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	NRM1935840155
District RP	
Facility ID	
Application ID	

# **Release Notification**

# **Responsible Party**

WPIJ6-191106-C-1410

Responsible Party XTO Energy				OGRID	OGRID 5380	
Contact Nam	Contact Name Kyle Littrell			Contact T	Contact Telephone 432-221-7331	
Contact emai	Contact email Kyle_Littrell@xtoenergy.com			Incident #	(assigned by OCD)	
Contact mail 88220	ing address	522 W. Mermo	d, Carlsbad, NM	·		
			Location o	f Release S	ource	
Latitude 32.	277111		(NAD 83 in decim	Longitude al degrees to 5 decir	<u>-103.935915</u> mal places)	
Site Name	REMUDA S	SOUTH 25 STAT	Е 126Н	Site Type	Well Location	
Date Release	Discovered	10/22/2019		API# (if app 126H)	olicable) 30-015-44392 (REMUDA SOUTH 25 STATE	
Unit Letter	Section	Township	Range	Cour	nty	
G	25	23S	29E	EDDY		
Crude Oil	Nature and Volume of Release  Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)					
☐ Crude On		Volume Release			Volume Recovered (bbls) 0.0	
I roduccu	w atei	Volume Released (bbls) 8.8  Is the concentration of dissolved chloride in the produced water >10,000 mg/l?			Volume Recovered (bbls) 8.0  Yes No	
Condensa	te	Volume Release			Volume Recovered (bbls)	
☐ Natural G	as	Volume Released (Mcf)			Volume Recovered (Mcf)	
Other (des	scribe)	Volume/Weight Released (provide units)			Volume/Weight Recovered (provide units)	
Cause of Rele was released remediation.	ease: During to pad surfac	I g drilling operatio ce, a vacuum trucl	ns a returns flow line c recovered 8 bbls. A	was parted at a dditional third p	slip joint. Approximately 8.8 bbls of produced water party resources have been retained to assist in the	

Form C-141 Page 2

# State of New Mexico Oil Conservation Division

Incident ID	NRM1935840155
District RP	
Facility ID	
Application ID	

Was this a major	If YES, for what reason(s) does the respons	sible party consider this a major release?				
release as defined by	N7/4					
19.15.29.7(A) NMAC?	N/A					
☐ Yes ⊠ No						
If YES, was immediate n	notice given to the OCD? By whom? To who	om? When and by what means (phone, email, etc)?				
N/A						
IN/A						
	T '4' ID					
	Initial Re	sponse				
The responsible	party must undertake the following actions immediately	unless they could create a safety hazard that would result in injury				
M The						
The source of the rele	••					
	as been secured to protect human health and t					
Released materials ha	ave been contained via the use of berms or di	kes, absorbent pads, or other containment devices.				
All free liquids and re	ecoverable materials have been removed and	managed appropriately.				
If all the actions describe	d above have <u>not</u> been undertaken, explain w	hy:				
There were no fluids rele	eased to be contained via the use of berms or	likes, absorbent pads, or other containment devices.				
There were no mands release	ased to be contained via the use of bernis of t	inces, absorbent paus, or other containment devices.				
Per 19.15.29.8 B. (4) NM	1AC 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 containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.					
I hereby certify that the info	rmation given above is true and complete to the be	est of my knowledge and understand that pursuant to OCD rules and				
public health or the environr	ment. The acceptance of a C-141 report by the O(	cations 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	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.						
	T MANUEL	T'A GHAD G				
Printed Name: Kyle	Littleil	Title: SH&E Supervisor				
Signature	Telluch	Date:11/6/2019				
email: Kyle Littrell@	)xtoenergy com	Telephone:				
- The Dieterine	y	Totophone.				
OCD Only						
Received by: Ramon	na Marcus	Date: 12/24/2019				
	na Marcus	Date: 12/24/2019				

Page 3 of 138

Incident ID	NRM1935840155
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?	<u>&gt;100</u> (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ⊠ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ⊠ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ⊠ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ⊠ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ⊠ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ⊠ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ⊠ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ⊠ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ⊠ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ⊠ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ⊠ No
Did the release impact areas <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 vecontamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.	rtical 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 well</li> <li>Field data</li> <li>Data table of soil contaminant concentration data</li> <li>Depth to water determination</li> </ul>	tls.

