A	Approved for publication -- Processing and review completed.

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site_no list =

- 320106103555301

Minimum number of levels = 1
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USGS 320106103555301 26S.29E.26.13143

Eddy County, New Mexico
Latitude 32°00'51.3", Longitude 103°57'42.0" NAD83
Land-surface elevation 2,883.00 feet above NGVD29
The depth of the well is 140 feet below land surface.
This well is completed in the Rustler Formation (312RSLR) local aquifer.

Output formats

Table of data

Tab-separated data

Graph of data

Reselect period


Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1983-01-26		D	54.30			2			U		A
1987-10-14		D	35.29			2			U		A
1992-11-04		D	44.06			2			S		A
1998-01-28		D	53.01			2			S		A
2003-01-27		D	55.93			2			S	USGS	A
2013-01-09	12:00 MST	m	57.81			2			S	USGS	R


Explanation


Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level date-time accuracy	m	Date is accurate to the Minute
Water-level accuracy	2	Water level accuracy to nearest hundredth of a foot
Status		The reported water-level measurement represents a static level
Method of measurement	S	Steel-tape measurement.
Method of measurement	U	Unknown method.
Measuring agency		Not determined
Measuring agency	USGS	U.S. Geological Survey
Source of measurement	A	Reported by another government agency (do not use "A" if reported by owner, use "O").
Source of measurement	R	Reported by person other than the owner, driller, or another government agency.
Source of measurement	U	Source is unknown.
Water-level approval status	A	Approved for publication -- Processing and review completed.


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ATTACHMENT 2: LITHOLOGIC/SOIL SAMPLING LOG


 WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220		BH or CH Name: BH01		Date: 07/22/2020				
		BH01 and BH01A submitted						
		Site Name: Ross Draw 25 North						
		RP or Incident Number: NRM2020924128						
		WSP Job Number: TE012920108						
LITHOLOGIC / SOIL SAMPLING LOG								
Lat/Long: 32.018728, -103.936157		Field Screening: HACH chloride strips, PID		Logged By: Will Mather Method: Hand Auger				
		Hole Diameter: 4"		Total Depth (TD): 1'				
Comments: SAA - Same As Above All chloride tests strips include a 40% correction factor, HACH low range test strips were used.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
M	2,105	0.5	N	BH01	0	0	CCHE	Caliche, tan - off white, moist, poorly consolidated, large tan/brown gravel, trace of fine grain sand/silt, no stain, no odor
M	2,245	0.5	N	BH01A		1		
TD @ 1 ft bgs								

 WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220		BH or CH Name: BH01		Date: 09/16/2020				
		BH01B submitted						
		Site Name: Ross Draw 25 North						
		RP or Incident Number: NRM2020924128						
		WSP Job Number: TE012920108						
LITHOLOGIC / SOIL SAMPLING LOG								
Lat/Long: 32.018728, -103.936157		Field Screening: HACH chloride strips, PID		Logged By: Ben Belill/Robert McAfee Hole Diameter: 1.75" Method: Core Drill Total Depth (TD): 2'				
Comments: SAA - Same As Above All chloride tests strips include a 40% correction factor, HACH low range test strips were used. Borehole/corehole was backfilled with clean fill material to surface.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
M			N		0	0	CCHE	Caliche, tan - off white, moist, mod consolidated, trace of fine grain sand, no stain, no odor
M	2,105	0.5	N	BH01		0.5		SAA
M	2,245	0.5	N	BH01A		1		
M	<180	0.2	N	BH01B	2	2		SAA
TD @ 2 ft bgs								

 WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220					BH or CH Name: CH01		Date: 09/16/2020	
					CH01 and CH01A submitted			
					Site Name: Ross Draw 25 North			
					RP or Incident Number: NRM2020924128			
					WSP Job Number: TE012920108			
LITHOLOGIC / SOIL SAMPLING LOG								
Lat/Long: 32.018619, -103.936088			Field Screening: HACH chloride strips, PID		Hole Diameter: 1.75"		Total Depth (TD): 2'	
Comments: SAA - Same As Above All chloride tests strips include a 40% correction factor, HACH low range test strips were used. Borehole/corehole was backfilled with clean fill material to surface.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
M	179	0.2	N	CH01	0 0.5 1 1.5	0	CCHE	Caliche, tan - off white, moist, mod consolidated, trace of fine grain sand, no stain, no odor SAA
M	179	0.1	N	CH01A	2	2	SAA	
TD @ 2 ft bgs								

 WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220		BH or CH Name: CH02		Date: 09/16/2020				
		CH02 and CH02A submitted						
		Site Name: Ross Draw 25 North						
		RP or Incident Number: NRM2020924128						
		WSP Job Number: TE012920108						
LITHOLOGIC / SOIL SAMPLING LOG								
Lat/Long: 32.018887, -103.936368		Field Screening: HACH chloride strips, PID		Logged By: Ben Belill/Robert McAfee Method: Core Drill				
		Hole Diameter: 1.75"		Total Depth (TD): 2'				
Comments: SAA - Same As Above All chloride tests strips include a 40% correction factor, HACH low range test strips were used. Borehole/corehole was backfilled with clean fill material to surface.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
M	450	0.2	N	CH02	0 0.5 1 1.5	0	CCHE	Caliche, tan - off white, moist, mod consolidated, trace of fine grain sand, no stain, no odor SAA
M	180	0.2	N	CH02A	2	2	SAA	
TD @ 2 ft bgs								

 WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220					BH or CH Name: CH03			Date: 09/16/2020							
					CH03 and CH03A submitted										
					Site Name: Ross Draw 25 North										
					RP or Incident Number: NRM2020924128										
					WSP Job Number: TE012920108										
LITHOLOGIC / SOIL SAMPLING LOG										Logged By: Ben Belill/Robert McAfee			Method: Core Drill		
Lat/Long: 32.019036, -103.936231					Field Screening: HACH chloride strips, PID					Hole Diameter: 1.75"			Total Depth (TD): 2'		
Comments: SAA - Same As Above All chloride tests strips include a 40% correction factor, HACH low range test strips were used. Borehole/corehole was backfilled with clean fill material to surface.															
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks							
M	504	0.2	N	CH03	0 0.5 1 1.5	0	CCHE	Caliche, tan - off white, moist, mod consolidated, trace of fine grain sand, no stain, no odor SAA							
M	347	0.2	N	CH03A	2	2	SAA								
TD @ 2 ft bgs															

 WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220					BH or CH Name: CH04		Date: 09/16/2020	
					CH04 and CH04A submitted			
					Site Name: Ross Draw 25 North			
					RP or Incident Number: NRM2020924128			
					WSP Job Number: TE012920108			
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: Ben Belill/Robert McAfee		Method: Core Drill	
Lat/Long: 32.018932, -103.935881			Field Screening: HACH chloride strips, PID		Hole Diameter: 1.75"		Total Depth (TD): 2'	
Comments: SAA - Same As Above All chloride tests strips include a 40% correction factor, HACH low range test strips were used. Borehole/corehole was backfilled with clean fill material to surface.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
M	347	0.2	N	CH04	0 0.5 1 1.5	0	CCHE	Caliche, tan - off white, moist, mod consolidated, trace of fine grain sand, no stain, no odor SAA
M	180	0.2	N	CH04A	2	2	SAA	
TD @ 2 ft bgs								

ATTACHMENT 3: PHOTOGRAPHIC LOG

**PHOTOGRAPHIC LOG**

XTO Energy, Inc.	Ross Draw 25 North Eddy County, New Mexico	TE012920108
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Photo No.	Date	
1	July 22- September 16, 2020	
View of BH01 location within the lined containment during initial delineation efforts		

Photo No.	Date	
2	July 22- September 16, 2020	
View of BH01 location within the lined containment during initial delineation efforts.		



PHOTOGRAPHIC LOG

XTO Energy, Inc.	Ross Draw 25 North Eddy County, New Mexico	TE012920108
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Photo No.	Date	
3	July 22- September 16, 2020	
North view of the soil sample CH01 location following advancement with the core drill.		

Photo No.	Date	
4	July 22- September 16, 2020	
View of the area associated with BH01 following advancement with the core drill.		



PHOTOGRAPHIC LOG

XTO Energy, Inc.	Ross Draw 25 North Eddy County, New Mexico	TE012920108
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Photo No.	Date	
5	July 22- September 16, 2020	
View of the soil sample CH02 location following advancement with the core drill.		

Photo No.	Date	
6	July 22- September 16, 2020	
View of the soil sample CH01 location prior to backfilling.		

ATTACHMENT 4: LABORATORY ANALYTICAL REPORTS

Certificate of Analysis Summary 667911

LT Environmental, Inc., Arvada, CO

Project Name: Ross Draw 25 N CTB

Project Id: 012920108

Contact: Dan Moir

Project Location: Eddy

Date Received in Lab: Wed 07.22.2020 13:19

Report Date: 07.23.2020 13:23

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	667911-001	667911-002				
	Field Id:	BH01	BH01A				
	Depth:	0.5- ft	1- ft				
	Matrix:	SOIL	SOIL				
	Sampled:	07.22.2020 11:14	07.22.2020 10:17				
BTEX by EPA 8021B	Extracted:	07.22.2020 14:00	07.22.2020 14:00				
	Analyzed:	07.22.2020 19:35	07.22.2020 19:57				
	Units/RL:	mg/kg RL	mg/kg RL				
		<0.00200 0.00200	<0.00202 0.00202				
Benzene		<0.00200 0.00200	<0.00202 0.00202				
Toluene		<0.00200 0.00200	<0.00202 0.00202				
Ethylbenzene		<0.00200 0.00200	<0.00202 0.00202				
m,p-Xylenes		<0.00399 0.00399	<0.00403 0.00403				
o-Xylene		<0.00200 0.00200	<0.00202 0.00202				
Total Xylenes		<0.00200 0.00200	<0.00202 0.00202				
Total BTEX		<0.00200 0.00200	<0.00202 0.00202				
Chloride by EPA 300	Extracted:	07.22.2020 17:54	07.22.2020 17:54				
	Analyzed:	07.23.2020 04:50	07.23.2020 04:56				
	Units/RL:	mg/kg RL	mg/kg RL				
Chloride		2480 100	2290 200				
TPH by SW8015 Mod	Extracted:	07.22.2020 16:30	07.22.2020 16:30				
	Analyzed:	07.22.2020 16:43	07.22.2020 17:03				
	Units/RL:	mg/kg RL	mg/kg RL				
		<50.0 50.0	<50.0 50.0				
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<50.0 50.0				
Diesel Range Organics (DRO)		<50.0 50.0	<50.0 50.0				
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<50.0 50.0				
Total GRO-DRO		<50.0 50.0	<50.0 50.0				
Total TPH		<50.0 50.0	<50.0 50.0				

BRL - Below Reporting Limit

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





Environment Testing
Xenco

Analytical Report 667911

for

LT Environmental, Inc.

