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**

			Resp	onsibl	e Party	y
Responsible	Party XTO	Energy		C	OGRID 5	5380
			C	Contact Te	elephone 432-221-7331	
Contact ema	il Kyle_Li	ttrell@xtoenergy.c	om	Iı	ncident#	(assigned by OCD)
Contact mail	ing address	522 W. Mermod	, Carlsbad, NM 88	8220		
			Location	of Rel	ease So	ource
Latitude 32.0	1871			La	maituda -	-103.93655
Latitude			(NAD 83 in dec	cimal degree	es to 5 decim	nal places)
Site Name	Ross Draw 2	5 North		S	ite Type <sub>T</sub>	Γank Battery
Date Release					PI# (if app	
Unit Letter	Section	Township	Range	125	Coun	<u>·                                      </u>
В	25	26S	S 29E Eddy		У	
	Materia		Nature and	d Volui		justification for the volumes provided below)
Crude Oil		Volume Released (bbls)			Volume Recovered (bbls)	
⋉ Produced	Water	Volume Released (bbls) 40			Volume Recovered (bbls) 40	
Is the concentration of total dissolved solids in the produced water >10,000 mg/l?			s (TDS)	☐ Yes ☐ No		
Condensate Volume Released (bbls)			Volume Recovered (bbls)			
Natural Gas Volume Released (Mcf)			Volume Recovered (Mcf)			
Other (describe) Volume/Weight Released (provide units) Volume/Weight Recovered (provide units)						
Cause of Rele	AIU	/ictaulic tee leaked ned that it was not	d produced water i in working condi	inside the ition. A th	lined cont	ntainment of the battery. An inspection of the liner contractor has been retained for remediation activities.

Page 2

Oil Conservation Division

Incident ID NRM2020924128
District RP
Facility ID
Application ID

Was this a major	If YES, for what reason(s) does the respo	nsible party consider this a major release?	
release as defined by			
19.15.29.7(A) NMAC?			
☐ Yes ☐ No			
If YES, was immediate n	otice given to the OCD? By whom? To w	hom? When and by what means (phone, email, etc)?	
		ia, EMNRD'; 'Hamlet, Robert, EMNRD'; 'Griswold, Jim, EMNRD';	
Morgan, Crisha A; blm_n	m_cfo_spill@blm.gov via email on Saturda	ay, July 11, 2020 8:25 AM.	
		-	
	Initial R	esponse	
The responsible	party must undertake the following actions immediate	ly unless they could create a safety hazard that would result in injury	
The source of the rele	ease has been stopped.		
	is been secured to protect human health and	the environment	
1	î .	dikes, absorbent pads, or other containment devices.	
	ecoverable materials have been removed ar	, ,	
NA	If all the actions described above have <u>not</u> been undertaken, explain why:		
INA			
D 10 15 20 9 D (4) ND	fA C dla man and ill la made man and in the control of the control		
		remediation immediately after discovery of a release. If remediation efforts have been successfully completed or if the release occurred	
		please attach all information needed for closure evaluation.	
I hereby certify that the info	rmation given above is true and complete to the	best of my knowledge and understand that pursuant to OCD rules and	
		ifications and perform corrective actions for releases which may endanger OCD does not relieve the operator of liability should their operations have	
failed to adequately investig	ate and remediate contamination that pose a three	eat to groundwater, surface water, human health or the environment. In	
addition, OCD acceptance o and/or regulations.	f a C-141 report does not relieve the operator of	responsibility for compliance with any other federal, state, or local laws	
_	rell	Title: SH&E Supervisor	
Printed Name: Kyle Littr			
Signature:	Total	Date:	
email: Kyle_Littrell@xto	penergy.com	Telephone: 432-221-7331	
		* **	
OCD Only			
Received by: Ramona	Marcus	Date:	
Received by.		Date.	

Form C-141 Page 3 State of New Mexico
Oil Conservation Division

Incident ID	NRM2020924128
District RP	
Facility ID	
Application ID	

# Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	51-100 (ft bgs)	
Did this release impact groundwater or surface water?	☐ Yes ☑ No	
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☑ No	
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☑ No	
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☑ No	
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☑ No	
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☑ No	
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☑ No	
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☑ No	
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☑ No	
Are the lateral extents of the release overlying an unstable area such as karst geology?	☑ Yes ☐ No	
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☑ No	
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	☐ Yes ☑ No	
Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.		
Characterization Report Checklist: Each of the following items must be included in the report.		
Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.		
☐ Field data ☐ Data table of soil contaminant concentration data		
Depth to water determination		
Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release  Boring or excavation logs		

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.

Topographic/Acrial maps

Photographs including date and GIS information

✓ Laboratory data including chain of custody

Form C-141 Page 4

# State of New Mexico Oil Conservation Division

Incident ID	NRM2020924128
District RP	
Facility ID	
Application ID	

I hereby certify that the information given above is true and complete to the regulations all operators are required to report and/or file certain release not public health or the environment. The acceptance of a C-141 report by the failed to adequately investigate and remediate contamination that pose a threaddition, OCD acceptance of a C-141 report does not relieve the operator of and/or regulations.	fications and perform corrective actions for releases which may endanger DCD does not relieve the operator of liability should their operations have eat to groundwater, surface water, human health or the environment. In
Printed Name: Kyle Littrell	Title: Environmental Manager
Signature: Signature:	Date: 05/18/2021
email: Kyle Littrell@exxonmobil.com	Telephone: 432-221-7331
OCD Only	
Received by:	Date:

Form C-141 Page 5 State of New Mexico
Oil Conservation Division

Incident ID	NRM2020924128	
District RP		
Facility ID		
Application ID		

# **Remediation Plan**

Remediation Plan Checklist: Each of the following items must be included in the plan	an.
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 9)	0 days OCD approval is required)
Deferral Requests Only: Each of the following items must be confirmed as part of an	ny request for deferral of remediation.
☐ Contamination must be in areas immediately under or around production equipment deconstruction.	
☑ Extents of contamination must be fully delineated.	
Contamination does not cause an imminent risk to human health, the environment, or	or groundwater.
I hereby certify that the information given above is true and complete to the best of my rules and regulations all operators are required to report and/or file certain release notific which may endanger public health or the environment. The acceptance of a C-141 report liability should their operations have failed to adequately investigate and remediate cont surface water, human health or the environment. In addition, OCD acceptance of a C-14 responsibility for compliance with any other federal, state, or local laws and/or regulation	cations and perform corrective actions for releases rt by the OCD does not relieve the operator of amination that pose a threat to groundwater, 41 report does not relieve the operator of
Printed Name: Kyle Littrell Title: Environ	mental Manager
Signature: Date: 05/18/20	021
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:	

# NRM2020924128

Location:	Ross Draw 25 North CTB		
Spill Date:	7/10/2020		
	Area 1		
Approximate A	rea =	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

VOCD: 5/19/2021 10:07:25 AM Page 7 of 126

Incident ID NRM2020924128

District RP
Facility ID
Application ID

# **Remediation Plan**

Remediation Plan Checklist: Each of the following items must be	included in the plan
Remediation I fan Checkiist. Each of the following tiems 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 19.15.29.13	
Proposed schedule for remediation (note if remediation plan time	eline is more than 90 days OCD approval is required)
Deferral Requests Only: Each of the following items must be conjugated	firmed as part of any request for deferral of remediation.
Contamination must be in areas immediately under or around prodeconstruction.	oduction equipment where remediation could cause a major facility
Extents of contamination must be fully delineated.	
Contamination does not cause an imminent risk to human health,	the environment, or groundwater.
I hereby certify that the information given above is true and complete	
which may endanger public health or the environment. The acceptar	ertain release notifications and perform corrective actions for releases
liability should their operations have failed to adequately investigate	
surface water, human health or the environment. In addition, OCD a	
responsibility for compliance with any other federal, state, or local la	
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 A	Approval Denied Deferral Approved
Signature: Robert Hamlet	Date: 8/18/2021

District I
1625 N. French Dr., Hobbs, NM 88240
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811 S. First St., Artesia, NM 88210
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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 5	3300			
Contact Name Kyle Littrell				Contact Te	Contact Telephone 432-221-7331			
Contact email	Kyle_Lit	trell@xtoenergy.c	om	Incident # (	(assigned by OCD)			
Contact mailin	g address	522 W. Mermod	, Carlsbad, NM 88	3220				
			Location	of Release So	ource			
Latitude 32.01	871			Longitude _	-103.93655			
			(NAD 83 in dec	imal degrees to 5 decim	al places)			
Site Name Ro	oss Draw 2:	5 North		Site Type T	ank Battery			
Date Release D				API# (if appl	licable)			
Unit Letter	Section	Township	Range	Coun	ty			
В	25	26S	29E	Eddy	ý			
Surface Owner:		▼ Federal ☐ Tr	Nature and	l Volume of F	Release justification for the volumes provided below)			
Crude Oil		Volume Release			Volume Recovered (bbls)			
× Produced V	Vater	Volume Release	d (bbls) 40		Volume Recovered (bbls) 40			
		in the produced	ion of total dissolv water >10,000 mg		☐ Yes ☐ No			
Condensate		Volume Release	d (bbls)		Volume Recovered (bbls)			
Natural Gas	S	Volume Release	d (Mcf)		Volume Recovered (Mcf)			
Other (describe) Volume/Weight Released (provide unit			Released (provide	e units)	ts) Volume/Weight Recovered (provide units)			
Cause of Relea	A 10" V determi	Victaulic tee leaked ned that it was not	l produced water i in working condi	nside the lined cont tion. A third-party	tainment of the battery. An inspection of the liner contractor has been retained for remediation activities.			

Received by OCD: 5/19/2021 10:07:25 AM
Form C-141 State of New Mexico
Page 2 Oil Conservation Division

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	0							

Incident ID NRM2020924128
District RP
Facility ID
Application ID

Was this a major	If YES, for what reason(s) does the respon	sible party consider this a major release?
release as defined by	A release equal to or greater than 25 barrels	• •
19.15.29.7(A) NMAC?		
☐ Yes ☐ No		
If YES, was immediate n	otice given to the OCD? By whom? To wh	om? When and by what means (phone, email, etc)?
•	·	, EMNRD'; 'Hamlet, Robert, EMNRD'; 'Griswold, Jim, EMNRD';
Morgan, Crisha A; blm_n	m_cfo_spill@blm.gov via email on Saturday	
		<u> </u>
	Initial Re	sponse
The responsible	party must undertake the following actions immediately	unless they could create a safety hazard that would result in injury
▼ The source of the rele	ease has been stopped.	
l <u></u>	s been secured to protect human health and	he environment.
	•	kes, absorbent pads, or other containment devices.
	ecoverable materials have been removed and	•
If all the actions described	d above have <u>not</u> been undertaken, explain v	vhy:
NA	_	
Per 19.15.29.8 B. (4) NM	AC the responsible party may commence re	mediation immediately after discovery of a release. If remediation
has begun, please attach	a narrative of actions to date. If remedial e	fforts have been successfully completed or if the release occurred
within a lined containmer	nt area (see 19.15.29.11(A)(5)(a) NMAC), p	ease attach all information needed for closure evaluation.
		est of my knowledge and understand that pursuant to OCD rules and
		ications and perform corrective actions for releases which may endanger CD does not relieve the operator of liability should their operations have
failed to adequately investig	ate and remediate contamination that pose a threa	t to groundwater, surface water, human health or the environment. In
addition, OCD acceptance o and/or regulations.	f a C-141 report does not relieve the operator of i	esponsibility for compliance with any other federal, state, or local laws
	rell	Title: SH&E Supervisor
Printed Name: Kyle Little	-M	
Signature:	X Hould	Date:
email: Kyle_Littrell@xto	penergy.com	Telephone: 432-221-7331
OCD Only		
Received by: Ramona	Marcus	Date:

# NRM2020924128

Location:	Ross Draw 25 North CTB				
Spill Date:	7/10/2020				
	Area 1				
Approximate A	rea =	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 b					

State of New Mexico

Incident ID	NRM2020924128
District RP	
Facility ID	
Application ID	

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# Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	51-100 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☑ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☑ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☑ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☑ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☑ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☑ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☑ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☑ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☑ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	✓ Yes ☐ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☑ No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	☐ Yes ☑ No
Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and ver contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.	tical extents of soil
Characterization Report Checklist: Each of the following items must be included in the report.	
<ul> <li>✓ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wel</li> <li>✓ Field data</li> <li>✓ Data table of soil contaminant concentration data</li> <li>✓ Depth to water determination</li> <li>✓ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release</li> </ul>	ls.
Boring or excavation logs	

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.