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

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

Received by OCD: 1/18/2021 2:20:31 PM Form C-141 State of New Mexico Page 4 Oil Conservation Division

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Incident ID	NRM1935840155	
District RP		
Facility ID		
Application ID		

ate of New Mexico

Incident ID	NRM1935840155
District RP	
Facility ID	
Application ID	

# Closure

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

Closure Report Attachment Checklist: Each of the following it	tems must be included in the closure report.
A scaled site and sampling diagram as described in 19.15.29.1	1 NMAC
□ Photographs of the remediated site prior to backfill or photos must be notified 2 days prior to liner inspection)	of the liner integrity if applicable (Note: appropriate OCD District office
☐ Laboratory analyses of final sampling (Note: appropriate ODC	C District office must be notified 2 days prior to final sampling)
Description of remediation activities	
and regulations all operators are required to report and/or file certain may endanger public health or the environment. The acceptance of	tions. The responsible party acknowledges they must substantially additions that existed prior to the release or their final land use in
Printed Name: Kyle Littrell	Title: SH&E Supervisor
Printed Name: Kyle Littrell Signature:	Date: <u>01/18/2021</u>
email: Kyle Littrell@xtoenergy.com	Telephone: 432-221-7331
OCD Only	
Received by:	Date:
	of liability should their operations have failed to adequately investigate and water, human health, or the environment nor does not relieve the responsible or regulations.
Closure Approved by: <u>Karen Collins</u>	Date: 4/7/2021
Printed Name: <u>Karan Collins</u>	Title: Environmental Scientist & Specialist

District I
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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	NRM2000235975
District RP	
Facility ID	
Application ID	

## **Release Notification**

		Respo	onsible Party	Y17V0-191108-C-1410
Responsible Party XTO Energy			OGRID 538	30
Contact Name Kyle	Littrell		Contact Telep	hone 432-221-7331
Contact email Kyle	_Littrell@xtoenergy.	com	Incident # (assi	igned by OCD)
Contact mailing addre	ss 522 W. Mermo	d, Carlsbad, NM	<b>\</b>	
		Location of	of Release Sou	rce
_atitude <u>32.277111</u>		<u>.</u>		103.935915
		(NAD 83 in deci	mal degrees to 5 decimal p	laces)
Site Name REMUD	OA SOUTH 25 STA	ГЕ 126Н	Site Type W	ell Location
Date Release Discover	ed 10/25/2019		API# (if applicat	ble) 30-015-44392
Unit Letter   Section	n Township	Danca	Country	
G 25	23S	Range 29E	County	
Mate	erial(s) Released (Select a		Volume of Rel	fication for the volumes provided below)
Crude Oil	Volume Release	d (bbls) 0.0		olume Recovered (bbls) 0.0
Produced Water	Volume Release	d (bbls) 10.0	V	olume Recovered (bbls) 8.5
	Is the concentrate produced water	ion of dissolved chi	loride in the	Yes No
☐ Condensate	Volume Release	d (bbls)	V	olume Recovered (bbls)
☐ Natural Gas	Volume Release	d (Mcf)	V	olume Recovered (Mcf)
Other (describe)	Volume/Weight	Released (provide	units) Vo	olume/Weight Recovered (provide units)
Cause of Release: Downwas released to pad surremediation.	l uring drilling operation rface, a vacuum truck	ons a returns flow li	ine was parted at a slij s. Additional third par	p joint. Approximately 10 bbls of produced water ty resources have been retained to assist in the

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# State of New Mexico Oil Conservation Division