Project Manager: Dan Moir

Ross Draw 25 N CTB

012920108

07.23.2020

Collected By: Client

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

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

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

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



07.23.2020

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: Eurofins Xenco, LLC Report No(s): **667911**

Ross Draw 25 N CTB

Project Address: Eddy

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) 667911. 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. 667911 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 667911

LT Environmental, Inc., Arvada, CO

Ross Draw 25 N CTB

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH01	S	07.22.2020 11:14	0.5 ft	667911-001
BH01A	S	07.22.2020 10:17	1 ft	667911-002



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Ross Draw 25 N CTB

Project ID: 012920108
Work Order Number(s): 667911

Report Date: 07.23.2020
Date Received: 07.22.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 667911

LT Environmental, Inc., Arvada, CO

Ross Draw 25 N CTB

Sample Id: **BH01** Matrix: Soil Date Received: 07.22.2020 13:19
 Lab Sample Id: 667911-001 Date Collected: 07.22.2020 11:14 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.22.2020 17:54 Basis: Wet Weight
 Seq Number: 3132399

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2480	100	mg/kg	07.23.2020 04:50		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.22.2020 16:30 Basis: Wet Weight
 Seq Number: 3132405

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.22.2020 16:43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.22.2020 16:43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.22.2020 16:43	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	07.22.2020 16:43	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.22.2020 16:43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	07.22.2020 16:43	
o-Terphenyl	84-15-1	103	%	70-135	07.22.2020 16:43	



Certificate of Analytical Results 667911

LT Environmental, Inc., Arvada, CO

Ross Draw 25 N CTB

Sample Id: **BH01**
Lab Sample Id: 667911-001

Matrix: Soil
Date Collected: 07.22.2020 11:14

Date Received: 07.22.2020 13:19
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.22.2020 14:00

Basis: Wet Weight

Seq Number: 3132403

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.22.2020 19:35	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.22.2020 19:35	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.22.2020 19:35	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.22.2020 19:35	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.22.2020 19:35	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.22.2020 19:35	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.22.2020 19:35	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	100	%	70-130	07.22.2020 19:35		
4-Bromofluorobenzene	460-00-4	106	%	70-130	07.22.2020 19:35		



Certificate of Analytical Results 667911

LT Environmental, Inc., Arvada, CO

Ross Draw 25 N CTB

Sample Id: **BH01A** Matrix: Soil Date Received: 07.22.2020 13:19
 Lab Sample Id: 667911-002 Date Collected: 07.22.2020 10:17 Sample Depth: 1 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.22.2020 17:54 Basis: Wet Weight
 Seq Number: 3132399

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2290	200	mg/kg	07.23.2020 04:56		20

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.22.2020 16:30 Basis: Wet Weight
 Seq Number: 3132405

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.22.2020 17:03	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.22.2020 17:03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.22.2020 17:03	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	07.22.2020 17:03	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.22.2020 17:03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	07.22.2020 17:03	
o-Terphenyl	84-15-1	103	%	70-135	07.22.2020 17:03	



Certificate of Analytical Results 667911

LT Environmental, Inc., Arvada, CO

Ross Draw 25 N CTB

Sample Id: **BH01A**
Lab Sample Id: 667911-002

Matrix: Soil
Date Collected: 07.22.2020 10:17

Date Received: 07.22.2020 13:19
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.22.2020 14:00

Basis: Wet Weight

Seq Number: 3132403

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.22.2020 19:57	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.22.2020 19:57	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.22.2020 19:57	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	07.22.2020 19:57	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.22.2020 19:57	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.22.2020 19:57	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.22.2020 19:57	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	101	%	70-130	07.22.2020 19:57		
4-Bromofluorobenzene	460-00-4	107	%	70-130	07.22.2020 19:57		

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.

Ross Draw 25 N CTB

Analytical Method: Chloride by EPA 300

Seq Number: 3132399

MB Sample Id: 7707895-1-BLK

Matrix: Solid

LCS Sample Id: 7707895-1-BKS

Prep Method: E300P

Date Prep: 07.22.2020

LCSD Sample Id: 7707895-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	261	104	269	108	90-110	3	20	mg/kg	07.23.2020 02:58	

Analytical Method: Chloride by EPA 300

Seq Number: 3132399

Parent Sample Id: 667904-050

Matrix: Soil

MS Sample Id: 667904-050 S

Prep Method: E300P

Date Prep: 07.22.2020

MSD Sample Id: 667904-050 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	7470	201	7680	104	7670	101	90-110	0	20	mg/kg	07.23.2020 03:15	

Analytical Method: Chloride by EPA 300

Seq Number: 3132399

Parent Sample Id: 667904-060

Matrix: Soil

MS Sample Id: 667904-060 S

Prep Method: E300P

Date Prep: 07.22.2020

MSD Sample Id: 667904-060 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	129	200	338	105	338	105	90-110	0	20	mg/kg	07.23.2020 04:33	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3132405

MB Sample Id: 7707899-1-BLK

Matrix: Solid

LCS Sample Id: 7707899-1-BKS

Prep Method: SW8015P

Date Prep: 07.22.2020

LCSD Sample Id: 7707899-1-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	935	94	1010	101	70-135	8	35	mg/kg	07.22.2020 10:11	
Diesel Range Organics (DRO)	<50.0	1000	1040	104	1120	112	70-135	7	35	mg/kg	07.22.2020 10:11	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	108		122		126		70-135	%	07.22.2020 10:11
o-Terphenyl	109		110		118		70-135	%	07.22.2020 10:11

Analytical Method: TPH by SW8015 Mod

Seq Number: 3132405

Matrix: Solid

MB Sample Id: 7707899-1-BLK

Prep Method: SW8015P

Date Prep: 07.22.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	07.22.2020 09:50	

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.

Ross Draw 25 N CTB

Analytical Method: TPH by SW8015 Mod

Seq Number: 3132405

Parent Sample Id: 667902-007

Matrix: Soil

MS Sample Id: 667902-007 S

Prep Method: SW8015P

Date Prep: 07.22.2020

MSD Sample Id: 667902-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	863	86	878	88	70-135	2	35	mg/kg	07.22.2020 14:42	
Diesel Range Organics (DRO)	<50.0	1000	978	98	959	96	70-135	2	35	mg/kg	07.22.2020 14:42	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	115		117		70-135	%	07.22.2020 14:42
o-Terphenyl	110		105		70-135	%	07.22.2020 14:42

Analytical Method: BTEX by EPA 8021B

Seq Number: 3132403

MB Sample Id: 7707875-1-BLK

Matrix: Solid

LCS Sample Id: 7707875-1-BKS

Prep Method: SW5035A

Date Prep: 07.22.2020

LCSD Sample Id: 7707875-1-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	0.115	115	0.122	122	70-130	6	35	mg/kg	07.22.2020 15:28	
Toluene	<0.00200	0.100	0.110	110	0.116	116	70-130	5	35	mg/kg	07.22.2020 15:28	
Ethylbenzene	<0.00200	0.100	0.102	102	0.108	108	71-129	6	35	mg/kg	07.22.2020 15:28	
m,p-Xylenes	<0.00400	0.200	0.206	103	0.218	109	70-135	6	35	mg/kg	07.22.2020 15:28	
o-Xylene	<0.00200	0.100	0.102	102	0.108	108	71-133	6	35	mg/kg	07.22.2020 15:28	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		100		100		70-130	%	07.22.2020 15:28
4-Bromofluorobenzene	103		102		102		70-130	%	07.22.2020 15:28

Analytical Method: BTEX by EPA 8021B

Seq Number: 3132403

Parent Sample Id: 667902-007

Matrix: Soil

MS Sample Id: 667902-007 S

Prep Method: SW5035A

Date Prep: 07.22.2020

MSD Sample Id: 667902-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.125	126	0.113	113	70-130	10	35	mg/kg	07.22.2020 16:32	
Toluene	<0.00199	0.0996	0.117	117	0.106	106	70-130	10	35	mg/kg	07.22.2020 16:32	
Ethylbenzene	<0.00199	0.0996	0.110	110	0.0989	99	71-129	11	35	mg/kg	07.22.2020 16:32	
m,p-Xylenes	<0.00398	0.199	0.224	113	0.200	101	70-135	11	35	mg/kg	07.22.2020 16:32	
o-Xylene	<0.00199	0.0996	0.110	110	0.0985	99	71-133	11	35	mg/kg	07.22.2020 16:32	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		98		70-130	%	07.22.2020 16:32
4-Bromofluorobenzene	103		100		70-130	%	07.22.2020 16:32

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

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

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

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

Work Order No: 667911

Chain of Custody

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:	
City, State ZIP:	Midland, Tx 79705		City, State ZIP:	
Phone:	(432) 236-3849	Email:	wmnathner@ltenv.com, dmoir@ltenv.com	

Work Order Comments Program: UST/PST <input type="checkbox"/> RP <input type="checkbox"/> Growfields <input checked="" type="checkbox"/> RC <input type="checkbox"/> \$fund <input type="checkbox"/> State of Project: Reporting: Level II <input type="checkbox"/> Level III <input type="checkbox"/> PST/UST <input type="checkbox"/> RP <input checked="" type="checkbox"/> Level IV <input type="checkbox"/> Deliverables: EDD <input type="checkbox"/> ADAPT <input type="checkbox"/> Other: <input type="checkbox"/>	
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[illegible]

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

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

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

Received by OCD: 5/19/2021 10:07:25 AM

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 07.22.2020 01.19.00 PM

Work Order #: 667911

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

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

Samples received in bulk containers.