✓ Photographs including date and GIS information

✓ Laboratory data including chain of custody

☑ Topographic/Aerial maps

Received by OCD: 5/19/2021 10:07:25 AM Form C-141 State of New Mexico Oil Conservation Division Page 4

	Page 12 of 120
nt ID	NRM2020924128
4 DD	

Incident ID	NRM2020924128
District RP	
Facility ID	
Application ID	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.							
Printed Name: Kyle Littrell	Title: Environmental Manager						
Signature:	Date: <u>05/18/2021</u>						
email: Kyle.Littrell@exxonmobil.com	Telephone: 432-221-7331						
OCD Only							
Received by:	Date:						

Page 13 of 126

Incident ID	NRM2020924128
District RP	
Facility ID	
Application ID	

# **Remediation Plan**

Remediation Plan Checklist: Each of the following items must be	e 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 con-	firmed as part of any request for deferral of remediation.						
Contamination must be in areas immediately under or around predeconstruction.	oduction equipment where remediation could cause a major facility						
☑ Extents of contamination must be fully delineated.							
Contamination does not cause an imminent risk to human health	, the environment, or groundwater.						
	e and remediate contamination that pose a threat to groundwater, acceptance of a C-141 report does not relieve the operator of						
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						
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



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.

Fatima Smith

Associate Consultant, Geologist

Ashley L. Ager, P.G.

ashley L. ager

Assistant Vice President, Geologist



cc: Kyle Littrell, XTO

**Bureau of Land Management** 

## Attachments:

Figure 1 Site Location Map

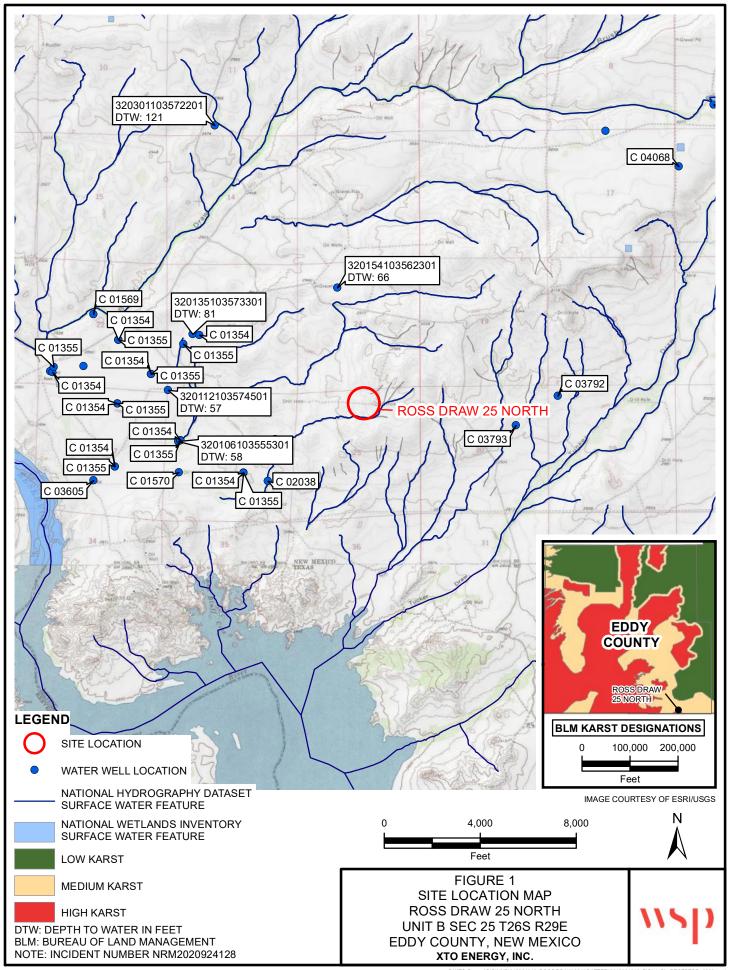
Figure 2 Delineation Soil Sample Locations

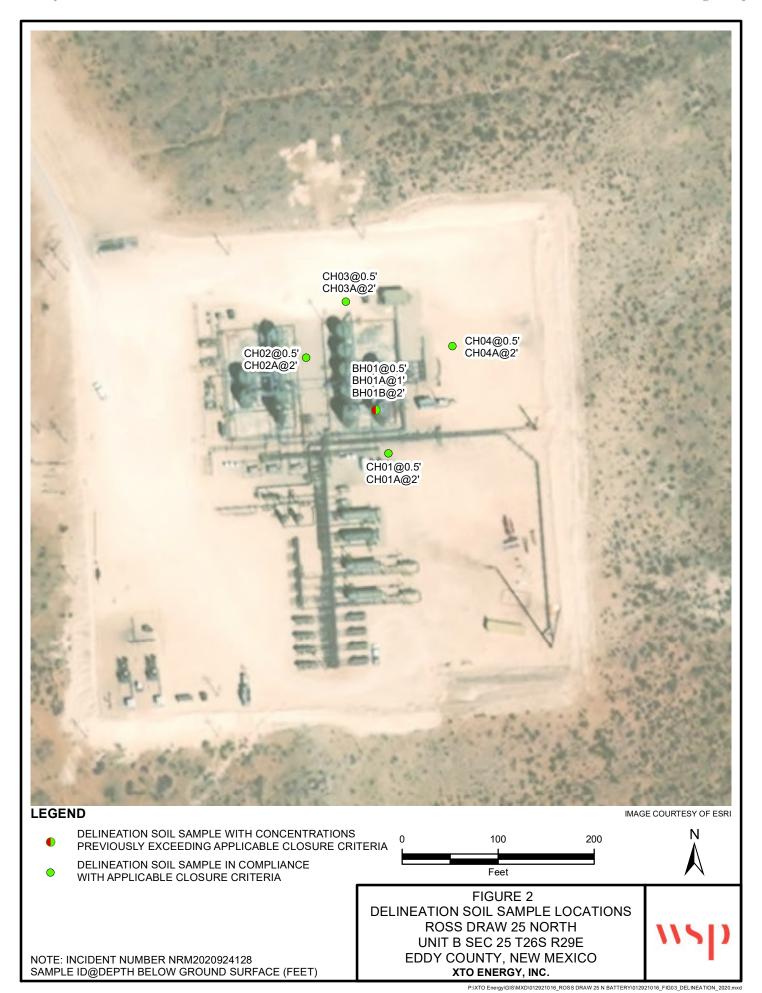
Figure 3 Deferral Area

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







DELINEATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA

**DEFERRAL AREA** 

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

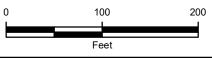




FIGURE 3 **DEFERRAL AREA ROSS DRAW 25 NORTH** UNIT B SEC 25 T26S R29E EDDY COUNTY, NEW MEXICO XTO ENERGY, INC.



P:\XTO Energy\GIS\MXD\012920108\_ROSS DRAW 25 NORTH\012920108\_FIG04\_DEFERRAL\_2020.mx

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	
<b>Delineation Samples</b>										
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
СН03А	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



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Table of data Tab-separated data Graph of data Reselect period

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#### Search Results -- 1 sites found

Agency code = usgs

site\_no list =

• 320154103562301

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

## 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		

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	Α
1976-01-16	5	D	64.75			2		U		U	А
1977-01-14	ŀ	D	63.41			2		U		U	Α
1978-02-23	3	D	65.47			2		U		U	А
1983-01-26	5	D	66.44			2		U		U	Α
1987-10-14	ŀ	D	49.81			2		U		U	Α
1992-11-04	ŀ	D	59.28			2		S		U	Α
1998-01-22	2	D	66.42			2		S		U	А

		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	А	Approved for publication Processing and review completed.

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Agency code = usqs

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**

		? Water-	Water level, feet	Water level, feet	Referenced	?	?	?	?	?	? Water-	
Graph of dat												
Tab-separate	b-separated data											
Table of data	<u>a</u>											

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	
1987-10-14		D	80.88			2		S		U		A

	Explanation									
Section		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	Α	Approved for publication Processing and review completed.								

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0.25 0.23 nadww01

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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
1993-01-05	14:45 MST	m	57.38			2		S		U	Α

#### 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	Α	Approved for publication Processing and review completed.						

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### Search Results -- 1 sites found

Agency code = usgs

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 fo	rmats
-----------	-------

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		U	Α
1987-10-14		D	35.29			2		U		U	А
1992-11-04		D	44.06			2		S		U	Α
1998-01-28		D	53.01			2		S		U	А
2003-01-27		D	55.93			2		S	USGS	Α	Α
2013-01-09	12:00 MST	m	57.81			2		S	USGS	R	A

Exp	lanation

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	Α	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	Α	Approved for publication Processing and review completed.			

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LITHOLOGIC / SOIL SAMPLING LOG  Lat/Long: 32.018728, -103.936157 Field Screening: HACH chloride strips, PID  Comments: SAA - Same As Above All chloride tests strips include a 40% correction factor, HACH low range test strips were used									BH or CH Name: BH01 BH01 and BH01A submitted Site Name: Ross Draw 25 Nor RP or Incident Number: NRM207 WSP Job Number: TE01 Logged By: Will Mather Hole Diameter: 4"		Method: Hand Auger Total Depth (TD):
							USCS/Rock Symbol	Lith	ology/Rem	ıarks	
	2,105 2,245	0.5	N N	BH01 BH01A	0 1	0.5	ССНЕ		tan - off white, moist, poorl		ated, large tan/brown gravel, trace
		I	!		<u>                                     </u>			TD @ 1	ft bgs		

7	•	_	П	_		WSDI	IISA		BH or CH Name: BH01	D	Pate: 09/16/2020
WSP USA									BH01B submitted		
508 West Stevens Street									Site Name: Ross Draw 25 North		
Carlsbad, New Mexico 88220									RP or Incident Number: NRM2020		
									WSP Job Number: TE0129		
LITHOLOGIC / SOIL SAMPLING LOG									Logged By: Ben Belill/Robert M		Method: Core Drill
Lat/Lo	ng: 32.0187	28, -103.9	36157		Field Scree		DID		Hole Diameter: 1.75"	T 2'	otal Depth (TD):
Comm	ents: SAA -	Same As	Above		HACH chl	oride strips,	PID		1./5"		·
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 Content Chloride Chloride (ppm) Sample Beth (ppm) Chloride (ppm) Staining Sample Beth (pt pds) Content Chloride (ppm) Sample Sample Sample Sample Symbol							Lithol	logy/Remarl	ks		
M			N		0	[ 0	CCHE			onsolidated	, trace of fine grain sand, no
М	2,105	0.5	N	BH01	-	0.5		stain, no o SAA	odor		
111	2,100	0.5	-11		-	- "					
M	2,245	0.5	N	BH01A		1					
					-	-					
					-	-					
M	<180	0.2	N	BH01B	2	2		SAA TD @ 2 1			

Lat/Lo	ng: 32.018	<b>LITH</b> (519, -103.9	OLO( 936088	GIC / SOII		ING LO	vens Stre Mexico 8 OG	BH or CH Name: CH01 CH01 and CH01A submitted  Site Name: Ross Draw 25 North RP or Incident Number: NRM2020924128 WSP Job Number: TE012920108 Logged By: Ben Belill/Robert McAfee Method: Core Drill Hole Diameter: Total Depth (TD): 1.75" 2'	
				% correction f	actor, HACI	I low range	e test strips	were used. Borehole/corehole was backfilled with clean fill material to surface.	
Moisture Content Content Content Content Content Chloride (ppm) Sample Behth (ppm) Content Chloride (ppm) Chebth (ppm) Content Chebth (						Depth (ft bgs)	Lithology/Remarks		
M	179	0.2	N	CH01	0.5	0	ССНЕ	Caliche, tan - off white, moist, mod consolidated, trace of fine grain stain, no odor SAA	sand, no
м	170	0.1	N	CH01 A	,	. ,		CAA	
171	117	0.1	14	CHUIA			<u> </u>	TD @ 2 ft bgs	
M 179 0.1 N CH01A 2 2 SAA									