Incident ID	NRM2000235975
District RP	
Facility ID	
Application ID	

Was this a major	If YES, for what reason(s) does the responsible	party consider this a major release?			
release as defined by 19.15.29.7(A) NMAC?	N/A				
19.13.29.7(A) NIVIAC!	IV/A				
☐ Yes ⊠ No					
If YES, was immediate n	If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?				
N/A					
	Initial Response				
The responsible	party must undertake the following actions immediately unles	s they could create a safety hazard that would result in injury			
☐ The source of the rele	ease has been stopped.				
	as been secured to protect human health and the e	nvironment.			
Released materials ha	ave been contained via the use of berms or dikes,	absorbent pads, or other containment devices.			
All free liquids and re					
If all the actions describe	d above have <u>not</u> been undertaken, explain why:				
There were no fluids rele	ased to be contained via the use of berms or dikes	absorbent pads or other containment devices			
		, asserted in particular contact and actions.			
Per 19.15.29.8 B. (4) NM	AC the responsible party may commence remed	ation immediately after discovery of a release. If remediation			
has begun, please attach within a lined containmer	a narrative of actions to date. If remedial effort in area (see 19.15.29.11(A)(5)(a) NMAC), please	s have been successfully completed or if the release occurred			
within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.  I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and					
regulations all operators are	required to report and/or file certain release notification	and perform corrective actions for releases which may endanger			
public health or the environs	ment. The acceptance of a C-141 report by the OCD d	pes not relieve the operator of liability should their operations have			
addition, OCD acceptance o	of a C-141 report does not relieve the operator of respon	roundwater, surface water, human health or the environment. In sibility for compliance with any other federal, state, or local laws			
and/or regulations.					
Printed Name: Kyle	<u>Littrell</u> T	tle: SH&E Supervisor			
Signature:					
1					
email:Kyle_Littrell@	extoenergy.com Te	ephone:			
OCD Only					
Received by: Ramon	na Marcus	01/02/2020			
Received by	Dat				

State of New Mexico Incident ID NR

Incident ID	NRM2000235975
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?	<u>&gt;100</u> (ft bgs)		
Did this release impact groundwater or surface water?	☐ Yes ⊠ No		
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ⊠ No		
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ⊠ No		
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ⊠ No		
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ⊠ No		
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ⊠ No		
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ⊠ No		
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ⊠ No		
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ⊠ No		
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ⊠ No		
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ⊠ No		
Did the release impact areas <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.			
<ul> <li>Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.</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> <li>Boring or excavation logs</li> <li>Photographs including date and GIS information</li> </ul>			

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/Aerial maps

☐ Laboratory data including chain of custody

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Incident ID	NRM2000235975	
District RP		
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Incident ID	NNRM2000235975
District RP	
Facility ID	
Application ID	

# Closure

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

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

A scaled site and sampling diagram as described in 19.15.29.	11 NMAC		
Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)			
☐ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)			
☐ Description of remediation activities			
and regulations all operators are required to report and/or file certain may endanger public health or the environment. The acceptance of should their operations have failed to adequately investigate and replacement human health or the environment. In addition, OCD acceptance of	ations. The responsible party acknowledges they must substantially anditions that existed prior to the release or their final land use in		
Printed Name: Kyle Littrell	Title: SH&E Supervisor		
Printed Name: Kyle Littrell Signature: Signature:	Date:01/18/2021		
email:Kyle_Littrell@xtoenergy.com	Telephone: 432-221-7331		
	Telephone:432-221-7331		
	Telephone: 432-221-7331		
email:Kyle_Littrell@xtoenergy.com  OCD Only  Received by:			
OCD Only  Received by:  Closure approval by the OCD does not relieve the responsible party	Date: of liability should their operations have failed to adequately investigate and water, human health, or the environment nor does not relieve the responsible		
OCD Only  Received by:  Closure approval by the OCD does not relieve the responsible party remediate contamination that poses a threat to groundwater, surface	Date:  of liability should their operations have failed to adequately investigate and water, human health, or the environment nor does not relieve the responsible for regulations.		

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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	NRM2000237294
District RP	
Facility ID	
Application ID	