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

Analyst:

PH Device/Lot#:

Checklist completed by:



Elizabeth McClellan

Date: 07.22.2020

Checklist reviewed by:



Jessica Kramer

Date: 07.22.2020

Certificate of Analysis Summary 672898

LT Environmental, Inc., Arvada, CO

Project Name: Ross Draw 25 North CTB

Project Id: 012920108

Contact: Dan Moir

Project Location:

Date Received in Lab: Thu 09.17.2020 16:15

Report Date: 09.21.2020 12:16

Project Manager: Jessica Kramer

Analysis Requested	Lab Id: 672898-001 Field Id: BH01 B Depth: 2- ft Matrix: SOIL Sampled: 09.16.2020 10:45					
BTEX by EPA 8021B	Extracted: 09.18.2020 11:44 Analyzed: 09.18.2020 13:33 Units/RL: mg/kg RL					
Benzene	<0.00200 0.00200					
Toluene	<0.00200 0.00200					
Ethylbenzene	<0.00200 0.00200					
m,p-Xylenes	<0.00400 0.00400					
o-Xylene	<0.00200 0.00200					
Total Xylenes	<0.00200 0.00200					
Total BTEX	<0.00200 0.00200					
Chloride by EPA 300	Extracted: 09.17.2020 17:31 Analyzed: 09.17.2020 21:52 Units/RL: mg/kg RL					
Chloride	37.9 10.0					
TPH by SW8015 Mod	Extracted: 09.17.2020 17:20 Analyzed: 09.18.2020 05:16 Units/RL: mg/kg RL					
Gasoline Range Hydrocarbons (GRO)	<50.1 50.1					
Diesel Range Organics (DRO)	<50.1 50.1					
Motor Oil Range Hydrocarbons (MRO)	<50.1 50.1					
Total GRO-DRO	<50.1 50.1					
Total TPH	<50.1 50.1					

BRL - Below Reporting Limit

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





Environment Testing
Xenco

Analytical Report 672898

for

LT Environmental, Inc.

Project Manager: Dan Moir

Ross Draw 25 North CTB

012920108

09.21.2020

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 (2019-058), North Carolina (681), Arkansas (20-035-0)

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

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



09.21.2020

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: Eurofins Xenco, LLC Report No(s): **672898**

Ross Draw 25 North CTB

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) 672898. 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. 672898 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 672898

LT Environmental, Inc., Arvada, CO

Ross Draw 25 North CTB

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH01 B	S	09.16.2020 10:45	2 ft	672898-001



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Ross Draw 25 North CTB

Project ID: 012920108
Work Order Number(s): 672898

Report Date: 09.21.2020
Date Received: 09.17.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 672898

LT Environmental, Inc., Arvada, CO

Ross Draw 25 North CTB

Sample Id: **BH01 B** Matrix: Soil Date Received: 09.17.2020 16:15
 Lab Sample Id: 672898-001 Date Collected: 09.16.2020 10:45 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 09.17.2020 17:31 Basis: Wet Weight
 Seq Number: 3137499

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	37.9	10.0	mg/kg	09.17.2020 21:52		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 09.17.2020 17:20 Basis: Wet Weight
 Seq Number: 3137481

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	09.18.2020 05:16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	09.18.2020 05:16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	09.18.2020 05:16	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	09.18.2020 05:16	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	09.18.2020 05:16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	09.18.2020 05:16	
o-Terphenyl	84-15-1	88	%	70-135	09.18.2020 05:16	



Certificate of Analytical Results 672898

LT Environmental, Inc., Arvada, CO

Ross Draw 25 North CTB

Sample Id: **BH01 B**
Lab Sample Id: 672898-001

Matrix: Soil
Date Collected: 09.16.2020 10:45

Date Received: 09.17.2020 16:15
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 09.18.2020 11:44

Basis: Wet Weight

Seq Number: 3137632

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.18.2020 13:33	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.18.2020 13:33	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.18.2020 13:33	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	09.18.2020 13:33	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.18.2020 13:33	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.18.2020 13:33	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.18.2020 13:33	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	99	%	70-130	09.18.2020 13:33		
4-Bromofluorobenzene	460-00-4	87	%	70-130	09.18.2020 13:33		

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **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.

Ross Draw 25 North CTB

Analytical Method: Chloride by EPA 300

Seq Number: 3137499

MB Sample Id: 7711598-1-BLK

Matrix: Solid

LCS Sample Id: 7711598-1-BKS

Prep Method: E300P

Date Prep: 09.17.2020

LCSD Sample Id: 7711598-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	256	102	256	102	90-110	0	20	mg/kg	09.17.2020 19:46	

Analytical Method: Chloride by EPA 300

Seq Number: 3137499

Parent Sample Id: 672834-021

Matrix: Soil

MS Sample Id: 672834-021 S

Prep Method: E300P

Date Prep: 09.17.2020

MSD Sample Id: 672834-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	155	199	357	102	357	102	90-110	0	20	mg/kg	09.17.2020 20:03	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3137481

MB Sample Id: 7711555-1-BLK

Matrix: Solid

LCS Sample Id: 7711555-1-BKS

Prep Method: SW8015P

Date Prep: 09.17.2020

LCSD Sample Id: 7711555-1-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	834	83	822	82	70-135	1	35	mg/kg	09.17.2020 22:53	
Diesel Range Organics (DRO)	<50.0	1000	935	94	925	93	70-135	1	35	mg/kg	09.17.2020 22:53	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	129		122		121		70-135	%	09.17.2020 22:53
o-Terphenyl	124		117		113		70-135	%	09.17.2020 22:53

Analytical Method: TPH by SW8015 Mod

Seq Number: 3137481

Matrix: Solid

MB Sample Id: 7711555-1-BLK

Prep Method: SW8015P

Date Prep: 09.17.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	09.17.2020 22:33	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3137481

Matrix: Soil

Parent Sample Id: 672834-009

MS Sample Id: 672834-009 S

Prep Method: SW8015P

Date Prep: 09.17.2020

MSD Sample Id: 672834-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.9	998	824	83	861	86	70-135	4	35	mg/kg	09.17.2020 23:53	
Diesel Range Organics (DRO)	<49.9	998	906	91	938	94	70-135	3	35	mg/kg	09.17.2020 23:53	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	105		104		70-135	%	09.17.2020 23:53
o-Terphenyl	100		97		70-135	%	09.17.2020 23:53

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.

Ross Draw 25 North CTB

Analytical Method: BTEX by EPA 8021B

Seq Number: 3137632

Matrix: Solid

Prep Method: SW5035A

Date Prep: 09.18.2020

MB Sample Id: 7711605-1-BLK

LCS Sample Id: 7711605-1-BKS

LCSD Sample Id: 7711605-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.105	105	0.0937	94	70-130	11	35	mg/kg	09.18.2020 06:51	
Toluene	<0.00200	0.100	0.102	102	0.0906	91	70-130	12	35	mg/kg	09.18.2020 06:51	
Ethylbenzene	<0.00200	0.100	0.0940	94	0.0833	83	71-129	12	35	mg/kg	09.18.2020 06:51	
m,p-Xylenes	<0.00400	0.200	0.189	95	0.168	84	70-135	12	35	mg/kg	09.18.2020 06:51	
o-Xylene	<0.00200	0.100	0.0939	94	0.0835	84	71-133	12	35	mg/kg	09.18.2020 06:51	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		98		98		70-130	%	09.18.2020 06:51
4-Bromofluorobenzene	88		88		88		70-130	%	09.18.2020 06:51

Analytical Method: BTEX by EPA 8021B

Seq Number: 3137632

Matrix: Soil

Prep Method: SW5035A

Date Prep: 09.18.2020

Parent Sample Id: 672834-021

MS Sample Id: 672834-021 S

MSD Sample Id: 672834-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.120	120	0.123	123	70-130	2	35	mg/kg	09.18.2020 07:36	
Toluene	<0.00199	0.0996	0.114	114	0.118	118	70-130	3	35	mg/kg	09.18.2020 07:36	
Ethylbenzene	<0.00199	0.0996	0.104	104	0.109	109	71-129	5	35	mg/kg	09.18.2020 07:36	
m,p-Xylenes	<0.00398	0.199	0.208	105	0.218	108	70-135	5	35	mg/kg	09.18.2020 07:36	
o-Xylene	<0.00199	0.0996	0.102	102	0.107	107	71-133	5	35	mg/kg	09.18.2020 07:36	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		100		70-130	%	09.18.2020 07:36
4-Bromofluorobenzene	89		90		70-130	%	09.18.2020 07:36

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

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

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

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



Chain of Custody

Work Order No: 1077898

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334
Phoenix AZ (480-355-0900) Atlanta GA (770-449-8800) Tampa FL (813-575-392-7550)
Midland TX (432-704-5440) EL Paso, TX (915) 585-3443 Lubbock, TX (806) 94-1296

Hobbs, NM (575-392-7550) Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813-620-2000)

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 E Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.236.3849	Email:	bbeiliii@tenv.com

Work Order Comments Program: UST/PST <input type="checkbox"/> PRP <input type="checkbox"/> brownfields <input type="checkbox"/> RC <input type="checkbox"/> Superfund <input type="checkbox"/> State of Project: Reporting Level II <input type="checkbox"/> Level III <input type="checkbox"/> UST/UST <input type="checkbox"/> RRP <input type="checkbox"/> Level IV <input type="checkbox"/> Deliverables: EDD <input type="checkbox"/> ADAPT <input type="checkbox"/> Other:	
---	--

ANALYSIS REQUEST						
			Turn Around		Work Order Notes	
Project Name:	Ross Draw 23 North CTB					
Project Number:	4000 012520108	Routine	<input checked="" type="checkbox"/>			
P.O. Number:	N8.M2020924128	Rush:	3 Day			
Sampler's Name:	Benjamin Bellini	Due Date:				
SAMPLE RECEIPT						
Temperature (°C):	2.8/2.6	Temp Blank:	<input checked="" type="radio"/> Yes	No	Wet Ice:	<input checked="" type="radio"/> Yes No
Received Intact:	<input checked="" type="radio"/> Yes No	Thermometer ID				
Cooler Custody Seals:	Yes <input checked="" type="radio"/> No N/A	Correction Factor: -0.2				
Sample Custody Seals:	Yes <input checked="" type="radio"/> No N/A	Total Containers:	1			
Number of Containers						
(A 8015)						
(PA 0=8021)						
(EPA 300.0)						
TAT starts the day received by the lab, if received by 4:30pm						

[illegible]

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	9/17/2016 15:15			

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 09.17.2020 04.15.00 PM

Work Order #: 672898

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T_NM_007

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

Samples received in bulk containers.