									BH or CH Name: CH02	Date: 09/16/2020			
Α,	•	4					CH02 and CH02A submitted						
508 West Stevens Street									Site Name: Ross Draw 25 North	•			
Carlsbad, New Mexico 88220									RP or Incident Number: NRM2020924	128			
									WSP Job Number: TE0129201	108			
				GIC / SOII			Logged By: Ben Belill/Robert McAt						
Lat/Lo	ng: 32.018	887, -103.9	936368		Field Scree				Hole Diameter:	Total Depth (TD):			
Comm	ente: SAA	Same As	Above		HACH chl	oride strips,	PID		1.75"	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 Content Chloride (ppm) Staining Sample # Debth (gt pgs) USCS/Rock Symbol							Lithology/Remarks						
М	450	0.2	N	CH02	0 1	0 - - - -							
					_	-							
M	180	0.2	N	CH02A	2	2		SAA TD @ 2	0.1				

LITHOLO Lat/Long: 32.019036, -103.9362	508 West Slev Carlsbad, New M	BH or CH Name: CH03 CH03 and CH03A submitted Site Name: Ross Draw 25 North RP or Incident Number: NRM2020924128 WSP Job Number: TE012920108 Logged By: Ben Belill/Robert McAfee Hole Diameter:	Date: 09/16/2020  Method: Core Drill Total Depth (TD):	
Comments: SAA - Same As Abov	HACH chloride strips, Pl		1.75"	2'
		est strips were used. E	Borehole/corehole was backfilled with clean fill	material to surface.
Moisture Content Chloride (ppm) Vapor (ppm)		USCS/Rock Symbol	Lithology/Rema	
M 504 0.2 N		CCHE Caliche, stain, no o SAA	tan - off white, moist, mod consolidate odor	xd, trace of fine grain sand, no
M 247 02 N				
M 347 0.2 N	CH03A   2   2	SAA TD @ 2 f	t bgs	

WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220  LITHOLOGIC / SOIL SAMPLING LOG				BH or CH Name: CH04 CH04 and CH04A submitted Site Name: Ross Draw 25 N RP or Incident Number: NRM2 WSP Job Number: TE Logged By: Ben Belill/Robe Hole Diameter:	2020924128	Date: 09/16/2020  Method: Core Drill Total Depth (TD):	
	Н	IACH chloride strips,	PID		1.75"		2'
Comments: SAA - Same As A All chloride tests strips include		tor, HACH low range	test strips	were used. I	3 orehole/corehole was backfille	ed with clean fill	material to surface.
Moisture Content Chloride (ppm) Vapor (ppm)	ainia 	Sample Depth (ft bgs)	USCS/Rock Symbol			thology/Rema	
M 347 0.2	N CH04	0   0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		Caliche, stain, no SAA		od consolidate	ed, trace of fine grain sand, no
M 180 0.2	N CHOAA	ΤΙ		CAA			
100 0.2	N CHOTA	2 2		TD @ 2	t bgs		
M 180 0.2 N CH04A 2 2 2 SAA TD @ 2 ft bgs							



PHOTOGRAPHIC LOG						
XTO Energy, Inc. Ross Draw 25 North TE012920						
	Eddy County, New Mexico					

Photo No.	Date
	July 22-
1	September 16,
	2020

View of BH01 location within the lined containment during initial delineation efforts



Photo No.	Date
	July 22-
2	September 16,
	2020

View of BH01 location within the lined containment during initial delineation efforts.





	PHOTOGRAPHIC LOG					
XTO Energy, Inc.	XTO Energy, Inc. Ross Draw 25 North					
	Eddy County, New Mexico					

Photo No.	Date				
	July 22-				
3	September 16,				
	2020				
North view of the soil sample CH0					

North view of the soil sample CH01 location following advancement with the core drill.



Photo No.	Date			
	July 22-			
4	September 16,			
	2020			

View of the area associated with BH01 following advancement with the core drill.





	PHOTOGRAPHIC LOG					
XTO Energy, Inc.	XTO Energy, Inc. Ross Draw 25 North					
	Eddy County, New Mexico					

Photo No.	Date
	July 22-
5	September 16,
	2020

View of the soil sample CH02 location following advancement with the core drill.



Photo No.	Date			
	July 22-			
6	September 16,			
	2020			
37' 0.1	1 1 01101			

View of the soil sample CH01 location prior to backfilling.



## Certificate of Analysis Summary 667911

LT Environmental, Inc., Arvada, CO

**Project Id: Contact:** 

012920108

**Project Name: Ross Draw 25 N CTB** 

**Date Received in Lab:** Wed 07.22.2020 13:19

**Report Date:** 07.23.2020 13:23

**Project Location:** 

eurofins Environment Testing

Dan Moir Eddy

Project Manager: Jessica Kramer

	Lab Id:	667911-0	01	667911-0	002		
Analysis Requested	Field Id:	BH01		BH01A	4		
Analysis Requesieu	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		
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		
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

Jessica Weamer



# **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,

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	<b>Date Collected</b>	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

Page 47 of 126

eurofins

Environment Testing
Xenco

Client Name: LT Environmental, Inc. Project Name: Ross Draw 25 N CTB

 Project ID:
 012920108
 Report Date:
 07.23.2020

 Work Order Number(s):
 667911
 Date Received:
 07.22.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

## LT Environmental, Inc., Arvada, CO

Ross Draw 25 N CTB

Soil

Sample Id: BH01 Matrix:

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: We

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

DTH

Prep Method: SW8015P

% Moisture:

Tech: DTH

Analyst:

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	

Surrogate	Cas Number	% Recovery	Units	Limits	<b>Analysis Date</b>
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

## LT Environmental, Inc., Arvada, CO

Ross Draw 25 N CTB

07.22.2020 14:00

Basis:

Wet Weight

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: BTEX by EPA 8021B Prep Method: SW5035A

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 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

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	<b>Analysis Date</b>	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	

## 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 % Moisture:

Tech:

MAB

MAB Analyst:

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 Numbe	r 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		

## 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

460-00-4

Prep Method: SW5035A

07.22.2020 19:57

Analytical Method: BTEX by EPA 8021B MAB

% Moisture:

MAB Analyst: Date Prep: 07.22.2020 14:00 Basis: Wet Weight

Seq Number: 3132403

4-Bromofluorobenzene

Tech:

Parameter	Cas Number	Result	RL		Units	<b>Analysis Date</b>	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	5	40-36-3	101	%	70-130	07.22.2020 19:57		

107

%

70-130



## **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

Flag

#### **QC Summary** 667911

#### LT Environmental, Inc.

Ross Draw 25 N CTB

7707895-1-BKS

Analytical Method: Chloride by EPA 300

Seq Number: 3132399

7707895-1-BLK

Matrix: Solid

E300P Prep Method:

Date Prep: 07.22.2020

LCSD Sample Id: 7707895-1-BSD

MB Sample Id: LCS MB Spike LCS LCSD LCSD **Parameter** 

RPD %RPD Units Analysis

Result Amount Result %Rec Result %Rec Limit Date <10.0 250 104 90-110 20 07.23.2020 02:58 261 269 108 3 mg/kg

Analytical Method: Chloride by EPA 300

Seq Number: 3132399 Matrix: Soil

104

Prep Method: Date Prep: 07.22.2020

E300P

667904-050 Parent Sample Id:

667904-050 S MS Sample Id:

MSD Sample Id: 667904-050 SD

**Parameter** 

Chloride

Chloride

Parent Spike Result Amount 7470 201

MS MS Result %Rec

7680

LCS Sample Id:

MSD MSD %Rec Result

101

90-110

7670

Limits %RPD RPD Limit 0

Limits

Units Analysis

Flag Date 07.23.2020 03:15 mg/kg

Analytical Method: Chloride by EPA 300

3132399 Seq Number:

Matrix: Soil

Prep Method: Date Prep:

**RPD** 

20

E300P

MS Sample Id: 667904-060 S Parent Sample Id: 667904-060

07.22.2020 MSD Sample Id: 667904-060 SD

**Parameter** 

Spike **Parent** Result Amount

MS MS Result %Rec

MSD **MSD** Result %Rec

338

%RPD Limits

Units

Analysis Flag

Chloride

129 200

338 105

105 90-110

Limit 20 0

07.23.2020 04:33 mg/kg

Date

Analytical Method: TPH by SW8015 Mod

Seq Number:

3132405

Matrix: Solid

SW8015P Prep Method:

MB Sample Id:

7707899-1-BLK

LCS Sample Id: 7707899-1-BKS

Date Prep: LCSD Sample Id: 7707899-1-BSD

07.22.2020

MB Spike LCS LCS LCSD LCSD Limits %RPD **RPD** Units **Parameter** Result Limit Result Amount %Rec %Rec Result Gasoline Range Hydrocarbons (GRO) 35 8 mg/kg

Diesel Range Organics (DRO)

< 50.0 1000 < 50.0 1000

94 935

1010

101 70-135

126

118

Analysis Flag Date 07.22.2020 10:11

07.22.2020 10:11 1040 104 70-135 35 1120 112 7 mg/kg LCS MBMB LCS LCSD Limits Units Analysis LCSD **Surrogate** Flag %Rec %Rec Flag Date Flag %Rec

1-Chlorooctane o-Terphenyl

108 109 122 110 07.22.2020 10:11 07.22.2020 10:11

Analytical Method: TPH by SW8015 Mod

Matrix: Solid

Prep Method:

70-135

70-135

SW8015P

Date Prep: 07.22.2020

%

%

Seq Number:

3132405

MB

MB Sample Id: 7707899-1-BLK

Flag

**Parameter** Motor Oil Range Hydrocarbons (MRO) Result < 50.0

mg/kg

Units

Date 07.22.2020 09:50

Analysis

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

[D] = 100\*(C-A) / B $RPD = 200* \mid (C-E) \mid (C+E) \mid$ [D] = 100 \* (C) / [B]

Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample = Parent Result = MS/LCS Result

= MSD/LCSD Result

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

Flag

Flag

Flag

Seq Number:

#### **QC Summary** 667911

#### LT Environmental, Inc.

Ross Draw 25 N CTB

Analytical Method: TPH by SW8015 Mod

3132405

Matrix: Soil

SW8015P Prep Method:

Date Prep: 07.22.2020

Parent Sample Id: 667902-007 MS Sample Id: 667902-007 S

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	
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

Prep Method:

SW5035A

3132403 Seq Number: Matrix: Solid Date Prep: 07.22.2020

7707875-1-BLK LCS Sample Id: 7707875-1-BKS MB Sample Id:

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
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:

o-Xylene

Parent Sample Id:

3132403

< 0.00199

Matrix: Soil 667902-007 MS Sample Id: 667902-007 S

0.0996

0.110

Prep Method: SW5035A

Date Prep: 07.22.2020 MSD Sample Id: 667902-007 SD

mg/kg

RPD **Parent** Spike MS MS MSD MSD Limits %RPD Units Analysis **Parameter** Limit Date Result Result Amount %Rec Result %Rec 07.22.2020 16:32 < 0.00199 0.0996 0.125 126 0.113 70-130 10 35 Benzene 113 mg/kg 07.22.2020 16:32 0.117 70-130 35 Toluene < 0.00199 0.0996 117 0.106 106 10 mg/kg 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 70-135 11 35 07.22.2020 16:32 101 mg/kg

Surrogate		MS MS Flag %R		Limits	Units	Analysis Date
1,4-Difluorobenzene	99	98	}	70-130	%	07.22.2020 16:32
4-Bromofluorobenzene	103	10	0	70-130	%	07.22.2020 16:32

110

0.0985

E = MSD/LCSD Result

71-133

99

11

35

07.22.2020 16:32

	(FU
-	P X
	o m
	>
I	45
I	20
١	m o

# **Chain of Custody**

Work Order No:

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

cen	M. Wee	Refinquished by: (Signature)	Stice: Signature of this docu service. Xenco will be liable Xenco. A minimum charge	Circle Method(s) a						1	BH01A	BH01	Sample Identification	Sample Custody Seals:	Cooler Custody Seals:	Received Intact:	Temperature (°C):	SAMPLE RECEIPT	Sampler's Name:	P.O. Number:	Project Number:	Project Name:	Phone: (4	City, State ZIP: M	Address: 3:	Company Name: L	Project Manager: D	LAB
	R	gnature)	ment and relinquishment of e only for the cost of sample of \$75.00 will be applied to e	Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed							S	S	cation Matrix	Yes No N/A	Yes 966 N/A	Yes No	24/22	Temp Blank:	William Mather	Eddy	Ø12920108	Ross Draw 25 N CTB	(432) 236-3849	Midland, Tx 79705	3300 North A Street	LT Environmental, Inc., Permian office	Dan Moir	LABORATORIES
	I had	Received by: (Signature)	samples constitutes a s and shall not assum ach project and a cha	8RCRA lyzed TCLP							7/22/2020 10	7/22/2020 11	Date Ti Sampled Sam	Total Containers:	Correction Factor:	レーハル	Therm	Yes No W	ather		08	N CTB				Permian office		Hobbs,NM
		ignature)	valid purchase order free any responsibility for ge of \$5 for each samp	RCRA 13PPM Texas 11 A TCLP / SPLP 6010: 8RCRA			21/101	1			10:17 1'	11:14 0.5'	Time Depth	ainers: 2	Factor: _S.7	1007	Thermometer ID	Wet Ice: (%) No	Due Date:	Rush:	Routine d	Turn Around	Email: wmather@ltenv.com, dmoir@ltenv.com	City, State ZIP	Address:	Company Name:	Bill to: (if different)	Midland,TX (432-70 (575-392-7550) Phoe
	1/22	Dat	om client comp any losses or o le submitted to	11 Al Sb RCRA Sb		0	1		1			×	Number	*********		nta	iners						tenv.com, dr	ZIP:			rerent) Ky	)4-5440) EL P )nix,AZ (480-3
	20 1319	Date/Time	any to Xenco, is expenses incurred Xenco, but not	Sb As Ba Be B Cd Ca Sb As Ba Be Cd Cr Co			1		H		×	×	BTEX (E	PA (	0=80	300	)						noir@ltenv.c			XTO Energy	Kyle Littrell	aso,TX (915)5 55-0900) Atlar
O.	4 0	Relinquished by: (Signature)	Todice: 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 expenses. A minimum charge of \$75.00 will be applied to each project and a charge of \$6 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	B Cd Ca Cr Co Cu Fe Pb Cd Cr Co Cu Pb Mn Mo Ni																		ANALYSIS REQUEST	<u>m</u>					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)
		re) Received by: (Signature)	s standard terms and conditions circumstances beyond the control nless previously negotiated.	\g SiO2									σ	2 0	TAT								Deliverables: EDD ADaPT	Reporting:Level II   PT/UST		Program: UST/PST RP rownfields	Work Order Com	www.xenco.com
		Date/Time		Na Sr Tl Sn U V Zn 1631 / 245.1 / 7470 / 7471 : Hg							Discrete	Discrete	Sample Comments	lab, if received by 4:30pm	nds the day received by the							Work Order Notes	Other:	RP Upvel IV		RC 1 perfund	nts	Page of

Revised Date 051418 Rev. 2018.1

## **Eurofins Xenco, LLC**

## Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Acceptable Temperature Range: 0 - 6 degC

Date/ Time Received: 07.22.2020 01.19.00 PM

Air and Metal samples Acceptable Range: Ambient Temperature Measuring device used: T-NM-007

Work Order #: 667911

Sample Receipt Checklist Comments

	Sample Receipt Checklist	(	Comments
#1 *Temperature of cooler(s)?	2.	2	
#2 *Shipping container in good condition?	Ye	s	
#3 *Samples received on ice?	Ye	s	
#4 *Custody Seals intact on shipping contain	er/ cooler? Ye	s	
#5 Custody Seals intact on sample bottles?	Ye	s	
#6*Custody Seals Signed and dated?	Ye	s	
#7 *Chain of Custody present?	Ye	s	
#8 Any missing/extra samples?	N	0	
#9 Chain of Custody signed when relinquished	ed/ received?	es	
#10 Chain of Custody agrees with sample lal	pels/matrix?	es	
#11 Container label(s) legible and intact?	Ye	es	
#12 Samples in proper container/ bottle?	Ye	_	camples received in bulk ontainers.
#13 Samples properly preserved?	Ye		ontainers.
#14 Sample container(s) intact?	Ye	s	
#15 Sufficient sample amount for indicated to	est(s)?	s	
#16 All samples received within hold time?	Ye	es	
#17 Subcontract of sample(s)?	N	0	
#18 Water VOC samples have zero headspa	ce? N	Ά	

A nalvati	PH Device/Lot#
Analyst	PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: <u>07.22.2020</u>

Checklist reviewed by:

Jessica Kramer

Jessica Kramer Date: <u>07.22.2020</u>

<sup>\*</sup> Must be completed for after-hours delivery of samples prior to placing in the refrigerator

eurofins Environment Testing

## Certificate of Analysis Summary 672898

LT Environmental, Inc., Arvada, CO

**Project Name: Ross Draw 25 North CTB** 

**Project Id: Contact:** 

**Project Location:** 

012920108

Dan Moir

**Date Received in Lab:** Thu 09.17.2020 16:15

**Report Date:** 09.21.2020 12:16

Project Manager: Jessica Kramer

	Lab Id:	672898-001			
Analysis Requested	Field Id:	BH01 B			
Analysis Requested	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			
pluene		< 0.00200 0.00200			
thylbenzene		< 0.00200 0.00200			
m,p-Xylenes	n,p-Xylenes				
o-Xylene	p-Xylene				
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

Jessica Vramer



# **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,

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

#### Page 61 of 126

#### **CASE NARRATIVE**

eurofins **Environment Testing** Xenco

Client Name: LT Environmental, Inc. Project Name: Ross Draw 25 North CTB

Project ID: Report Date: 09.21.2020 012920108 Work Order Number(s): 672898 Date Received: 09.17.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

## 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

% Moisture:

% Moisture:

Tech: MAB

MAB Analyst: Date Prep: 09.17.2020 17:31 Basis: Wet Weight

Seq Number: 3137499

Parameter	Cas Number	Result	RL	Units	<b>Analysis Date</b>	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

DTH Tech:

Analyst: DTH Basis: Wet Weight Date Prep: 09.17.2020 17:20

Seq Number: 3137481

Parameter	Cas Numbe	r 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		

## 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: BTEX by EPA 8021B Prep Method: SW5035A

Tech: MAB % Moisture:

460-00-4

Analyst: MAB Date Prep: 09.18.2020 11:44 Basis: Wet Weight

Seq Number: 3137632

4-Bromofluorobenzene

Parameter	Cas Number	Result	RL		Units	<b>Analysis Date</b>	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		

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.

**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

<sup>\*\*</sup> Surrogate recovered outside laboratory control limit.

Flag

Flag

#### **QC Summary** 672898

#### LT Environmental, Inc.

Ross Draw 25 North CTB

Analytical Method: Chloride by EPA 300

3137499 Seq Number:

MB Sample Id:

7711598-1-BLK

Matrix: Solid LCS Sample Id: 7711598-1-BKS

E300P Prep Method:

Date Prep: 09.17.2020

LCSD Sample Id: 7711598-1-BSD

LCS RPD MB Spike LCS Limits %RPD Units Analysis LCSD LCSD **Parameter** Result Amount Result %Rec Result %Rec Limit Date

Chloride <10.0 250 102 256 102 90-110 0 20 09.17.2020 19:46 256 mg/kg

Analytical Method: Chloride by EPA 300

3137499

Matrix: Soil

Prep Method: Date Prep:

E300P 09.17.2020

Seq Number: Parent Sample Id: 672834-021

MS Sample Id: 672834-021 S

MSD Sample Id: 672834-021 SD

Parent Spike MS MS MSD MSD Limits %RPD RPD Units Analysis **Parameter** Flag Result Amount Result %Rec %Rec Limit Date Result

09.17.2020 20:03 Chloride 155 199 357 102 357 102 90-110 0 20 mg/kg

Analytical Method: TPH by SW8015 Mod

Seq Number: 3137481 Matrix: Solid

SW8015P Prep Method:

LCS Sample Id: 7711555-1-BKS MB Sample Id: 7711555-1-BLK

Date Prep: 09.17.2020 LCSD Sample Id: 7711555-1-BSD

MB Spike **RPD** LCS LCS %RPD Units LCSD LCSD Limits Analysis **Parameter** Result %Rec Limit Date Result Amount Result %Rec Gasoline Range Hydrocarbons (GRO) 35 09.17.2020 22:53 < 50.0 1000 834 83 822 82 70-135 1 mg/kg Diesel Range Organics (DRO) < 50.0 1000 935 94 925 93 70-135 35 09.17.2020 22:53 1 mg/kg

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

Analytical Method: TPH by SW8015 Mod

Seq Number: 3137481 Matrix: Solid

Prep Method: Date Prep:

SW8015P 09.17.2020

MB Sample Id: 7711555-1-BLK

MB **Parameter** Result

Units

mg/kg

Analysis Flag Date

Flag

Motor Oil Range Hydrocarbons (MRO) < 50.0

09.17.2020 22:33 mg/kg

Analytical Method: TPH by SW8015 Mod

3137481

Matrix: Soil

906

Prep Method: Date Prep: SW8015P

Seq Number: Parent Sample Id:

672834-009

MS Sample Id: 672834-009 S MSD Sample Id: 672834-009 SD

35

09.17.2020

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

938

94

70-135

91

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

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

Diesel Range Organics (DRO)

[D] = 100\*(C-A) / BRPD = 200\* | (C-E) / (C+E) | [D] = 100 \* (C) / [B]

<49.9

Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

998

LCS = Laboratory Control Sample

3

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

## QC Summary 672898

#### LT Environmental, Inc.

Ross Draw 25 North CTB

Analytical Method:BTEX by EPA 8021BPrep Method:SW5035ASeq Number:3137632Matrix:SolidDate Prep:09.18.2020MB Sample Id:7711605-1-BLKLCS Sample Id:7711605-1-BKSLCSD 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		0.0937	94	70-130	11	35	mg/kg	09.18.2020 06:51	
Toluene	< 0.00200	0.100	0.102	0.102 102 0		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	0.189 95		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 Flag	LCSI %Re			imits	Units	Analysis Date	
1,4-Difluorobenzene	100		ç	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 Prep Method: SW5035A

 Seq Number:
 3137632
 Matrix:
 Soil
 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	%Rec	Flag	MSD %Rec	Flag	Limits	Omts	Date
1,4-Difluorobenzene	98		100		70-130	%	09.18.2020 07:36
4-Bromofluorobenzene	89		90		70-130	%	09.18.2020 07:36



5			Chain of Custody	Custody	Work Order No:	ならなの下の
X II Z		ton, TX (281) 240-42	00 Dallas,TX (214) 902-0	Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334		
		392-7550) Phoenix,	440) EL Paso, IX (915)58: AZ (480-355-0900) Atlant	Mildiand, I.X (432-704-5440) EL Paso, I.X (915)585-3443 Lubbock, T.X (806)794-1296 Hobbs, NM (575-392-7550) Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813-620-2000)	www.xenco.com	Page / of /
ect Manager: Dan Moir		Bill to: (if different)	) Kyle Littrell		Work Order Com	
pany Name: LT Environmental, Inc.,	ental, Inc., Permian office	Company Name:	e: XTO Energy		Program: UST/PST PRP Brownfields	RC   uperfund
ess: 3300 North A Street		Address:		reet	District Con-	[
State ZIP: Midland, TX 79705	79705	City, State ZIP:	50.00	220	Reporting:Level II	RRP   bvel IV
1e: 432.236.3849		Email: bbelill@ltenv.com	1000000		Deliverables: EDD ☐ ADaPT ☐	Other:
ect Name: Ross Draw 25 North CTB		Turn Around		ANALYSIS REQUEST	TEST	Work Order Notes
ct Number: 0 / 2	0,2520 108 Ro	Routine 🔏				
NBN						
oler's Name: Benjamin Belill		Due Date:				
MPLE RECEIPT Te	Temp Blank: Wet Ice:	S No				
perature (°C): 2-8/	3. 6 Thermometer ID					
	No		021)			
yes Yes	No N/A Total Containers:	- 0	801 A 0=		TAT	TAT starts the day recevied by th
Sample Identification	Matrix Date Time	Depth	PH (EP			Sample Comments
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		10/10	***************************************			
tal 200.7 / 6010 200.8 / 6020: ircle Method(s) and Metal(s) to be analyzed	8	RCRA 13PPM Texas 11 A		Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag	Mo Ni K Se Ag SiO2 TI U	Na Sr Tl Sn U V Zn 1631 / 245.1 / 7470 / 7471 : Hg
Signature of this document and reling  e. Xenco will be liable only for the co  b. A minimum charge of \$75.00 will be	Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It is affiliated by the client if such losses are in the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are in the cost of samples are considered by the client if such losses are in the cost of samples are considered by the client if such losses are in the cost of samples are considered by the client if such losses are considered by the client in the const of such losses are considered by the client in the constant in t	urchase order from cesponsibility for any	lient company to Xenco, its losses or expenses incurred	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  E. Kenco 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  A minimum charge of \$25 no will be applied to 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	assigns standard terms and conditions due to circumstances beyond the control	
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## **Eurofins Xenco, LLC**

## Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Acceptable Temperature Range: 0 - 6 degC

Date/ Time Received: 09.17.2020 04.15.00 PM

Air and Metal samples Acceptable Range: Ambient

Work Order #: 672898

Analyst:

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/ receiv	ed? Yes	
#10 Chain of Custody agrees with sample labels/matri	x? Yes	
#11 Container label(s) legible and intact?	Yes	
#12 Samples in proper container/ bottle?	Yes	Samples received in bulk containers.
#13 Samples properly preserved?	Yes	
#14 Sample container(s) intact?	Yes	
#15 Sufficient sample amount for indicated test(s)?	Yes	
#16 All samples received within hold time?	Yes	
#17 Subcontract of sample(s)?	No	
#18 Water VOC samples have zero headspace?	N/A	

Must be completed for	after-hours deliver	v of samples prior to	placing in the refrigerato
Must be combleted to	aitei-ilouis aeilvei	v di sallibles bildi to	Diacilla ili tile rell'iderato

Checklist completed by:

Cloe Clifton

Checklist reviewed by:

Jessica Kramer

Date: 09.17.2020

Date: 09.21.2020

PH Device/Lot#:

eurofins Environment Testing

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## Certificate of Analysis Summary 672899

LT Environmental, Inc., Arvada, CO

**Project Name: Ross Draw 25 North CTB** 

**Project Id:** 

**Project Location:** 

**Contact:** 

012920108 Dan Moir

**Date Received in Lab:** Thu 09.17.2020 16:19

**Report Date:** 09.21.2020 11:45

Project Manager: Jessica Kramer

	Lab Id:	672899-0	001	672899-0	002		
Analysis Paguested	Field Id:	CH01		CH01 A	A		
Analysis Requested	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		
Benzene		< 0.00201	0.00201		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		
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		
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		
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

Jessica Weamer



# **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,

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	<b>Date Collected</b>	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**

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eurofins **Environment Testing** Xenco

Client Name: LT Environmental, Inc. Project Name: Ross Draw 25 North CTB

Project ID: Report Date: 09.21.2020 012920108 Work Order Number(s): 672899 Date Received: 09.17.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

**CH01** 

## **Certificate of Analytical Results 672899**

## LT Environmental, Inc., Arvada, CO

Ross Draw 25 North CTB

Soil

Lab Sample Id: 672899-001 Date Collected: 09.16.2020 12:50 Sample Depth: 0.5 ft

Matrix:

Analytical Method: Chloride by EPA 300 Prep Method: E300P

% Moisture:

Tech: MAB % Moisture:

MAB Analyst: Date Prep: 09.17.2020 17:31 Basis: Wet Weight

Date Received:09.17.2020 16:19

Seq Number: 3137499

Sample Id:

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

DTH Tech:

Analyst: DTH Basis: Wet Weight Date Prep: 09.17.2020 17:20

Parameter	Cas Numbe	r 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		

## 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: BTEX by EPA 8021B Prep Method: SW5035A

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 09.18.2020 11:44 Basis: Wet Weight

Parameter	Cas Number	r Result	RL		Units	<b>Analysis Date</b>	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		

## 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

09.17.2020 17:31

Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

Date Prep:

% Moisture:

MAB Analyst:

Basis:

Wet Weight

Seq Number: 3137499

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

Analytical Method: TPH by SW8015 Mod

DTH

Prep Method: SW8015P

% Moisture:

DTH Tech:

Analyst:

Date Prep: 09.17.2020 17:20 Basis: Wet Weight

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	

Surrogate	Cas Number	% Recovery	Units	Limits	<b>Analysis Date</b>
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

## 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

Prep Method: SW5035A

09.18.2020 14:18

Tech: MAB % Moisture:

460-00-4

Analyst: MAB Date Prep: 09.18.2020 11:44 Basis: Wet Weight

Seq Number: 3137632

4-Bromofluorobenzene

Analytical Method: BTEX by EPA 8021B

Parameter	Cas Number	Result	RL		Units	<b>Analysis Date</b>	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		

90

%

70-130



# **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

MB Sample Id:

#### 672899 **QC Summary**

## LT Environmental, Inc.

Ross Draw 25 North CTB

Analytical Method: Chloride by EPA 300

Seq Number: 3137499

7711598-1-BLK

Matrix: Solid LCS Sample Id: 7711598-1-BKS

E300P Prep Method: Date Prep: 09.17.2020

LCSD Sample Id: 7711598-1-BSD

LCS RPD MB Spike LCS Limits %RPD Units Analysis LCSD LCSD Flag **Parameter** Result Amount Result %Rec Result %Rec Limit Date

Chloride <10.0 250 102 256 102 90-110 0 20 09.17.2020 19:46 256 mg/kg

Analytical Method: Chloride by EPA 300

Seq Number: 3137499

Matrix: Soil

MS Sample Id: 672834-021 S Prep Method: E300P

Date Prep: 09.17.2020

MSD Sample Id: 672834-021 SD Parent Sample Id: 672834-021 Parent Spike MS MS MSD MSD Limits %RPD RPD Units Analysis

**Parameter** Flag Result Amount Result %Rec %Rec Limit Date Result 09.17.2020 20:03 Chloride 155 199 357 102 357 102 90-110 0 20 mg/kg

Analytical Method: TPH by SW8015 Mod

Seq Number: 3137481

Matrix: Solid

SW8015P Prep Method:

Date Prep: 09.17.2020

LCS Sample Id: 7711555-1-BKS LCSD Sample Id: 7711555-1-BSD MB Sample Id: 7711555-1-BLK

Spike **RPD** MB LCS LCS %RPD Units LCSD LCSD Limits Analysis **Parameter** Result %Rec Limit Date Result Amount Result %Rec Gasoline Range Hydrocarbons (GRO) 35 09.17.2020 22:53 < 50.0 1000 834 83 822 82. 70-135 1 mg/kg Diesel Range Organics (DRO) < 50.0 1000 935 94 925 93 70-135 35 09.17.2020 22:53 1 mg/kg

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

Analytical Method: TPH by SW8015 Mod

Seq Number: 3137481 Matrix: Solid Prep Method:

SW8015P

Date Prep: 09.17.2020

MB Sample Id: 7711555-1-BLK

MB **Parameter** Result Units

Analysis Flag Date

Flag

Flag

Motor Oil Range Hydrocarbons (MRO) < 50.0

09.17.2020 22:33 mg/kg

Analytical Method: TPH by SW8015 Mod

3137481

Prep Method:

SW8015P

Date Prep: 09.17.2020

MS Sample Id: 672834-009 S Parent Sample Id: 672834-009

MSD Sample Id: 672834-009 SD

MS = Matrix Spike

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

Matrix: Soil

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

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

Seq Number:

[D] = 100\*(C-A) / BRPD = 200\* | (C-E) / (C+E) | [D] = 100 \* (C) / [B]

Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample = Parent Result

B = Spike Added = MS/LCS Result D = MSD/LCSD % Rec = MSD/LCSD Result

Final 1.000

## QC Summary 672899

## LT Environmental, Inc.

Ross Draw 25 North CTB

Analytical Method:BTEX by EPA 8021BPrep Method:SW5035ASeq Number:3137632Matrix:SolidDate Prep:09.18.2020MB Sample Id:7711605-1-BLKLCS Sample Id:7711605-1-BKSLCSD 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 Flag	LCSI %Re			imits	Units	Analysis Date	
1,4-Difluorobenzene	100		g	98		98		70	-130	%	09.18.2020 06:51	
4-Bromofluorobenzene	88		8	38		88		70	-130	%	09.18.2020 06:51	

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

 Seq Number:
 3137632
 Matrix:
 Soil
 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	%Rec	Flag	MSD %Rec	Flag	Limits	Omts	Date
1,4-Difluorobenzene	98		100		70-130	%	09.18.2020 07:36
4-Bromofluorobenzene	89		90		70-130	%	09.18.2020 07:36

Company Name: Project Manager: Dan Moir LT Environmental, Inc.,

Address: City, State ZIP:

Midland, TX 79705 3300 North A Street

Carlsbad, NM 88220 3104 E Green Street XTO Energy Kyle Littrell

, Permian office

Bill to: (if different)

Company Name: Address:

Program: UST/PST □PRP □Brownfields □RC

uperfund

www.xenco.com

Page

of

**Work Order Comments** 

State of Project:

# Chain of Custody

Work Order No: 472899

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

Revised Date 051418 Rev. 2018.1				Rece
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Date/Time	Received by: (Signature)	Date/Time Relinquished by: (Signature)	Received by: (Signature)	(Signature)
	andard terms and conditions umstances beyond the control is previously negotiated.	A 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: /Circustum:	sst of samples and shall not assume any responsibility for an applied to each project and a charge of \$5 for each sample s	Service. Aenco will be liable only for the c  Xenco. A minimum charge of \$75.00 will b  Relinquiched by: (Sizepature)
1631 / 245.1 / /4/0 / /4/1 : Hg		tice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco its affiliation and relinquishment of samples constitutes a valid purchase order from client company to Xenco its affiliation and relinquishment of Samples constitutes a valid purchase order from client company to Xenco its affiliation and relinquishment of Samples constitutes a valid purchase order from client company to Xenco its affiliation and relinquishment of Samples constitutes a valid purchase order from client company to Xenco its affiliation and relinquishment of Samples constitutes a valid purchase order from client company to Xenco its affiliation and relinquishment of Samples constitutes a valid purchase order from client company to Xenco its affiliation and relinquishment of Samples constitutes a valid purchase order from client company to Xenco its affiliation and relinquishment of Samples constitutes are supported by the constitute of the company of the co	uishment of samples constitutes a valid purchase order from	otice: Signature of this document and reline
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Sample Collinellis		ТВ	0616-12-	くれて
Sample Comments	w a	Numbe TPH (EP, BTEX (El	Matrix Date Time Depth	Sample Identification
TAT starts the day recevied by the	TATS	A 801	N/A Total Containers: 2	Sample Custody Seals: Yes
		15) =802		Cooler Custody Seals: Yes
		11)	No To	SULT
		ers	5 [	Temperature (°C):
			Temp Blank: O No Wet Ice: No	SAMPLE RECEIPT
			iill Due Date:	Sampler's Name:   Benjamin Belill
			N/M2020 924 128 Rush: 3 day	
			012420 108 Routine 18	er:
Work Order Notes		ANALYSIS REQUEST	Ross Draw 25 North CTB Turn Around	
ň I	Deliverables: EDD		Email: bbelill@ltenv.com	
RRP bvel IV	Reporting:Level II	Carlsbad, NM 88220	City, State ZIP:	200 000 0

# **Eurofins Xenco, LLC**

## Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Acceptable Temperature Range: 0 - 6 degC

Date/ Time Received: 09.17.2020 04.19.00 PM

Air and Metal samples Acceptable Range: Ambient

Work Order #: 672899

Analyst:

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 contain	ner/ 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 relinquish	ned/ received?	Yes	
#10 Chain of Custody agrees with sample la	abels/matrix?	Yes	
#11 Container label(s) legible and intact?		Yes	
#12 Samples in proper container/ bottle?		Yes	Samples received in bulk containers.
#13 Samples properly preserved?		Yes	
#14 Sample container(s) intact?		Yes	
#15 Sufficient sample amount for indicated to	test(s)?	Yes	
#16 All samples received within hold time?		Yes	
#17 Subcontract of sample(s)?		No	
#18 Water VOC samples have zero headsp	ace?	N/A	

* Must be	completed for	after-hours	delivery of	samples	prior to	placing in	the r	efrigerato	16

Checklist completed by:	Cloe Clifton	Date: 09.17.2020
Checklist reviewed by:	Jessica Vramer	Date: 09.18.2020