# **Release Notification**

**Responsible Party** 

N949D-191108-C-1410

		resp	onsible I arty	
Responsible Party XTO Energy			OGRID 5380	
Contact Name Kyle Littrell			Contact Telephone	432-221-7331
Contact email Kyle_	Littrell@xtoenergy	.com	Incident # (assigned	by OCD)
Contact mailing address 88220	s 522 W. Mermo	d, Carlsbad, NM		
		Location	of Release Source	
Latitude <u>32.277111</u>		(NAD 83 in dec	Longitude <u>-103.</u> imal degrees to 5 decimal places	935915
Site Name REMUDA	SOUTH 25 STAT	TE 126H	Site Type Well I	Location
Date Release Discovered	d 10/25/2019		API# (if applicable) 3	0-015-44392
11-'41 -H   G4'	I	Damas	Country	
Unit Letter Section G 25	Township 23S	Range 29E	County	
		Nature and	Volume of Releas	se
Mater				on for the volumes provided below)
Crude Oil		Volume Released (bbls) 0.0		ne Recovered (bbls) 0.0
Produced Water	Volume Release			ne Recovered (bbls) 4.0
Is the concentration of dissolved chloride in the produced water >10,000 mg/l?		loride in the	es 🗌 No	
Condensate	Volume Released (bbls)		Volum	ne Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)		Volum	ne Recovered (Mcf)
Other (describe)	volume/Weight Released (provide units)		units) Volun	ne/Weight Recovered (provide units)
				nt. Approximately 5 bbls of produced water was es have been retained to assist in the

Form C-141 Page 2

# State of New Mexico Oil Conservation Division

Incident ID	NRM2000237294
District RP	
Facility ID	
Application ID	

Was this a major release as defined by	If YES, for what reason(s) does the respon	nsible party consider this a major release?			
19.15.29.7(A) NMAC?	N/A				
` '					
Yes No					
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?					
11 1125, was infinediate in	Since given to the OCD: By whom: 10 wh	ioni: When and by what means (phone, eman, etc):			
N/A					
	Initial Ro	esponse			
The responsible p	party must undertake the following actions immediatel	y unless they could create a safety hazard that would result in injury			
☐ The source of the rele	ease has been stopped.				
☐ The impacted area ha	s been secured to protect human health and	the environment.			
Released materials ha	ave been contained via the use of berms or d	likes, absorbent pads, or other containment devices.			
All free liquids and re	ecoverable materials have been removed and	d managed appropriately.			
If all the actions described	d above have <u>not</u> been undertaken, explain v	why:			
There were no fluids released to be contained via the use of berms or dikes, absorbent pads, or other containment devices.					
		a a			
		· ·			
Per 19.15.29.8 B. (4) NM	IAC the responsible party may commence r	emediation immediately after discovery of a release. If remediation			
has begun, please attach	a narrative of actions to date. If remedial	efforts have been successfully completed or if the release occurred blease attach all information needed for closure evaluation.			
		best of my knowledge and understand that pursuant to OCD rules and			
		fications 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 thre	at to groundwater, surface water, human health or the environment. In			
and/or regulations.	Ta C-141 report does not refleve the operator of	responsibility for compliance with any other federal, state, or local laws			
Printed Name: Kyle	Littrell	Title: SH&E Supervisor			
1/1	Stuff				
Signature	- James	Date: 11-8-19			
email:Kyle_Littrell@	xtoenergy.com	Telephone:			
OCD Only					
Received by: Ramona	a Marcus	Date: 1/2/2020			

e of New Mexico

Incident ID	NRM2000237294
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?	<u>&gt;100</u> (ft bgs)							
Did this release impact groundwater or surface water?	☐ Yes ⊠ No							
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant vatercourse?								
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?								
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?								
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?								
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 vercontamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.	rtical extents of soil							
Characterization Report Checklist: Each of the following items must be included in the report.								
<ul> <li>         \infty Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring well included in the property of the property o</li></ul>	ls.							
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								
<ul> <li>☑ Boring or excavation logs</li> <li>☑ Photographs including date and GIS information</li> </ul>								
Topographic/Aerial maps								
☐ Laboratory data including chain of custody								

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

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Incident ID	NRM2000237294
District RP	
Facility ID	
Application ID	