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

Analyst:

PH Device/Lot#:

Checklist completed by:



Cloe Clifton

Date: 09.17.2020

Checklist reviewed by:



Jessica Kramer

Date: 09.21.2020

Certificate of Analysis Summary 672899

LT Environmental, Inc., Arvada, CO

Project Name: Ross Draw 25 North CTB

Project Id: 012920108

Contact: Dan Moir

Project Location:

Date Received in Lab: Thu 09.17.2020 16:19

Report Date: 09.21.2020 11:45

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	672899-001	672899-002				
	Field Id:	CH01	CH01 A				
	Depth:	0.5- ft	2- ft				
	Matrix:	SOIL	SOIL				
	Sampled:	09.16.2020 12:50	09.16.2020 13:10				
BTEX by EPA 8021B	Extracted:	09.18.2020 11:44	09.18.2020 11:44				
	Analyzed:	09.18.2020 13:56	09.18.2020 14:18				
	Units/RL:	mg/kg RL	mg/kg RL				
		<0.00201 0.00201	<0.00198 0.00198				
Benzene		<0.00201 0.00201	<0.00198 0.00198				
Toluene		<0.00201 0.00201	<0.00198 0.00198				
Ethylbenzene		<0.00201 0.00201	<0.00198 0.00198				
m,p-Xylenes		<0.00402 0.00402	<0.00396 0.00396				
o-Xylene		<0.00201 0.00201	<0.00198 0.00198				
Total Xylenes		<0.00201 0.00201	<0.00198 0.00198				
Total BTEX		<0.00201 0.00201	<0.00198 0.00198				
Chloride by EPA 300	Extracted:	09.17.2020 17:31	09.17.2020 17:31				
	Analyzed:	09.17.2020 21:58	09.17.2020 22:03				
	Units/RL:	mg/kg RL	mg/kg RL				
		48.7 10.0	17.3 10.1				
Chloride		48.7 10.0	17.3 10.1				
TPH by SW8015 Mod	Extracted:	09.17.2020 17:20	09.17.2020 17:20				
	Analyzed:	09.18.2020 05:36	09.18.2020 05:55				
	Units/RL:	mg/kg RL	mg/kg RL				
		<49.9 49.9	<49.8 49.8				
Gasoline Range Hydrocarbons (GRO)		<49.9 49.9	<49.8 49.8				
Diesel Range Organics (DRO)		<49.9 49.9	<49.8 49.8				
Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9	<49.8 49.8				
Total GRO-DRO		<49.9 49.9	<49.8 49.8				
Total TPH		<49.9 49.9	<49.8 49.8				

BRL - Below Reporting Limit

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





Analytical Report 672899

for

LT Environmental, Inc.

Project Manager: Dan Moir

Ross Draw 25 North CTB

012920108

09.21.2020

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 (2019-058), North Carolina (681), Arkansas (20-035-0)

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

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



09.21.2020

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: Eurofins Xenco, LLC Report No(s): **672899**

Ross Draw 25 North CTB

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) 672899. 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. 672899 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 672899

LT Environmental, Inc., Arvada, CO

Ross Draw 25 North CTB

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
CH01	S	09.16.2020 12:50	0.5 ft	672899-001
CH01 A	S	09.16.2020 13:10	2 ft	672899-002



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Ross Draw 25 North CTB

Project ID: 012920108

Work Order Number(s): 672899

Report Date: 09.21.2020

Date Received: 09.17.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 672899

LT Environmental, Inc., Arvada, CO

Ross Draw 25 North CTB

Sample Id: **CH01** Matrix: Soil Date Received: 09.17.2020 16:19
 Lab Sample Id: 672899-001 Date Collected: 09.16.2020 12:50 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 09.17.2020 17:31 Basis: Wet Weight
 Seq Number: 3137499

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	48.7	10.0	mg/kg	09.17.2020 21:58		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 09.17.2020 17:20 Basis: Wet Weight
 Seq Number: 3137481

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	09.18.2020 05:36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	09.18.2020 05:36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	09.18.2020 05:36	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	09.18.2020 05:36	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	09.18.2020 05:36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	09.18.2020 05:36	
o-Terphenyl	84-15-1	94	%	70-135	09.18.2020 05:36	



Certificate of Analytical Results 672899

LT Environmental, Inc., Arvada, CO

Ross Draw 25 North CTB

Sample Id: **CH01**
Lab Sample Id: 672899-001

Matrix: Soil
Date Collected: 09.16.2020 12:50

Date Received: 09.17.2020 16:19
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 09.18.2020 11:44

Basis: Wet Weight

Seq Number: 3137632

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	09.18.2020 13:56	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	09.18.2020 13:56	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	09.18.2020 13:56	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	09.18.2020 13:56	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	09.18.2020 13:56	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	09.18.2020 13:56	U	1
Total BTEX		<0.00201	0.00201	mg/kg	09.18.2020 13:56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	89	%	70-130	09.18.2020 13:56	
1,4-Difluorobenzene	540-36-3	102	%	70-130	09.18.2020 13:56	



Certificate of Analytical Results 672899

LT Environmental, Inc., Arvada, CO

Ross Draw 25 North CTB

Sample Id: **CH01 A** Matrix: Soil Date Received: 09.17.2020 16:19
 Lab Sample Id: 672899-002 Date Collected: 09.16.2020 13:10 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 09.17.2020 17:31 Basis: Wet Weight
 Seq Number: 3137499

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	17.3	10.1	mg/kg	09.17.2020 22:03		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 09.17.2020 17:20 Basis: Wet Weight
 Seq Number: 3137481

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	09.18.2020 05:55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	09.18.2020 05:55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	09.18.2020 05:55	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	09.18.2020 05:55	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	09.18.2020 05:55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	09.18.2020 05:55	
o-Terphenyl	84-15-1	94	%	70-135	09.18.2020 05:55	



Certificate of Analytical Results 672899

LT Environmental, Inc., Arvada, CO

Ross Draw 25 North CTB

Sample Id: **CH01 A**
Lab Sample Id: 672899-002

Matrix: Soil
Date Collected: 09.16.2020 13:10

Date Received: 09.17.2020 16:19
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 09.18.2020 11:44

Basis: Wet Weight

Seq Number: 3137632

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	09.18.2020 14:18	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	09.18.2020 14:18	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	09.18.2020 14:18	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	09.18.2020 14:18	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	09.18.2020 14:18	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	09.18.2020 14:18	U	1
Total BTEX		<0.00198	0.00198	mg/kg	09.18.2020 14:18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	09.18.2020 14:18	
4-Bromofluorobenzene	460-00-4	90	%	70-130	09.18.2020 14:18	

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



LT Environmental, Inc.

Ross Draw 25 North CTB

Analytical Method: Chloride by EPA 300

Seq Number: 3137499

MB Sample Id: 7711598-1-BLK

Matrix: Solid

LCS Sample Id: 7711598-1-BKS

Prep Method: E300P

Date Prep: 09.17.2020

LCSD Sample Id: 7711598-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	256	102	256	102	90-110	0	20	mg/kg	09.17.2020 19:46	

Analytical Method: Chloride by EPA 300

Seq Number: 3137499

Parent Sample Id: 672834-021

Matrix: Soil

MS Sample Id: 672834-021 S

Prep Method: E300P

Date Prep: 09.17.2020

MSD Sample Id: 672834-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	155	199	357	102	357	102	90-110	0	20	mg/kg	09.17.2020 20:03	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3137481

MB Sample Id: 7711555-1-BLK

Matrix: Solid

LCS Sample Id: 7711555-1-BKS

Prep Method: SW8015P

Date Prep: 09.17.2020

LCSD Sample Id: 7711555-1-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	834	83	822	82	70-135	1	35	mg/kg	09.17.2020 22:53	
Diesel Range Organics (DRO)	<50.0	1000	935	94	925	93	70-135	1	35	mg/kg	09.17.2020 22:53	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	129		122		121		70-135	%	09.17.2020 22:53
o-Terphenyl	124		117		113		70-135	%	09.17.2020 22:53

Analytical Method: TPH by SW8015 Mod

Seq Number: 3137481

Matrix: Solid

MB Sample Id: 7711555-1-BLK

Prep Method: SW8015P

Date Prep: 09.17.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	09.17.2020 22:33	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3137481

Matrix: Soil

Parent Sample Id: 672834-009

MS Sample Id: 672834-009 S

Prep Method: SW8015P

Date Prep: 09.17.2020

MSD Sample Id: 672834-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.9	998	824	83	861	86	70-135	4	35	mg/kg	09.17.2020 23:53	
Diesel Range Organics (DRO)	<49.9	998	906	91	938	94	70-135	3	35	mg/kg	09.17.2020 23:53	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	105		104		70-135	%	09.17.2020 23:53
o-Terphenyl	100		97		70-135	%	09.17.2020 23:53

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.

Ross Draw 25 North CTB

Analytical Method: BTEX by EPA 8021B

Seq Number: 3137632

MB Sample Id: 7711605-1-BLK

Matrix: Solid

LCS Sample Id: 7711605-1-BKS

Prep Method: SW5035A

Date Prep: 09.18.2020

LCSD Sample Id: 7711605-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.105	105	0.0937	94	70-130	11	35	mg/kg	09.18.2020 06:51	
Toluene	<0.00200	0.100	0.102	102	0.0906	91	70-130	12	35	mg/kg	09.18.2020 06:51	
Ethylbenzene	<0.00200	0.100	0.0940	94	0.0833	83	71-129	12	35	mg/kg	09.18.2020 06:51	
m,p-Xylenes	<0.00400	0.200	0.189	95	0.168	84	70-135	12	35	mg/kg	09.18.2020 06:51	
o-Xylene	<0.00200	0.100	0.0939	94	0.0835	84	71-133	12	35	mg/kg	09.18.2020 06:51	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		98		98		70-130	%	09.18.2020 06:51
4-Bromofluorobenzene	88		88		88		70-130	%	09.18.2020 06:51

Analytical Method: BTEX by EPA 8021B

Seq Number: 3137632

Parent Sample Id: 672834-021

Matrix: Soil

MS Sample Id: 672834-021 S

Prep Method: SW5035A

Date Prep: 09.18.2020

MSD Sample Id: 672834-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.120	120	0.123	123	70-130	2	35	mg/kg	09.18.2020 07:36	
Toluene	<0.00199	0.0996	0.114	114	0.118	118	70-130	3	35	mg/kg	09.18.2020 07:36	
Ethylbenzene	<0.00199	0.0996	0.104	104	0.109	109	71-129	5	35	mg/kg	09.18.2020 07:36	
m,p-Xylenes	<0.00398	0.199	0.208	105	0.218	108	70-135	5	35	mg/kg	09.18.2020 07:36	
o-Xylene	<0.00199	0.0996	0.102	102	0.107	107	71-133	5	35	mg/kg	09.18.2020 07:36	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		100		70-130	%	09.18.2020 07:36
4-Bromofluorobenzene	89		90		70-130	%	09.18.2020 07:36