Jessica Kramer

PH Device/Lot#:

eurofins Environment Testing

## Page 83 of 126

# Certificate of Analysis Summary 672900

LT Environmental, Inc., Arvada, CO

**Project Id:** 

**Project Location:** 

**Contact:** 

012920108

Dan Moir

**Project Name: Ross Draw 25 North CTB** 

**Date Received in Lab:** Thu 09.17.2020 16:19

**Report Date:** 09.21.2020 11:46

Project Manager: Jessica Kramer

	Lab Id:	672900-0	01	672900-00	2		
Analysis Requested	Field Id:	CH02		CH02 A			
Anaiysis Kequesieu	Depth:	0.5- ft		2- ft			
	Matrix:	SOIL		SOIL			
	Sampled:	09.16.2020	10:10	09.16.2020 1	0:30		
BTEX by EPA 8021B	Extracted:	09.18.2020	11:44	09.18.2020 1	1:44		
	Analyzed:	09.18.2020	14:41	09.18.2020 1	5:03		
	Units/RL:	mg/kg	RL	mg/kg	RL		
Benzene		< 0.00200	0.00200	< 0.00201	0.00201		
Toluene		< 0.00200	0.00200	< 0.00201	0.00201		
Ethylbenzene		< 0.00200	0.00200	< 0.00201	0.00201		
-,p-Xylenes		< 0.00399	0.00399	< 0.00402	0.00402		
-Xylene		< 0.00200	0.00200		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 1	7:31		
	Analyzed:	09.17.2020	22:09	09.17.2020 2	2:14		
	Units/RL:	mg/kg	RL	mg/kg	RL		
Chloride		216	50.4	22.6	9.90		
TPH by SW8015 Mod	Extracted:	09.17.2020	17:20	09.17.2020 1	7:20		
	Analyzed:	09.18.2020	06:16	09.18.2020 0	6:36		
	Units/RL:	mg/kg	RL	mg/kg	RL		
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

Jessica Weamer



# **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	<b>Date Collected</b>	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

Xenco

**Environment Testing** 

## **CASE NARRATIVE**

Client Name: LT Environmental, Inc. Project Name: Ross Draw 25 North CTB

Project ID: Report Date: 09.21.2020 012920108 Work Order Number(s): 672900 Date Received: 09.17.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Final 1.000

**CH02** 

Analytical Method: Chloride by EPA 300

## **Certificate of Analytical Results 672900**

## LT Environmental, Inc., Arvada, CO

Ross Draw 25 North CTB

Sample Id:

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

Prep Method: E300P

Tech: MAB

% Moisture:

% Moisture:

MAB Analyst: 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

DTH Tech:

Analyst: DTH Basis: Wet Weight Date Prep: 09.17.2020 17:20

Parameter	Cas Numbe	r 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		

## 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: BTEX by EPA 8021B Prep Method: SW5035A

Tech: MAB % Moisture:

MAB Analyst: Date Prep: 09.18.2020 11:44 Basis: Wet Weight

Seq Number: 3137632

Parameter	Cas Number	Result	RL		Units	<b>Analysis Date</b>	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		

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## **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

Analyst:

MAB MAB

Date Prep: 09.17.2020 17:31

% Moisture: 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

DTH

Prep Method: SW8015P

% Moisture:

Basis:

Tech: DTH

Analyst:

Date Prep:

09.17.2020 17:20

Wet Weight

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	

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date
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

## 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: BTEX by EPA 8021B Prep Method: SW5035A

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 09.18.2020 11:44 Basis: Wet Weight

Parameter	Cas Numbe	r Result	RL		Units	<b>Analysis Date</b>	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

Flag

Flag

#### **QC Summary** 672900

## LT Environmental, Inc.

Ross Draw 25 North CTB

Analytical Method: Chloride by EPA 300

3137499 Seq Number:

MB Sample Id:

**Parameter** 

7711598-1-BLK

Matrix: Solid

E300P Prep Method:

Date Prep: 09.17.2020

LCSD Sample Id: 7711598-1-BSD

LCS RPD MB Spike LCS Limits %RPD Units Analysis LCSD LCSD Flag **Parameter** Result Amount Result %Rec Result %Rec Limit Date

Chloride <10.0 250 102 256 102 90-110 0 20 09.17.2020 19:46 256 mg/kg

LCS Sample Id: 7711598-1-BKS

Analytical Method: Chloride by EPA 300

Seq Number: 3137499

Matrix: Soil

Result

MS Sample Id: 672834-021 S Prep Method: E300P

Limit

Date Prep: 09.17.2020

Date

MSD Sample Id: 672834-021 SD Parent Sample Id: 672834-021 Parent Spike MS MS MSD MSD Limits %RPD RPD Units Analysis

Amount %Rec %Rec 09.17.2020 20:03 Chloride 155 199 357 102 357 102 90-110 0 20 mg/kg

Analytical Method: TPH by SW8015 Mod

Seq Number: 3137481

Result

Matrix: Solid

SW8015P Prep Method:

Date Prep: 09.17.2020

LCS Sample Id: 7711555-1-BKS LCSD Sample Id: 7711555-1-BSD MB Sample Id: 7711555-1-BLK

Result

MB Spike **RPD** LCS LCS %RPD Units LCSD LCSD Limits Analysis **Parameter** Result %Rec Limit Date Result Amount Result %Rec Gasoline Range Hydrocarbons (GRO) 35 09.17.2020 22:53 < 50.0 1000 834 83 822 82. 70-135 1 mg/kg Diesel Range Organics (DRO) < 50.0 1000 935 94 925 93 70-135 35 09.17.2020 22:53 1 mg/kg

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

Analytical Method: TPH by SW8015 Mod

Seq Number: 3137481 Matrix: Solid

Prep Method:

SW8015P

Date Prep: 09.17.2020

MB Sample Id: 7711555-1-BLK

MB **Parameter** 

Result

Units

Analysis Flag Date

Flag

09.17.2020 22:33 Motor Oil Range Hydrocarbons (MRO) < 50.0 mg/kg

Analytical Method: TPH by SW8015 Mod

Seq Number: 3137481

Matrix: Soil

Prep Method:

SW8015P

Date Prep: 09.17.2020

MS Sample Id: 672834-009 S Parent Sample Id: 672834-009

MSD Sample Id: 672834-009 SD

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

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

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

[D] = 100\*(C-A) / BRPD = 200\* | (C-E) / (C+E) | [D] = 100 \* (C) / [B]

Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample = Parent Result = MS/LCS Result

= MSD/LCSD Result

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

Page 11 of 14

Xenco

## LT Environmental, Inc.

672900

Ross Draw 25 North CTB

Analytical Method:BTEX by EPA 8021BPrep Method:SW5035ASeq Number:3137632Matrix:SolidDate Prep:09.18.2020MB Sample Id:7711605-1-BLKLCS Sample Id:7711605-1-BKSLCSD 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 Flag	LCSI %Re			imits	Units	Analysis Date	
1,4-Difluorobenzene	100		9	98		98		70	-130	%	09.18.2020 06:51	
4-Bromofluorobenzene	88		8	38		88		70	-130	%	09.18.2020 06:51	

Analytical Method: BTEX by EPA 8021B

 Seq Number:
 3137632
 Matrix:
 Soil
 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	%Rec	Flag	MSD %Rec	Flag	Limits	Omts	Date
1,4-Difluorobenzene	98		100		70-130	%	09.18.2020 07:36
4-Bromofluorobenzene	89		90		70-130	%	09.18.2020 07:36

Prep Method:

SW5035A

Address:

Company Name: Project Manager:

City, State ZIP:

Phone:

# **Chain of Custody**

Work Order No: 672900

of

Midland,TX (432-704-5440)         EL Paso,TX (915)585-3443         Lubbock,TX (806)794-1296         www.xenco.com         Page           Dan Moir         Bill to: (if different)         Kyle Littrell         Kyle Littrell         Work Order Comments           LT Environmental, Inc., Permian office         Company Name:         XTO Energy         Address:         3104 E Green Street         Program: UST/PST PRP Brownfields RC         RC           3300 North A Street         Address:         3104 E Green Street         State of Project:
--

i idic.	402.200.0049		-	Email:	Email: bbelill@ltenv.com	v.com				Deli	Deliverables: EDD	ADaPT	Other:
Project Name:	Ross Draw 25 North CTB	orth CTB		Tu	Turn Around					ANAI YSIS REQUEST		W	Work Order Notes
Project Number:	€01252010	80108		Routine	ne 🔀								
P.O. Number:	NRM2220924 128	851 42		Rush:	2		1	121-					
Sampler's Name:	Benjamin Belill			Due Date:	)ate:								
SAMPLE RECEIPT		Temp Blank: Yes	No	Wet Ice:	No No								
Temperature (°C):	9.8/a.6	6		Thermometer ID	1	ers							
Received Intact:	D S	No	-	22001		tain			(0.0				
Cooler Custody Seals:	Yes M	NA	Correcti	Correction Factor:	00	Con			300				
Sample Custody Seals:	Yes	N/A	Total C	Total Containers:	0	of (			(EPA			TAT start	TAT starts the day recevied by the
Sample Identification		Matrix	Date	Time	Depth	mber	H (EPA	EX (EF	oride			lab.	lab, ii received by 4:30pm
	7 1 2		100	Dairipieu		N		+	Ch			Sall	Sample Comments
	Cach	-	110/10/10	010	0.5	_	×	×	×				
	CHOZA	S	1	030	2'	_	×	×	×				
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		-				_	-					\	
		-										1	
							1	(					
				-	7	0	MAN	1	+				
					10								
			$\mathbb{H}$										
							-	-					
Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed	0 200.8 / 6020: and Metal(s) to be	0: ne analyze	<u>∞</u>	RA 13PP LP / SPLP	TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu	1 AI S	Sb As	Ba Be	6 B C	Co Cu Fe Pb Mg	Mn Mo Ni K Se Ag	SiO2	ân U V Zn
ce: Signature of this doc	mont and collection											10011 270.1	1001/2401/14/0/14/1lg
Service. Xenco will be liable only for the cost of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcon 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 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	ble only for the cost of e of \$75.00 will be apple	samples and lied to each pr	es constitute shall not ass roject and a c	s a valid purch ume any responsible of \$5 for	hase order from onsibility for an or each sample s	client co y losses o submitted	mpany to or expens to Xence	Xenco, ses incu o, but no	its affilia	Service. Xenco will be liable only for the cost 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 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.	rd terms and conditions tances beyond the control evicusly negotiated		
Relinquished by: (Signature)	Signature)	Rec	eived by:	Received by: (Signature)		D	Date/Time	ne		Relinquished by: (Signature)	Received by: (Signature)	(Signature)	Date/Time
Dr. Sun	0	Clu Cliffon 9-1720 1619	30 9.1	720 K	19	S/ 3/ 2003/21/6	Pool	161	2			,	

Revised Date 051418 Rev. 2018.1

□RRP □evel IV

uperfund

## **Eurofins Xenco, LLC**

# Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Acceptable Temperature Range: 0 - 6 degC

Date/ Time Received: 09.17.2020 04.19.00 PM

Air and Metal samples Acceptable Range: Ambient

Work Order #: 672900

Analyst:

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 contain	ner/ 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 relinquish	ned/ received?	Yes	
#10 Chain of Custody agrees with sample la	abels/matrix?	Yes	
#11 Container label(s) legible and intact?		Yes	
#12 Samples in proper container/ bottle?		Yes	Samples received in bulk containers.
#13 Samples properly preserved?		Yes	
#14 Sample container(s) intact?		Yes	
#15 Sufficient sample amount for indicated	test(s)?	Yes	
#16 All samples received within hold time?		Yes	
#17 Subcontract of sample(s)?		No	
#18 Water VOC samples have zero headsp	ace?	N/A	

* Must be	completed for	after-hours	delivery of	samples	prior to	placing in	the r	efrigerato	16

Checklist completed by:

Cloe Clifton

Checklist reviewed by:

Date: 09.17.2020

Date: 09.18.2020

PH Device/Lot#:

eurofins Environment Testing

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# **Certificate of Analysis Summary 672901**

LT Environmental, Inc., Arvada, CO

11 Environmental, me., Alvada, Co

Project Id: Contact: 012920108 Dan Moir **Project Name: Ross Draw 25 North CTB** 

**Date Received in Lab:** Thu 09.17.2020 16:19 **Report Date:** 09.21.2020 12:17

**Project Location:** 

Project Manager: Jessica Kramer

	Lab Id:	672901-0	001	672901-0	002		
	Field Id:	CH03		CH03			
Analysis Requested	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

Jessian Kramer



# **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,

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	<b>Date Collected</b>	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