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

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

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

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



Chain of Custody

Work Order No. 672899

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 (770-445-8800) Tampa, FL (813-251-1111)

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Page 1 of 1

Hobbs, NM (575-392-7550)				Phoenix, AZ (480-355-0900)				Atlanta, GA (770-449-8800)				Tampa, FL (813-291-1111)			
Project Manager:		Dan Moir				Bill to: (if different)		Kyle Littlell							
Company Name:		LT Environmental, Inc., Permian office				Company Name:		XTO Energy							
Address:		3300 North A Street				Address:		3104 E Green Street							
City, State ZIP:		Midland, TX 79705				City, State ZIP:		Carlsbad, NM 88220							
Phone:		432.236.3849				Email:		bbelliii@ltenv.com							

Work Order Comments									
Program: UST/ST <input type="checkbox"/> PRP <input type="checkbox"/> Brownfields <input type="checkbox"/> RC <input type="checkbox"/> Superfund <input type="checkbox"/>									
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 <input type="checkbox"/>									
Deliverables: EDD <input type="checkbox"/> ADAPT <input type="checkbox"/> Other:									

Project Name:	Ross Draw 25 North CTB	Turn Around
Project Number:	012470108	Routine <input checked="" type="checkbox"/>
P.O. Number:	NAM2020924128	Rush: <i>3 day</i>
Sampler's Name:	Benjamin Bellil	Due Date:

SAMPLE RECEIPT		Temp Blank:	Yes	No	Wet Ice:	Yes	No
Temperature (°C):		0.8/0.4					
Received Intact:		Yes No			Thermometer ID		
Cooler Custody Seals:		Yes No			N/A		
Sample Custody Seals:		Yes No			N/A		
					Correction Factor:	-0.2	
					Total Containers:	2	

[illegible]

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

1631 / 245.1 / 7470 / 7471 : Hg

Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions for 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>St. Selt</i>	<i>Che Ciffen</i>	<i>9/17/2016 15</i>			

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 09.17.2020 04.19.00 PM

Work Order #: 672899

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T_NM-007

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

Samples received in bulk containers.

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

Analyst:

PH Device/Lot#:

Checklist completed by:



Cloe Clifton

Date: 09.17.2020

Checklist reviewed by:



Jessica Kramer

Date: 09.18.2020

Certificate of Analysis Summary 672900

LT Environmental, Inc., Arvada, CO

Project Name: Ross Draw 25 North CTB

Project Id: 012920108

Contact: Dan Moir

Project Location:

Date Received in Lab: Thu 09.17.2020 16:19

Report Date: 09.21.2020 11:46

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	672900-001	672900-002				
	Field Id:	CH02	CH02 A				
	Depth:	0.5- ft	2- ft				
	Matrix:	SOIL	SOIL				
	Sampled:	09.16.2020 10:10	09.16.2020 10:30				
BTEX by EPA 8021B	Extracted:	09.18.2020 11:44	09.18.2020 11:44				
	Analyzed:	09.18.2020 14:41	09.18.2020 15:03				
	Units/RL:	mg/kg RL	mg/kg RL				
		<0.00200 0.00200	<0.00201 0.00201				
Benzene		<0.00200 0.00200	<0.00201 0.00201				
Toluene		<0.00200 0.00200	<0.00201 0.00201				
Ethylbenzene		<0.00200 0.00200	<0.00201 0.00201				
m,p-Xylenes		<0.00399 0.00399	<0.00402 0.00402				
o-Xylene		<0.00200 0.00200	<0.00201 0.00201				
Total Xylenes		<0.00200 0.00200	<0.00201 0.00201				
Total BTEX		<0.00200 0.00200	<0.00201 0.00201				
Chloride by EPA 300	Extracted:	09.17.2020 17:31	09.17.2020 17:31				
	Analyzed:	09.17.2020 22:09	09.17.2020 22:14				
	Units/RL:	mg/kg RL	mg/kg RL				
		216 50.4	22.6 9.90				
Chloride							
TPH by SW8015 Mod	Extracted:	09.17.2020 17:20	09.17.2020 17:20				
	Analyzed:	09.18.2020 06:16	09.18.2020 06:36				
	Units/RL:	mg/kg RL	mg/kg RL				
		<49.8 49.8	<49.8 49.8				
Gasoline Range Hydrocarbons (GRO)		<49.8 49.8	<49.8 49.8				
Diesel Range Organics (DRO)		<49.8 49.8	<49.8 49.8				
Motor Oil Range Hydrocarbons (MRO)		<49.8 49.8	<49.8 49.8				
Total GRO-DRO		<49.8 49.8	<49.8 49.8				
Total TPH		<49.8 49.8	<49.8 49.8				

BRL - Below Reporting Limit

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





Environment Testing
Xenco

Analytical Report 672900

for

LT Environmental, Inc.

Project Manager: Dan Moir

Ross Draw 25 North CTB

012920108

09.21.2020

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 (2019-058), North Carolina (681), Arkansas (20-035-0)

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

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



09.21.2020

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: Eurofins Xenco, LLC Report No(s): **672900**

Ross Draw 25 North CTB

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) 672900. 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. 672900 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Project Manager

A Small Business and Minority Company

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



Sample Cross Reference 672900

LT Environmental, Inc., Arvada, CO

Ross Draw 25 North CTB

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
CH02	S	09.16.2020 10:10	0.5 ft	672900-001
CH02 A	S	09.16.2020 10:30	2 ft	672900-002



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Ross Draw 25 North CTB

Project ID: 012920108

Work Order Number(s): 672900

Report Date: 09.21.2020

Date Received: 09.17.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 672900

LT Environmental, Inc., Arvada, CO

Ross Draw 25 North CTB

Sample Id: **CH02** Matrix: Soil Date Received: 09.17.2020 16:19
 Lab Sample Id: 672900-001 Date Collected: 09.16.2020 10:10 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 09.17.2020 17:31 Basis: Wet Weight
 Seq Number: 3137499

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	216	50.4	mg/kg	09.17.2020 22:09		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 09.17.2020 17:20 Basis: Wet Weight
 Seq Number: 3137481

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	09.18.2020 06:16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	09.18.2020 06:16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	09.18.2020 06:16	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	09.18.2020 06:16	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	09.18.2020 06:16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	09.18.2020 06:16	
o-Terphenyl	84-15-1	93	%	70-135	09.18.2020 06:16	



Certificate of Analytical Results 672900

LT Environmental, Inc., Arvada, CO

Ross Draw 25 North CTB

Sample Id: **CH02**
Lab Sample Id: 672900-001

Matrix: Soil
Date Collected: 09.16.2020 10:10

Date Received: 09.17.2020 16:19
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 09.18.2020 11:44

Basis: Wet Weight

Seq Number: 3137632

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.18.2020 14:41	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.18.2020 14:41	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.18.2020 14:41	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	09.18.2020 14:41	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.18.2020 14:41	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.18.2020 14:41	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.18.2020 14:41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	94	%	70-130	09.18.2020 14:41	
1,4-Difluorobenzene	540-36-3	102	%	70-130	09.18.2020 14:41	



Certificate of Analytical Results 672900

LT Environmental, Inc., Arvada, CO

Ross Draw 25 North CTB

Sample Id: **CH02 A** Matrix: Soil Date Received: 09.17.2020 16:19
 Lab Sample Id: 672900-002 Date Collected: 09.16.2020 10:30 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 09.17.2020 17:31 Basis: Wet Weight
 Seq Number: 3137499

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	22.6	9.90	mg/kg	09.17.2020 22:14		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 09.17.2020 17:20 Basis: Wet Weight
 Seq Number: 3137481

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	09.18.2020 06:36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	09.18.2020 06:36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	09.18.2020 06:36	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	09.18.2020 06:36	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	09.18.2020 06:36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	09.18.2020 06:36	
o-Terphenyl	84-15-1	89	%	70-135	09.18.2020 06:36	



Certificate of Analytical Results 672900

LT Environmental, Inc., Arvada, CO

Ross Draw 25 North CTB

Sample Id: **CH02 A**
Lab Sample Id: 672900-002

Matrix: Soil
Date Collected: 09.16.2020 10:30

Date Received: 09.17.2020 16:19
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 09.18.2020 11:44

Basis: Wet Weight

Seq Number: 3137632

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	09.18.2020 15:03	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	09.18.2020 15:03	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	09.18.2020 15:03	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	09.18.2020 15:03	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	09.18.2020 15:03	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	09.18.2020 15:03	U	1
Total BTEX		<0.00201	0.00201	mg/kg	09.18.2020 15:03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	94	%	70-130	09.18.2020 15:03	
1,4-Difluorobenzene	540-36-3	103	%	70-130	09.18.2020 15:03	

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.

Ross Draw 25 North CTB

Analytical Method: Chloride by EPA 300

Seq Number: 3137499

MB Sample Id: 7711598-1-BLK

Matrix: Solid

LCS Sample Id: 7711598-1-BKS

Prep Method: E300P

Date Prep: 09.17.2020

LCSD Sample Id: 7711598-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	256	102	256	102	90-110	0	20	mg/kg	09.17.2020 19:46	

Analytical Method: Chloride by EPA 300

Seq Number: 3137499

Parent Sample Id: 672834-021

Matrix: Soil

MS Sample Id: 672834-021 S

Prep Method: E300P

Date Prep: 09.17.2020

MSD Sample Id: 672834-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	155	199	357	102	357	102	90-110	0	20	mg/kg	09.17.2020 20:03	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3137481

MB Sample Id: 7711555-1-BLK

Matrix: Solid

LCS Sample Id: 7711555-1-BKS

Prep Method: SW8015P

Date Prep: 09.17.2020

LCSD Sample Id: 7711555-1-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	834	83	822	82	70-135	1	35	mg/kg	09.17.2020 22:53	
Diesel Range Organics (DRO)	<50.0	1000	935	94	925	93	70-135	1	35	mg/kg	09.17.2020 22:53	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	129		122		121		70-135	%	09.17.2020 22:53
o-Terphenyl	124		117		113		70-135	%	09.17.2020 22:53

Analytical Method: TPH by SW8015 Mod

Seq Number: 3137481

Matrix: Solid

MB Sample Id: 7711555-1-BLK

Prep Method: SW8015P

Date Prep: 09.17.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	09.17.2020 22:33	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3137481

Matrix: Soil

Parent Sample Id: 672834-009

MS Sample Id: 672834-009 S

Prep Method: SW8015P

Date Prep: 09.17.2020

MSD Sample Id: 672834-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.9	998	824	83	861	86	70-135	4	35	mg/kg	09.17.2020 23:53	
Diesel Range Organics (DRO)	<49.9	998	906	91	938	94	70-135	3	35	mg/kg	09.17.2020 23:53	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	105		104		70-135	%	09.17.2020 23:53
o-Terphenyl	100		97		70-135	%	09.17.2020 23:53

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.