Xenco

**Environment Testing** 

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## **CASE NARRATIVE**

Client Name: LT Environmental, Inc. Project Name: Ross Draw 25 North CTB

 Project ID:
 012920108
 Report Date:
 09.21.2020

 Work Order Number(s):
 672901
 Date Received:
 09.17.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Date Received:09.17.2020 16:19

**CH03** 

## **Certificate of Analytical Results 672901**

## LT Environmental, Inc., Arvada, CO

Ross Draw 25 North CTB

Soil

Lab Sample Id: 672901-001 Date Collected: 09.16.2020 11:07 Sample Depth: 0.5 ft

Matrix:

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

Sample Id:

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

Parameter	Cas Numbe	r 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		

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# **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: BTEX by EPA 8021B Prep Method: SW5035A

Tech: MAB % Moisture:

540-36-3

Analyst: MAB Date Prep: 09.18.2020 11:44 Basis: Wet Weight

Seq Number: 3137632

1,4-Difluorobenzene

Parameter	Cas Number	Result	RL		Units	<b>Analysis Date</b>	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		

103

%

70-130

09.18.2020 15:26

## LT Environmental, Inc., Arvada, CO

Ross Draw 25 North CTB

Sample Id: **CH03 A** Matrix: Soil

Date Received:09.17.2020 16:19

Date Collected: 09.16.2020 11:20

Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

Lab Sample Id: 672901-002

% Moisture:

MAB Analyst:

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

% Moisture:

 $\operatorname{DTH}$ Tech:

Analyst:

DTH

Date Prep: 09.18.2020 10:30 Basis: Wet Weight

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	

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date
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



## 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: BTEX by EPA 8021B Prep Method: SW5035A

Tech: MAB % Moisture:

540-36-3

Analyst: MAB Date Prep: 09.18.2020 11:44 Basis: Wet Weight

Seq Number: 3137632

1,4-Difluorobenzene

Toluene 108-88-3 <0.00200 0.00200 mg/kg Ethylbenzene 100-41-4 <0.00200 0.00200 mg/kg	Analysis Date	Flag	Dil
Ethylbenzene 100-41-4 <0.00200 0.00200 mg/kg	09.18.2020 15:48	U	1
	09.18.2020 15:48	U	1
m n Vydenes 170601 22 1 <0.00200 0.00200 mg/kg	09.18.2020 15:48	U	1
III,p-Ayienes 179001-25-1 <0.00399 0.00399 Ilig/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		

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.

**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

<sup>\*\*</sup> Surrogate recovered outside laboratory control limit.

#### **QC Summary** 672901

## LT Environmental, Inc.

Ross Draw 25 North CTB

Analytical Method: Chloride by EPA 300

Seq Number: 3137499

7711598-1-BLK

Matrix: Solid

LCSD

E300P Prep Method:

Date Prep: 09.17.2020

LCSD Sample Id: 7711598-1-BSD

MB Sample Id: **Parameter** 

LCS Sample Id: 7711598-1-BKS

LCS

102

RPD

Limit

20

RPD

Limit

20

Analysis Flag

Chloride

MB Result Amount <10.0

155

Spike

250

Spike

199

Amount

LCS Result %Rec 256

LCSD Result 256

%Rec 102 90-110

Limits

0

%RPD

mg/kg

Units

Date 09.17.2020 19:46

Analytical Method: Chloride by EPA 300

3137499

Matrix: Soil

Prep Method: Date Prep:

09.17.2020

E300P

Seq Number: Parent Sample Id:

672834-021

MS Sample Id: 672834-021 S

%Rec

102

MSD Sample Id: 672834-021 SD

mg/kg

**Parameter** 

Chloride

Parent Result MS MS

Result

357

MSD MSD %Rec Result

102

357

Limits %RPD

0

90-110

Units

Analysis Flag Date

09.17.2020 20:03

Analytical Method: TPH by SW8015 Mod

3137481

Matrix: Solid

Prep Method:

SW8015P

Seq Number: MB Sample Id:

Seq Number:

MB Sample Id:

7711555-1-BLK

LCS Sample Id: 7711555-1-BKS

Date Prep: LCSD Sample Id: 7711555-1-BSD

09.17.2020

MB Spike **RPD** LCS LCS %RPD Units LCSD LCSD Limite Analysis Flag **Parameter** Result %Rec Limit Date Result Amount Result %Rec Gasoline Range Hydrocarbons (GRO) 35 09.17.2020 22:53 < 50.0 1000 834 83 822 82. 70-135 1 mg/kg Diesel Range Organics (DRO) < 50.0 1000 935 94 925 93 70-135 35 09.17.2020 22:53 1 mg/kg

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

Analytical Method: TPH by SW8015 Mod

3137547

7711587-1-BLK

Matrix: Solid

Prep Method:

SW8015P

Date Prep: 09.18.2020

LCSD Sample Id: 7711587-1-BSD

%RPD RPD MB Spike LCS LCS LCSD LCSD Limits Units Analysis **Parameter** Result %Rec Limit Result Date Amount Result %Rec Gasoline Range Hydrocarbons (GRO) 35 09.18.2020 10:13 < 50.0 1000 832 83 800 80 70-135 4 mg/kg 09.18.2020 10:13 1000 909 91 812 70-135 11 Diesel Range Organics (DRO) < 50.0 81 35 mg/kg

LCS Sample Id: 7711587-1-BKS

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

Analytical Method: TPH by SW8015 Mod

Seq Number: 3137481 Matrix: Solid

Prep Method:

SW8015P

**Parameter** 

Date Prep:

09.17.2020

MB Result < 50.0

MB Sample Id: 7711555-1-BLK

Units

mg/kg

Analysis Flag Date

09.17.2020 22:33

Flag

Motor Oil Range Hydrocarbons (MRO)

[D] = 100\*(C-A) / BRPD = 200\* | (C-E) / (C+E) | [D] = 100 \* (C) / [B]

Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample = Parent Result

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

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

Flag

Flag

Flag

## QC Summary 672901

## LT Environmental, Inc.

Ross Draw 25 North CTB

Analytical Method: TPH by SW8015 Mod

Seq Number: 3137547 Matrix: Solid

Prep Method: SW8015P

Units

09.18.2020

Analysis

Matrix: Solid Date Prep: MB Sample Id: 7711587-1-BLK

MB

Parameter Result Date

 $Motor Oil Range Hydrocarbons (MRO) \\ < 50.0 \\ mg/kg \\ 09.18.2020 09:53$ 

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

 Seq Number:
 3137481
 Matrix:
 Soil
 Date Prep:
 09.17.2020

 Parent Sample Id:
 672834-009
 MS Sample Id:
 672834-009 S
 MSD Sample Id:
 672834-009 SD

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

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

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

 Seq Number:
 3137547
 Matrix:
 Soil
 Date Prep:
 09.18.2020

 Parent Sample Id:
 672935-001
 MS Sample Id:
 672935-001 SD
 MSD Sample Id:
 672935-001 SD

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

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

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

 Seq Number:
 3137632
 Matrix:
 Solid
 Date Prep:
 09.18.2020

 MB Sample Id:
 7711605-1-BLK
 LCS Sample Id:
 7711605-1-BSD

Spike LCS %RPD RPD MB LCS Units Limits Analysis LCSD LCSD Parameter Result Amount Result %Rec Limit Date %Rec Result 09.18.2020 06:51 Benzene 0.105 105 0.0937 70-130 11 35 < 0.00200 0.100 94 mg/kg mg/kg 09.18.2020 06:51 Toluene < 0.00200 0.100 0.102 102 0.0906 91 70-130 12 35 09.18.2020 06:51 94 12 35 Ethylbenzene < 0.00200 0.1000.0940 0.0833 83 71-129 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

MB LCS LCS LCSD Limits Units MB **Analysis** LCSD Surrogate %Rec Flag %Rec Flag Flag Date %Rec 09.18.2020 06:51 1.4-Difluorobenzene 100 98 98 70-130 % 09.18.2020 06:51 4-Bromofluorobenzene 88 88 88 70-130 %

MS/MSD Percent Recovery Relative Percent Difference LCS/LCSD Recovery Log Difference  $\begin{aligned} [D] &= 100*(C-A) / B \\ RPD &= 200* \mid (C-E) / (C+E) \mid \\ [D] &= 100*(C) / [B] \end{aligned}$ 

Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample A = Parent Result C = MS/LCS Result

= MSD/LCSD Result

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

09.18.2020 07:36

09.18.2020 07:36

#### QC Summary 672901

# eurofins Environment Testing Xenco

1,4-Difluorobenzene

4-Bromofluorobenzene

#### LT Environmental, Inc.

Ross Draw 25 North CTB

100

90

70-130

70-130

%

%

 Analytical Method:
 BTEX by EPA 8021B
 Prep Method:
 SW5035A

 Seq Number:
 3137632
 Matrix:
 Soil
 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 Flag	MSD %Re		_	imits	Units	Analysis Date	

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WORK Order Notes		21371.000 7160000			CONTROL OF THE PARTY OF THE PAR
	101	ANAL YEIS BEOLI	Turn Around	Ross Draw 25 North CTB	ect Name:
Other:	AUAP L				1
2	Deliverables: EDD	3	Email: bbelill@ltenv.com	432.236.3849	
UST LRRP Evel IV	RRP Byel IV	Calisbau, INIVI 00220			
]	Booding: 1	Carlebod NIM 88000	City State ZIP	Midland, TX 79705	State ZIP:
	State of Project:	3104 E Green Street	Address.		
ingina Co Cuberrana C			Addross	3300 North A Street	ress:
fields BC I mortund I	Program: UST/PST PRP Brownfields PC Chinarting	XIO Energy	Company Name.		
		VTO F	Company Name	LT Environmental, Inc., Permian office	pany Name:
Comments	Work Order Comments		, , , , , , , , , , , , , , , , , , , ,		
		Kylo Litroll	Bill to: (if different)	Dan Woir	er manager.
Page of /	3-620-2000) www.xenco.com	(1) - 100 000) / maila, On (1) 0-449-0000) Idiilpa, FL (6)			act Manager
		Hobbs, NM (575-392-7550) Phoenix, AZ (480-355-0900) Atlanta GA (770-440-8900) Towns El (640-650-6500)	575-392-7550) Phoenix.AZ	Hobbs, NM (5	
-		Midland, TX (432-704-5440) EL Paso, TX (915)585-3443 Lubbock, TX (806)794-1296	Midland, TX (432-704-544)		-
	-	1000011, 17 (201) 240-4200 Dallas, IX (214) 902-0300 San Antonio, TX (210) 509-3334	(201) 240-4200		LAE
2 2			Houston TY (281) 240 420		
Work Order No. (01290)	Work Order N	Citalli of Custody			<
・レく		Chain of Circles			)

Project Manager:	Dan Moir		Bill to: (if different)	Rill to: (if different)   C.1-1::::-!!	www.xenco.com	Page of /
Company Name:	LT Environmental, Inc.,	ıc., Permian office	Company Name:	YTO Excess	Work Order Comments	ments
Address:	3300 North A Street		Address:	3104 E Green Street	State of Broingt:	RC _uperfund _
City, State ZIP:	Midland, TX 79705		City, State ZIP:	Carlsbad, NM 88220	Reporting:Level    Pevel    PST/ IST	
Phone:	432.236.3849	E	Email: bbelill@ltenv.com	-		Other:
Project Name:	Ross Draw 25 North CTB		Turn Around		]	Curdi.
Project Number:	KO1021210	4	Routine 🕅			Work Order Notes
P.O. Number:	NBM 2020 924128		Rush: 3/			
ne:	Benjamin Belill		lie Date:			
	Dongan III Donn		Due Date:			
SAMPLE RECEIPT	IPT Temp Blank:	k: Yey No Wet Ice:	CG: Vo			
Temperature (°C):	2.8/2.6					
Received Intact:	1	122 2511	ē			
Cooler Custody Seals:	Yes No	0	19	802		
Sample Custody Seals:	Yes (Wo		2	A 0=	TAT	TAT starts the day recevied by the
,		nat		(EP		lab, if received by 4:30pm
Sample Identification	meation Matrix	S	d Depth	TPH (		Sample Comments
7	CH03 8	9/1680 1107	0.5' 1	×		
1)	CHO 3 A S	0211		×		
	1					
				1		
			80	7/18/5		
	1					
. II I	11					
Circle Method(s) a	Circle Method(s) and Metal(s) to be analyzed		RCRA 13PPM Texas 11 AI TCLP / SPLP 6010: 8RCRA	Sb As Ba Be B Cd Ca Cr Co Cu Sb As Ba Be Cd Cr Co Cu Pb Mn	Ni K Se Ag SiO2	Na Sr TI Sn U V Zn
service. Xenco will be liab	ument and relinquishment of	f samples constitutes a valid es and shall not assume any	purchase order from client responsibility for any loss	Service. Separate 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 Xenco. A minimum charge of a term of 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 circumstance 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 circumstance 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 circumstance the cost of samples.		
Relin	Cianata		To lot out sample subilities	Relinantished by: (Signature)	nforced unless previously negotiated.	
(Signature)	oignature)	Received by: (Signature)	ture)	Date/Time Relinquished by: (Signature)	Signature) Received by: (Signature)	Date/Time
W. sea	Clar	Citton 9-17:30	1619 91	17/200 1685 2		
				4		
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Rece				c		Revised Date 051418 Rev. 2018.1