Ross Draw 25 North CTB

Analytical Method: BTEX by EPA 8021B

Seq Number: 3137632

Matrix: Solid

Prep Method: SW5035A

Date Prep: 09.18.2020

MB Sample Id: 7711605-1-BLK

LCS Sample Id: 7711605-1-BKS

LCSD Sample Id: 7711605-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.105	105	0.0937	94	70-130	11	35	mg/kg	09.18.2020 06:51	
Toluene	<0.00200	0.100	0.102	102	0.0906	91	70-130	12	35	mg/kg	09.18.2020 06:51	
Ethylbenzene	<0.00200	0.100	0.0940	94	0.0833	83	71-129	12	35	mg/kg	09.18.2020 06:51	
m,p-Xylenes	<0.00400	0.200	0.189	95	0.168	84	70-135	12	35	mg/kg	09.18.2020 06:51	
o-Xylene	<0.00200	0.100	0.0939	94	0.0835	84	71-133	12	35	mg/kg	09.18.2020 06:51	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		98		98		70-130	%	09.18.2020 06:51
4-Bromofluorobenzene	88		88		88		70-130	%	09.18.2020 06:51

Analytical Method: BTEX by EPA 8021B

Seq Number: 3137632

Matrix: Soil

Prep Method: SW5035A

Date Prep: 09.18.2020

Parent Sample Id: 672834-021

MS Sample Id: 672834-021 S

MSD Sample Id: 672834-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.120	120	0.123	123	70-130	2	35	mg/kg	09.18.2020 07:36	
Toluene	<0.00199	0.0996	0.114	114	0.118	118	70-130	3	35	mg/kg	09.18.2020 07:36	
Ethylbenzene	<0.00199	0.0996	0.104	104	0.109	109	71-129	5	35	mg/kg	09.18.2020 07:36	
m,p-Xylenes	<0.00398	0.199	0.208	105	0.218	108	70-135	5	35	mg/kg	09.18.2020 07:36	
o-Xylene	<0.00199	0.0996	0.102	102	0.107	107	71-133	5	35	mg/kg	09.18.2020 07:36	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		100		70-130	%	09.18.2020 07:36
4-Bromofluorobenzene	89		90		70-130	%	09.18.2020 07:36

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

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

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

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

Work Order No: 1072900

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 E Green Street	
City, State ZIP: Midland, TX 79705		City, State ZIP: Carlsbad, NM 88220	
Phone: 432.236.3849		Email: lbellell@ltenv.com	

Program: UST/PT <input type="checkbox"/> PRP <input type="checkbox"/> brownfields <input type="checkbox"/> RC <input type="checkbox"/> superfund <input type="checkbox"/>	
State of Project:	
Reporting Level II <input type="checkbox"/> Level III <input type="checkbox"/> PST/UST <input type="checkbox"/> RRP <input type="checkbox"/> Level IV <input type="checkbox"/>	
Deliverables: EDD <input type="checkbox"/> ADAPT <input type="checkbox"/> Other:	

[illegible][illegible]

Total 200.7 / 6010	200.8 / 6020:	8RCRA 13PPM	Texas	11	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	SiO2	Na	Sr	Ti	Sn	U	V	Zn
<i>Circle Method(s) and Metal(s) to be analyzed</i>		TCLP / SPLP		6010:	8RCRA	Sb	As	Ba	Be	Cd	Cr	Co	Cu	Pb	Mn	Mo	Ni	Se	Ag	Ti	U										
					1631	245.1	77470	77471	: Hg																						

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	9/17/2016 15			

Revised Date 05/4/18 Rev. 2018.1

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 09.17.2020 04.19.00 PM

Work Order #: 672900

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T_NM_007

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

Samples received in bulk containers.

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

Analyst:

PH Device/Lot#:

Checklist completed by:



Cloe Clifton

Date: 09.17.2020

Checklist reviewed by:



Jessica Kramer

Date: 09.18.2020

Certificate of Analysis Summary 672901

LT Environmental, Inc., Arvada, CO

Project Name: Ross Draw 25 North CTB

Project Id: 012920108

Contact: Dan Moir

Project Location:

Date Received in Lab: Thu 09.17.2020 16:19

Report Date: 09.21.2020 12:17

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	672901-001	672901-002				
	Field Id:	CH03	CH03 A				
	Depth:	0.5- ft	2- ft				
	Matrix:	SOIL	SOIL				
	Sampled:	09.16.2020 11:07	09.16.2020 11:20				
BTEX by EPA 8021B	Extracted:	09.18.2020 11:44	09.18.2020 11:44				
	Analyzed:	09.18.2020 15:26	09.18.2020 15:48				
	Units/RL:	mg/kg RL	mg/kg RL				
Benzene		<0.00200 0.00200	<0.00200 0.00200				
Toluene		<0.00200 0.00200	<0.00200 0.00200				
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200				
m,p-Xylenes		<0.00400 0.00400	<0.00399 0.00399				
o-Xylene		<0.00200 0.00200	<0.00200 0.00200				
Total Xylenes		<0.00200 0.00200	<0.00200 0.00200				
Total BTEX		<0.00200 0.00200	<0.00200 0.00200				
Chloride by EPA 300	Extracted:	09.17.2020 17:31	09.17.2020 17:31				
	Analyzed:	09.17.2020 22:20	09.17.2020 22:25				
	Units/RL:	mg/kg RL	mg/kg RL				
Chloride		300 50.4	145 49.9				
TPH by SW8015 Mod	Extracted:	09.17.2020 17:20	09.18.2020 10:30				
	Analyzed:	09.18.2020 06:56	09.18.2020 13:15				
	Units/RL:	mg/kg RL	mg/kg RL				
Gasoline Range Hydrocarbons (GRO)		<49.8 49.8	<50.0 50.0				
Diesel Range Organics (DRO)		<49.8 49.8	<50.0 50.0				
Motor Oil Range Hydrocarbons (MRO)		<49.8 49.8	<50.0 50.0				
Total GRO-DRO		<49.8 49.8	<50.0 50.0				
Total TPH		<49.8 49.8	<50.0 50.0				

BRL - Below Reporting Limit

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





Analytical Report 672901

for

LT Environmental, Inc.

Project Manager: Dan Moir

Ross Draw 25 North CTB

012920108

09.21.2020

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 (2019-058), North Carolina (681), Arkansas (20-035-0)

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

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



09.21.2020

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: Eurofins Xenco, LLC Report No(s): **672901**

Ross Draw 25 North CTB

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) 672901. 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. 672901 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 672901

LT Environmental, Inc., Arvada, CO

Ross Draw 25 North CTB

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
CH03	S	09.16.2020 11:07	0.5 ft	672901-001
CH03 A	S	09.16.2020 11:20	2 ft	672901-002



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Ross Draw 25 North CTB

Project ID: 012920108

Work Order Number(s): 672901

Report Date: 09.21.2020

Date Received: 09.17.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 672901

LT Environmental, Inc., Arvada, CO

Ross Draw 25 North CTB

Sample Id: **CH03** Matrix: Soil Date Received: 09.17.2020 16:19
 Lab Sample Id: 672901-001 Date Collected: 09.16.2020 11:07 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 09.17.2020 17:31 Basis: Wet Weight
 Seq Number: 3137499

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	300	50.4	mg/kg	09.17.2020 22:20		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 09.17.2020 17:20 Basis: Wet Weight
 Seq Number: 3137481

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	09.18.2020 06:56	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	09.18.2020 06:56	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	09.18.2020 06:56	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	09.18.2020 06:56	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	09.18.2020 06:56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	09.18.2020 06:56	
o-Terphenyl	84-15-1	95	%	70-135	09.18.2020 06:56	



Certificate of Analytical Results 672901

LT Environmental, Inc., Arvada, CO

Ross Draw 25 North CTB

Sample Id: **CH03**
Lab Sample Id: 672901-001

Matrix: Soil
Date Collected: 09.16.2020 11:07

Date Received: 09.17.2020 16:19
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 09.18.2020 11:44

Basis: Wet Weight

Seq Number: 3137632

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.18.2020 15:26	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.18.2020 15:26	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.18.2020 15:26	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	09.18.2020 15:26	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.18.2020 15:26	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.18.2020 15:26	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.18.2020 15:26	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	95	%	70-130	09.18.2020 15:26		
1,4-Difluorobenzene	540-36-3	103	%	70-130	09.18.2020 15:26		



Certificate of Analytical Results 672901

LT Environmental, Inc., Arvada, CO

Ross Draw 25 North CTB

Sample Id: **CH03 A** Matrix: Soil Date Received: 09.17.2020 16:19
 Lab Sample Id: 672901-002 Date Collected: 09.16.2020 11:20 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 09.17.2020 17:31 Basis: Wet Weight
 Seq Number: 3137499

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	145	49.9	mg/kg	09.17.2020 22:25		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 09.18.2020 10:30 Basis: Wet Weight
 Seq Number: 3137547

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	09.18.2020 13:15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	09.18.2020 13:15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.18.2020 13:15	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	09.18.2020 13:15	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.18.2020 13:15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	09.18.2020 13:15	
o-Terphenyl	84-15-1	90	%	70-135	09.18.2020 13:15	



Certificate of Analytical Results 672901

LT Environmental, Inc., Arvada, CO

Ross Draw 25 North CTB

Sample Id: **CH03 A**
Lab Sample Id: 672901-002

Matrix: Soil
Date Collected: 09.16.2020 11:20

Date Received: 09.17.2020 16:19
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 09.18.2020 11:44

Basis: Wet Weight

Seq Number: 3137632

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.18.2020 15:48	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.18.2020 15:48	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.18.2020 15:48	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	09.18.2020 15:48	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.18.2020 15:48	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.18.2020 15:48	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.18.2020 15:48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	88	%	70-130	09.18.2020 15:48	
1,4-Difluorobenzene	540-36-3	98	%	70-130	09.18.2020 15:48	

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



LT Environmental, Inc.