## **Eurofins Xenco, LLC**

#### Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Acceptable Temperature Range: 0 - 6 degC

Date/ Time Received: 09.17.2020 04.19.00 PM

Air and Metal samples Acceptable Range: Ambient

Work Order #: 672901

Analyst:

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 contain	ner/ 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 relinquish	ed/ received?	Yes	
#10 Chain of Custody agrees with sample la	abels/matrix?	Yes	
#11 Container label(s) legible and intact?		Yes	
#12 Samples in proper container/ bottle?		Yes	Samples received in bulk containers.
#13 Samples properly preserved?		Yes	
#14 Sample container(s) intact?		Yes	
#15 Sufficient sample amount for indicated to	test(s)?	Yes	
#16 All samples received within hold time?		Yes	
#17 Subcontract of sample(s)?		No	
#18 Water VOC samples have zero headsp	ace?	N/A	

* Must be completed for	after-hours deliver	v of samples prior t	o placing in the	refrigerator
Must be combleted for	alter-mours acriver	V OI SAIIIDIGS DITOI I	o biacilia ili tile	i eli idei atoi

Checklist completed by:	Cloe Clifton	Date: 09.17.2020
Checklist reviewed by:	Jessica Warmer  Jessica Kramer	Date: 09.21.2020

PH Device/Lot#:

eurofins Environment Testing

# Certificate of Analysis Summary 672902

LT Environmental, Inc., Arvada, CO

**Project Name: Ross Draw 25 North CTB** 

**Project Id: Contact:** 

**Project Location:** 

012920108

Dan Moir

**Date Received in Lab:** Thu 09.17.2020 16:19

**Report Date:** 09.21.2020 11:56

Project Manager: Jessica Kramer

	Lab Id:	672902-0	01	672902-0	02		
Analysis Requested	Field Id:	CH04		CH04 A	4		
Analysis Requested	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		
Benzene		< 0.00200	0.00200	< 0.00201	0.00201		
Toluene		< 0.00200	0.00200	< 0.00201	0.00201		
Ethylbenzene			0.00200	< 0.00201	0.00201		
m,p-Xylenes		< 0.00401	0.00401	< 0.00402	0.00402		
o-Xylene			0.00200		0.00201		
Total Xylenes			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		
Chloride		273	47.2	78.1	9.96		
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		
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

Jessica Weamer



# **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,

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	<b>Date Collected</b>	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

#### Page 116 of 126

#### **CASE NARRATIVE**

eurofins Environment Testing Xenco

Client Name: LT Environmental, Inc. Project Name: Ross Draw 25 North CTB

 Project ID:
 012920108
 Report Date:
 09.21.2020

 Work Order Number(s):
 672902
 Date Received:
 09.17.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Final 1.000

Date Received:09.17.2020 16:19

**CH04** 

#### **Certificate of Analytical Results 672902**

#### LT Environmental, Inc., Arvada, CO

Ross Draw 25 North CTB

Soil

Date Collected: 09.16.2020 13:45 Sample Depth: 0.5 ft

Lab Sample Id: 672902-001

Matrix:

Analytical Method: Chloride by EPA 300 Prep Method: E300P

MAB % Moisture: Tech:

MAB Analyst: Date Prep: 09.18.2020 09:36 Basis: Wet Weight

Seq Number: 3137505

Sample Id:

Parameter	Cas Number	Result	RL	Units	<b>Analysis Date</b>	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

 $\operatorname{DTH}$ % Moisture: Tech:

Analyst: DTH Basis: Wet Weight Date Prep: 09.18.2020 10:30

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	C	as Number	% Recovery	Units	Limits	Analysis Date	Flag	

## **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: BTEX by EPA 8021B Prep Method: SW5035A

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 09.18.2020 11:44 Basis: Wet Weight

Parameter	Cas Number	r 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

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	C	as Number %	% Recovery	Units	Limits	Analysis Date	Flag	

### **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: BTEX by EPA 8021B Prep Method: SW5035A

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 09.18.2020 11:44 Basis: Wet Weight

Parameter	Cas Number	Result	$\mathbf{RL}$		Units	<b>Analysis Date</b>	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 Promofluorobanzana		460 00 4	96	0/-	70 120	00 19 2020 16:22		

Surrogate	Cas Number	% Recovery	Units	Limits	<b>Analysis Date</b>	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.

**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

<sup>\*\*</sup> Surrogate recovered outside laboratory control limit.

Prep Method:

E300P

Xenco

#### **QC Summary** 672902

#### LT Environmental, Inc.

Ross Draw 25 North CTB

Analytical Method: Chloride by EPA 300

E300P Prep Method: Seq Number: 3137505 Matrix: Solid Date Prep: 09.18.2020

7711600-1-BLK LCS Sample Id: 7711600-1-BKS LCSD Sample Id: 7711600-1-BSD MB Sample Id:

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

Analytical Method: Chloride by EPA 300

Seq Number: 3137505 Matrix: Soil Date Prep: 09.18.2020

672904-002 MS Sample Id: 672904-002 S MSD Sample Id: 672904-002 SD Parent Sample Id:

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

Analytical Method: Chloride by EPA 300

E300P Prep Method: 3137505 Seq Number: Matrix: Soil Date Prep: 09.18.2020

MS Sample Id: 672935-001 S MSD Sample Id: 672935-001 SD Parent Sample Id: 672935-001

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

Analytical Method: TPH by SW8015 Mod

SW8015P Prep Method: 3137547 Matrix: Solid Seq Number: Date Prep: 09.18.2020

MB Sample Id: 7711587-1-BLK LCS Sample Id: 7711587-1-BKS LCSD Sample Id: 7711587-1-BSD

MB Spike LCS LCS LCSD LCSD Limits %RPD **RPD** Units Analysis Flag **Parameter** Result Limit Date Result Amount %Rec Result %Rec Gasoline Range Hydrocarbons (GRO) 09.18.2020 10:13 832 35 < 50.0 1000 83 800 80 70-135 4 mg/kg 09.18.2020 10:13 Diesel Range Organics (DRO) 909 91 812 81 70-135 11 35 < 50.0 1000 mg/kg

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

Analytical Method: TPH by SW8015 Mod

Seq Number: 3137547 Matrix: Solid Date Prep: 09.18.2020

MB Sample Id: 7711587-1-BLK

MBUnits Analysis Flag **Parameter** Result Date

Motor Oil Range Hydrocarbons (MRO) 09.18.2020 09:53 < 50.0 mg/kg

SW8015P

Prep Method:

Flag

#### **QC Summary** 672902

#### LT Environmental, Inc.

Ross Draw 25 North CTB

672935-001 S

Analytical Method: TPH by SW8015 Mod

SW8015P Prep Method:

Seq Number: 3137547 Date Prep: 09.18.2020

Parent Sample Id: 672935-001

MSD Sample Id: 672935-001 SD RPD %RPD Units Analysis Flag

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

Matrix: Soil

MS Sample Id:

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

Analytical Method: BTEX by EPA 8021B

SW5035A Prep Method:

3137632 Seq Number:

Matrix: Solid

Date Prep: 09.18.2020

LCS Sample Id: 7711605-1-BKS MB Sample Id: 7711605-1-BLK

LCSD Sample Id: 7711605-1-BSD

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

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

Analytical Method: BTEX by EPA 8021B

3137632 Matrix: Soil

SW5035A Prep Method: Date Prep: 09.18.2020

Seq Number: 672834-021 MS Sample Id: 672834-021 S Parent Sample Id:

MSD Sample Id: 672834-021 SD

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

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

= MSD/LCSD Result

# Chain of Custody

Work Order No: 672903

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

Project Manager:	Dan Moir			Bill to: (if different)			Work Order Comments	
Company Name:	LT Environmental, Inc., Permian office	tal, Inc., Permi	ian office	Company Name:	ne: XTO Energy		Program: UST/PST PRP Brownfields	elds RC uperfund
le ZIP:	Midland, TX 79705	705		City, State ZIP:		8220	Reporting:Level II	ST RRP bvel IV
	432.236.3849		Ema	Email: bbelill@ltenv.com	7.00 CM		Deliverables: EDD ADaPT	Other:
Project Name:	Ross Draw 25 North CTB	North CTB		Turn Around		ANALYSIS REQUEST	JEST	Work Order Notes
er:	210	801026210	Rou	Routine X				
P.O. Number:	NRM 2020 9	82142 205		h: 3 day				
ne:	Benjamin Belill			Due Date:				
SAMPLE RECEIPT		Temp Blank: Yes	No Wet Ice:	rice No				
Temperature (°C):	2	_	Ther		ers			
Received Intact:	B	8	TIVM-00	11	21)	0.0)		
Cooler Custody Seals:	Ye	I/A	Correction Factor:	6.8-	15) =80	A 30		TAT starts the day received by the
Sample Custody Seals:			Total Containers:	0	PA 80	, (EF		lab, if received by 4:30pm
Sample Identification	tification	Matrix Date Sampled	te Time sampled	Depth	Number TPH (EF	Chlorid		Sample Comments
2	CHOY	s 9/16	Sh 1348	0.5	×	×		
0	CHOYA	S	1430	35	1 × ×	×		
								/
					0			
				R	1			
			1	1				
C								
Total 200.7 / 6010 Circle Method(s) a	otal         200.7 / 6010         200.8 / 6020:           Circle Method(s) and Metal(s) to be analyzed	)20: be analyzed	8RCRA 13PPM Tex	13PPM Texas 11 <i>J</i> <b>SPLP 6010</b> : 8RCRA	1 Al Sb As Ba Be CRA Sb As Ba Be	B Cd Ca Cr Co Cu Fe	Mn Mo Ni K Se Ag SiO2 Ag Ti U	Na Sr Tl Sn U V Zn 1631/245.1/7470/7471:Hg
otice: Signature of this do	ocument and relinqui iable only for the cost rge of \$75.00 will be a	shment of samples t of samples and st ipplied to each pro	constitutes a valid hall not assume any ject and a charge of	ourchase order from responsibility for an \$5 for each sample	n client company to Xenco, ny losses or expenses incu submitted to Xenco, but no	indice: 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 is 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.	gns standard terms and conditions to circumstances beyond the control d unless previously negotiated.	
Relinquished by:	(Signature)	Rece	Received by: (Signature)	ure)	Date/Time	Relinquished by: (Signature)	ture) Received by: (Signature)	) Date/Time
buth	0	Cur Chif	06:F1-12 no-17:20	@ [(e)q	9/17/201615	2		
						4		

#### **Eurofins Xenco, LLC**

#### Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Acceptable Temperature Range: 0 - 6 degC

Date/ Time Received: 09.17.2020 04.19.00 PM

Air and Metal samples Acceptable Range: Ambient

Work Order #: 672902

Analyst:

Temperature Measuring device used: T\_NM\_007

Sample Receipt C	hecklist	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	Samples received in bulk containers.
#13 Samples properly preserved?	Yes	
#14 Sample container(s) intact?	Yes	
#15 Sufficient sample amount for indicated test(s)?	Yes	
#16 All samples received within hold time?	Yes	
#17 Subcontract of sample(s)?	No	
#18 Water VOC samples have zero headspace?	N/A	

<sup>\*</sup> Must be completed for after-hours delivery of samples prior to placing in the refrigerator

Checklist completed by:

Cloe Clifton

Checklist reviewed by:

Jessica Kramer

Date: 09.17.2020

Date: 09.18.2020

PH Device/Lot#:

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

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

#### CONDITIONS

Created	Condition	Condition
Ву		Date
rhamle	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