Ross Draw 25 North CTB

Analytical Method: Chloride by EPA 300

Seq Number: 3137499

MB Sample Id: 7711598-1-BLK

Matrix: Solid

Prep Method: E300P

Date Prep: 09.17.2020

LCS Sample Id: 7711598-1-BKS

LCSD Sample Id: 7711598-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	256	102	256	102	90-110	0	20	mg/kg	09.17.2020 19:46	

Analytical Method: Chloride by EPA 300

Seq Number: 3137499

Parent Sample Id: 672834-021

Matrix: Soil

Prep Method: E300P

Date Prep: 09.17.2020

MS Sample Id: 672834-021 S

MSD Sample Id: 672834-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	155	199	357	102	357	102	90-110	0	20	mg/kg	09.17.2020 20:03	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3137481

MB Sample Id: 7711555-1-BLK

Matrix: Solid

Prep Method: SW8015P

Date Prep: 09.17.2020

LCS Sample Id: 7711555-1-BKS

LCSD Sample Id: 7711555-1-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	834	83	822	82	70-135	1	35	mg/kg	09.17.2020 22:53	
Diesel Range Organics (DRO)	<50.0	1000	935	94	925	93	70-135	1	35	mg/kg	09.17.2020 22:53	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	129		122		121		70-135	%	09.17.2020 22:53
o-Terphenyl	124		117		113		70-135	%	09.17.2020 22:53

Analytical Method: TPH by SW8015 Mod

Seq Number: 3137547

MB Sample Id: 7711587-1-BLK

Matrix: Solid

Prep Method: SW8015P

Date Prep: 09.18.2020

LCS Sample Id: 7711587-1-BKS

LCSD Sample Id: 7711587-1-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	832	83	800	80	70-135	4	35	mg/kg	09.18.2020 10:13	
Diesel Range Organics (DRO)	<50.0	1000	909	91	812	81	70-135	11	35	mg/kg	09.18.2020 10:13	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	135		111		92		70-135	%	09.18.2020 10:13
o-Terphenyl	135		103		78		70-135	%	09.18.2020 10:13

Analytical Method: TPH by SW8015 Mod

Seq Number: 3137481

Matrix: Solid
MB Sample Id: 7711555-1-BLK

Prep Method: SW8015P

Date Prep: 09.17.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	09.17.2020 22:33	

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.

Ross Draw 25 North CTB

Analytical Method: TPH by SW8015 Mod

Seq Number: 3137547

Matrix: Solid

Prep Method: SW8015P

Date Prep: 09.18.2020

MB Sample Id: 7711587-1-BLK

Parameter

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	09.18.2020 09:53	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3137481

Matrix: Soil

Prep Method: SW8015P

Date Prep: 09.17.2020

Parent Sample Id: 672834-009

MS Sample Id: 672834-009 S

MSD Sample Id: 672834-009 SD

Parameter

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.9	998	824	83	861	86	70-135	4	35	mg/kg	09.17.2020 23:53	
Diesel Range Organics (DRO)	<49.9	998	906	91	938	94	70-135	3	35	mg/kg	09.17.2020 23:53	

Surrogate

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	105		104		70-135	%	09.17.2020 23:53
o-Terphenyl	100		97		70-135	%	09.17.2020 23:53

Analytical Method: TPH by SW8015 Mod

Seq Number: 3137547

Matrix: Soil

Prep Method: SW8015P

Date Prep: 09.18.2020

Parent Sample Id: 672935-001

MS Sample Id: 672935-001 S

MSD Sample Id: 672935-001 SD

Parameter

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.3	1010	834	83	767	77	70-135	8	35	mg/kg	09.18.2020 11:14	
Diesel Range Organics (DRO)	<50.3	1010	907	90	838	84	70-135	8	35	mg/kg	09.18.2020 11:14	

Surrogate

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	113		105		70-135	%	09.18.2020 11:14
o-Terphenyl	104		97		70-135	%	09.18.2020 11:14

Analytical Method: BTEX by EPA 8021B

Seq Number: 3137632

Matrix: Solid

Prep Method: SW5035A

Date Prep: 09.18.2020

MB Sample Id: 7711605-1-BLK

LCS Sample Id: 7711605-1-BKS

LCSD Sample Id: 7711605-1-BSD

Parameter

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.105	105	0.0937	94	70-130	11	35	mg/kg	09.18.2020 06:51	
Toluene	<0.00200	0.100	0.102	102	0.0906	91	70-130	12	35	mg/kg	09.18.2020 06:51	
Ethylbenzene	<0.00200	0.100	0.0940	94	0.0833	83	71-129	12	35	mg/kg	09.18.2020 06:51	
m,p-Xylenes	<0.00400	0.200	0.189	95	0.168	84	70-135	12	35	mg/kg	09.18.2020 06:51	
o-Xylene	<0.00200	0.100	0.0939	94	0.0835	84	71-133	12	35	mg/kg	09.18.2020 06:51	

Surrogate

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		98		98		70-130	%	09.18.2020 06:51
4-Bromofluorobenzene	88		88		88		70-130	%	09.18.2020 06:51

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.

Ross Draw 25 North CTB

Analytical Method: BTEX by EPA 8021B

Seq Number: 3137632

Parent Sample Id: 672834-021

Matrix: Soil

MS Sample Id: 672834-021 S

Prep Method: SW5035A

Date Prep: 09.18.2020

MSD Sample Id: 672834-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.120	120	0.123	123	70-130	2	35	mg/kg	09.18.2020 07:36	
Toluene	<0.00199	0.0996	0.114	114	0.118	118	70-130	3	35	mg/kg	09.18.2020 07:36	
Ethylbenzene	<0.00199	0.0996	0.104	104	0.109	109	71-129	5	35	mg/kg	09.18.2020 07:36	
m,p-Xylenes	<0.00398	0.199	0.208	105	0.218	108	70-135	5	35	mg/kg	09.18.2020 07:36	
o-Xylene	<0.00199	0.0996	0.102	102	0.107	107	71-133	5	35	mg/kg	09.18.2020 07:36	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		100		70-130	%	09.18.2020 07:36
4-Bromofluorobenzene	89		90		70-130	%	09.18.2020 07:36

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

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

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

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



Chain of Custody

Work Order No: 672901

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)

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Page 1 of 1

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littlell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.236.3849	Email:	dbellil@ltenv.com

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

Project Name:	Ross Draw 25 North CTB	Turn Around	<input checked="" type="checkbox"/>
Project Number:	012970108	Routine	<input checked="" type="checkbox"/>
P.O. Number:	NRM2020924128	Rush:	3 day
Sampler's Name:	Benjamin Bellil	Due Date:	

SAMPLE RECEIPT	Temp Blank:	Yes	No	Wet Ice:	Yes	No
Temperature (°C):	2.8/2.6			Thermometer ID		
Received Intact:	Yes	No			Correction Factor:	-0.2
Cooler Custody Seals:	Yes	No			Total Containers:	2
Sample Custody Seals:	Yes	No				

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	ANALYSIS REQUEST				Sample Comments
					Number	TPH (EPA 8015)	BTEX (EPA 8015)	Chloride (EPA 8015)	
CH03	S	9/16/20	1107	0.5'	1	X	X	X	
CH03A	S	9/16/20	1120	2'	1	X	X	X	

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 09.17.2020 04.19.00 PM

Work Order #: 672901

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T_NM_007

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

Samples received in bulk containers.

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

Analyst:

PH Device/Lot#:

Checklist completed by:



Cloe Clifton

Date: 09.17.2020

Checklist reviewed by:



Jessica Kramer

Date: 09.21.2020

Certificate of Analysis Summary 672902

LT Environmental, Inc., Arvada, CO

Project Name: Ross Draw 25 North CTB

Project Id: 012920108

Contact: Dan Moir

Project Location:

Date Received in Lab: Thu 09.17.2020 16:19

Report Date: 09.21.2020 11:56

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	672902-001	672902-002				
	Field Id:	CH04	CH04 A				
	Depth:	0.5- ft	2- ft				
	Matrix:	SOIL	SOIL				
	Sampled:	09.16.2020 13:45	09.16.2020 14:30				
BTEX by EPA 8021B	Extracted:	09.18.2020 11:44	09.18.2020 11:44				
	Analyzed:	09.18.2020 16:11	09.18.2020 16:33				
	Units/RL:	mg/kg RL	mg/kg RL				
		<0.00200 0.00200	<0.00201 0.00201				
Benzene		<0.00200 0.00200	<0.00201 0.00201				
Toluene		<0.00200 0.00200	<0.00201 0.00201				
Ethylbenzene		<0.00200 0.00200	<0.00201 0.00201				
m,p-Xylenes		<0.00401 0.00401	<0.00402 0.00402				
o-Xylene		<0.00200 0.00200	<0.00201 0.00201				
Total Xylenes		<0.00200 0.00200	<0.00201 0.00201				
Total BTEX		<0.00200 0.00200	<0.00201 0.00201				
Chloride by EPA 300	Extracted:	09.18.2020 09:36	09.18.2020 09:36				
	Analyzed:	09.18.2020 11:34	09.18.2020 11:40				
	Units/RL:	mg/kg RL	mg/kg RL				
		273 47.2	78.1 9.96				
Chloride							
TPH by SW8015 Mod	Extracted:	09.18.2020 10:30	09.18.2020 10:30				
	Analyzed:	09.18.2020 13:35	09.18.2020 13:55				
	Units/RL:	mg/kg RL	mg/kg RL				
		<50.2 50.2	<50.0 50.0				
Gasoline Range Hydrocarbons (GRO)		<50.2 50.2	<50.0 50.0				
Diesel Range Organics (DRO)		<50.2 50.2	<50.0 50.0				
Motor Oil Range Hydrocarbons (MRO)		<50.2 50.2	<50.0 50.0				
Total GRO-DRO		<50.2 50.2	<50.0 50.0				
Total TPH		<50.2 50.2	<50.0 50.0				

BRL - Below Reporting Limit

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





Environment Testing
Xenco

Analytical Report 672902

for

LT Environmental, Inc.

Project Manager: Dan Moir

Ross Draw 25 North CTB

012920108

09.21.2020

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 (2019-058), North Carolina (681), Arkansas (20-035-0)

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

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



09.21.2020

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: Eurofins Xenco, LLC Report No(s): **672902**

Ross Draw 25 North CTB

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) 672902. 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. 672902 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 672902

LT Environmental, Inc., Arvada, CO

Ross Draw 25 North CTB

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
CH04	S	09.16.2020 13:45	0.5 ft	672902-001
CH04 A	S	09.16.2020 14:30	2 ft	672902-002



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Ross Draw 25 North CTB

Project ID: 012920108
Work Order Number(s): 672902

Report Date: 09.21.2020
Date Received: 09.17.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 672902

LT Environmental, Inc., Arvada, CO

Ross Draw 25 North CTB

Sample Id: **CH04** Matrix: Soil Date Received: 09.17.2020 16:19
 Lab Sample Id: 672902-001 Date Collected: 09.16.2020 13:45 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 09.18.2020 09:36 Basis: Wet Weight
 Seq Number: 3137505

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	273	47.2	mg/kg	09.18.2020 11:34		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 09.18.2020 10:30 Basis: Wet Weight
 Seq Number: 3137547

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	09.18.2020 13:35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	09.18.2020 13:35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	09.18.2020 13:35	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	09.18.2020 13:35	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	09.18.2020 13:35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	09.18.2020 13:35	
o-Terphenyl	84-15-1	89	%	70-135	09.18.2020 13:35	



Certificate of Analytical Results 672902

LT Environmental, Inc., Arvada, CO

Ross Draw 25 North CTB

Sample Id: **CH04**
Lab Sample Id: 672902-001

Matrix: Soil
Date Collected: 09.16.2020 13:45

Date Received: 09.17.2020 16:19
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 09.18.2020 11:44

Basis: Wet Weight

Seq Number: 3137632

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.18.2020 16:11	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.18.2020 16:11	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.18.2020 16:11	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	09.18.2020 16:11	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.18.2020 16:11	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.18.2020 16:11	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.18.2020 16:11	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	102	%	70-130	09.18.2020 16:11		
4-Bromofluorobenzene	460-00-4	93	%	70-130	09.18.2020 16:11		



Certificate of Analytical Results 672902

LT Environmental, Inc., Arvada, CO

Ross Draw 25 North CTB

Sample Id: **CH04 A** Matrix: Soil Date Received: 09.17.2020 16:19
 Lab Sample Id: 672902-002 Date Collected: 09.16.2020 14:30 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 09.18.2020 09:36 Basis: Wet Weight
 Seq Number: 3137505

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	78.1	9.96	mg/kg	09.18.2020 11:40		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 09.18.2020 10:30 Basis: Wet Weight
 Seq Number: 3137547

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	09.18.2020 13:55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	09.18.2020 13:55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.18.2020 13:55	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	09.18.2020 13:55	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.18.2020 13:55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	09.18.2020 13:55	
o-Terphenyl	84-15-1	89	%	70-135	09.18.2020 13:55	



Certificate of Analytical Results 672902

LT Environmental, Inc., Arvada, CO

Ross Draw 25 North CTB

Sample Id: **CH04 A**
Lab Sample Id: 672902-002

Matrix: Soil
Date Collected: 09.16.2020 14:30

Date Received: 09.17.2020 16:19
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 09.18.2020 11:44

Basis: Wet Weight

Seq Number: 3137632

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	09.18.2020 16:33	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	09.18.2020 16:33	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	09.18.2020 16:33	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	09.18.2020 16:33	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	09.18.2020 16:33	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	09.18.2020 16:33	U	1
Total BTEX		<0.00201	0.00201	mg/kg	09.18.2020 16:33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	86	%	70-130	09.18.2020 16:33	
1,4-Difluorobenzene	540-36-3	100	%	70-130	09.18.2020 16:33	

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **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.

Ross Draw 25 North CTB

Analytical Method: Chloride by EPA 300

Seq Number: 3137505

MB Sample Id: 7711600-1-BLK

Matrix: Solid

LCS Sample Id: 7711600-1-BKS

Prep Method: E300P

Date Prep: 09.18.2020

LCSD Sample Id: 7711600-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	257	103	257	103	90-110	0	20	mg/kg	09.18.2020 09:56	

Analytical Method: Chloride by EPA 300

Seq Number: 3137505

Parent Sample Id: 672904-002

Matrix: Soil

MS Sample Id: 672904-002 S

Prep Method: E300P

Date Prep: 09.18.2020

MSD Sample Id: 672904-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	76.0	200	279	102	279	102	90-110	0	20	mg/kg	09.18.2020 12:07	

Analytical Method: Chloride by EPA 300

Seq Number: 3137505

Parent Sample Id: 672935-001

Matrix: Soil

MS Sample Id: 672935-001 S

Prep Method: E300P

Date Prep: 09.18.2020

MSD Sample Id: 672935-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	57.3	200	240	91	247	94	90-110	3	20	mg/kg	09.18.2020 10:12	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3137547

MB Sample Id: 7711587-1-BLK

Matrix: Solid

LCS Sample Id: 7711587-1-BKS

Prep Method: SW8015P

Date Prep: 09.18.2020

LCSD Sample Id: 7711587-1-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	832	83	800	80	70-135	4	35	mg/kg	09.18.2020 10:13	
Diesel Range Organics (DRO)	<50.0	1000	909	91	812	81	70-135	11	35	mg/kg	09.18.2020 10:13	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	135		111		92		70-135	%	09.18.2020 10:13
o-Terphenyl	135		103		78		70-135	%	09.18.2020 10:13

Analytical Method: TPH by SW8015 Mod

Seq Number: 3137547

Matrix: Solid

MB Sample Id: 7711587-1-BLK

Prep Method: SW8015P

Date Prep: 09.18.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	09.18.2020 09:53	

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.

Ross Draw 25 North CTB

Analytical Method: TPH by SW8015 Mod

Seq Number: 3137547

Parent Sample Id: 672935-001

Matrix: Soil

MS Sample Id: 672935-001 S

Prep Method: SW8015P

Date Prep: 09.18.2020

MSD Sample Id: 672935-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.3	1010	834	83	767	77	70-135	8	35	mg/kg	09.18.2020 11:14	
Diesel Range Organics (DRO)	<50.3	1010	907	90	838	84	70-135	8	35	mg/kg	09.18.2020 11:14	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	113		105		70-135	%	09.18.2020 11:14
o-Terphenyl	104		97		70-135	%	09.18.2020 11:14

Analytical Method: BTEX by EPA 8021B

Seq Number: 3137632

MB Sample Id: 7711605-1-BLK

Matrix: Solid

LCS Sample Id: 7711605-1-BKS

Prep Method: SW5035A

Date Prep: 09.18.2020

LCSD Sample Id: 7711605-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.105	105	0.0937	94	70-130	11	35	mg/kg	09.18.2020 06:51	
Toluene	<0.00200	0.100	0.102	102	0.0906	91	70-130	12	35	mg/kg	09.18.2020 06:51	
Ethylbenzene	<0.00200	0.100	0.0940	94	0.0833	83	71-129	12	35	mg/kg	09.18.2020 06:51	
m,p-Xylenes	<0.00400	0.200	0.189	95	0.168	84	70-135	12	35	mg/kg	09.18.2020 06:51	
o-Xylene	<0.00200	0.100	0.0939	94	0.0835	84	71-133	12	35	mg/kg	09.18.2020 06:51	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		98		98		70-130	%	09.18.2020 06:51
4-Bromofluorobenzene	88		88		88		70-130	%	09.18.2020 06:51

Analytical Method: BTEX by EPA 8021B

Seq Number: 3137632

Parent Sample Id: 672834-021

Matrix: Soil

MS Sample Id: 672834-021 S

Prep Method: SW5035A

Date Prep: 09.18.2020

MSD Sample Id: 672834-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.120	120	0.123	123	70-130	2	35	mg/kg	09.18.2020 07:36	
Toluene	<0.00199	0.0996	0.114	114	0.118	118	70-130	3	35	mg/kg	09.18.2020 07:36	
Ethylbenzene	<0.00199	0.0996	0.104	104	0.109	109	71-129	5	35	mg/kg	09.18.2020 07:36	
m,p-Xylenes	<0.00398	0.199	0.208	105	0.218	108	70-135	5	35	mg/kg	09.18.2020 07:36	
o-Xylene	<0.00199	0.0996	0.102	102	0.107	107	71-133	5	35	mg/kg	09.18.2020 07:36	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		100		70-130	%	09.18.2020 07:36
4-Bromofluorobenzene	89		90		70-130	%	09.18.2020 07:36

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
Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813) 281-2811
Hobbs, NM (575-392-7550)

Chain of Custody

Work Order No: 672900

Project Manager:		Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:		LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:		3300 North A Street	Address:	3104 E Green Street
City, State ZIP:		Midland, TX 79705	City, State ZIP:	Carlsbad, NM 86220
Phone:		432.236.3849	Email:	dbelill@ltenv.com

Work Order Comments				
Program: UST/PST <input type="checkbox"/> PRP <input type="checkbox"/> Brownfields <input type="checkbox"/> RC <input type="checkbox"/> Superfund <input type="checkbox"/>				
State of Project:				
Reporting Level I <input type="checkbox"/> Level III <input type="checkbox"/> PST/UST <input type="checkbox"/> RRP <input type="checkbox"/> Level IV <input type="checkbox"/>				
Deliverables: EDD <input type="checkbox"/> Adapt <input type="checkbox"/> Other: <input type="checkbox"/>				

[illegible]

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number	TPH (%)	BTEX (mg/L)	Chloride (ppm)												Sample Comments
CH04	S	9/6/20	1345	0.5'	1	x	x	x												
CH04	S	↓	1430	2'	1	x	x	x												
PCB 9/6/20																				

service. Xenoco 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 Xenoco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenoco, but not analyzed. These terms will be enforced unless previously negotiated.

[illegible]

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 09.17.2020 04.19.00 PM

Work Order #: 672902

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T_NM_007

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

Samples received in bulk containers.

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

Analyst:

PH Device/Lot#:

Checklist completed by:



Cloe Clifton

Date: 09.17.2020

Checklist reviewed by:



Jessica Kramer

Date: 09.18.2020

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 28781

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 28781
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	XTO's deferral requests to complete final remediation during any future major construction/alteration or final plugging and abandonment, whichever occurs first. WSP and XTO do not believe deferment will result in imminent risk to human health, the environment, or groundwater. The area requested for deferral is identified on the site map as "BH01". The areas have been delineated and documented in the report. At this time, OCD approves this request. The Deferral Request and C-141 will be accepted for record and marked accordingly. The release will remain open in OCD database files and reflect an open environmental issue.	8/18/2021