# Closure

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

Closure Report Attachment Checklist: Each of the following is	tems must be included in the closure report.
A scaled site and sampling diagram as described in 19.15.29.1	1 NMAC
Photographs of the remediated site prior to backfill or photos must be notified 2 days prior to liner inspection)	of the liner integrity if applicable (Note: appropriate OCD District office
☐ Laboratory analyses of final sampling (Note: appropriate ODC	C District office must be notified 2 days prior to final sampling)
Description of remediation activities	
may endanger public health or the environment. The acceptance of	tions. The responsible party acknowledges they must substantially nditions that existed prior to the release or their final land use in
Printed Name: Kyle Littrell	Title: SH&E Supervisor
Printed Name: Kyle Littrell Signature:	Date: <u>01/18/2021</u>
email:Kyle_Littrell@xtoenergy.com	Telephone: 432-221-7331
OCD Only	
Received by:	Date:
	of liability should their operations have failed to adequately investigate and water, human health, or the environment nor does not relieve the responsible or regulations.
Closure Approved by: Karen Collins	Date: 4/7/2021
Printed Name: Kazen Collins	Title: Environmental Scientist & Specialist



WSP USA

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

January 19, 2021

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

Re: Closure Request

Remuda South 25 State 126H

Incident Numbers: NRM1935840155, NRM2000235975, and NRM2000237294

**Eddy County, New Mexico** 

To Whom It May Concern:

WSP USA Inc. (WSP, formerly LT Environmental, Inc.), on behalf of XTO Energy, Inc. (XTO), presents the following Closure Request detailing site assessment, excavation, and soil sampling activities at the Remuda South 25 State 126H (Site) in Unit G, Section 25, Township 23 South, Range 29 East, in Eddy County, New Mexico (Figure 1). The purpose of the site assessment, excavation, and soil sampling activities was to address impacts to soil following three produced water release events at the Site. Based on field observations, excavation activities, and soil sample laboratory analytical results, XTO is submitting this Closure Request and requesting no further action (NFA) for Incident Numbers NRM1935840155, NRM2000235975, and NRM2000237294.

#### **RELEASE BACKGROUND**

On October 22, 2019, during drilling operations, a returns flow line was parted at a slip joint, resulting in the release of approximately 8.80 barrels (bbls) of produced water onto the well pad surface. A vacuum truck was dispatched to the Site to recover free-standing fluids; approximately 8.0 bbls were recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on Release Notification and Corrective Action Form C-141 (Form C-141) on November 6, 2019. The release was assigned Incident Number NRM1935840155.

On October 25, 2019, during drilling operations, a returns flow line was parted at a slip joint, resulting in the release of approximately 10 bbls of produced water onto the well pad surface. A vacuum truck was dispatched to the Site to recover free-standing fluids; approximately 8.5 bbls were recovered. XTO reported the release to the NMOCD on a Form C-141 on November 8, 2019. The release was assigned Incident Number NRM2000235975.

On October 25, 2019, during drilling operations, a returns flow line was parted at a slip joint, resulting in the release of approximately 5.0 bbls of produced water onto the well pad surface. A vacuum truck was dispatched to the Site to recover free-standing fluids; approximately 4.0 bbls



were recovered. XTO reported the release to the NMOCD on a Form C-141 on November 8, 2019. The release was assigned Incident Number NRM2000237294.

#### 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 greater than 100 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted groundwater well with depth to groundwater data is United States Geological Survey (USGS) well 321717103561001, located approximately 4,005 feet north of the Site. The water well has a depth to groundwater of approximately 50 feet bgs. The total depth of the well could not be determined. Ground surface elevation at the water well location is 3,033 feet above mean seal level (AMSL), which is approximately 31 feet lower in elevation than the Site. The associated referenced well records are included in Attachment 1.

In an effort to confirm depth to water in the area, a borehole (C-04494) was advanced 0.29 miles southwest of the Site to a depth of 105 feet bgs via sonic drill rig. The location of the borehole is provided on Figure 1. A WSP geologist logged and described soils continuously. The borehole lithologic/soil sampling log is included in Attachment 2. The borehole was left open for over 72 hours to allow for potential slow infill of groundwater. On January 8, 2021, after the 72-hour waiting period ended without observing groundwater, it was confirmed that groundwater beneath the Site is greater than 105 feet bgs. The borehole was properly abandoned utilizing hydrated bentonite chips.

The closest continuously flowing water or significant watercourse to the Site is a dry wash, located approximately 529 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, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (medium potential karst designation area). The Site receptors are identified on Figure 1.

#### **CLOSURE CRITERIA**

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

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



Chloride: 20,000 mg/kg

#### SITE ASSESSMENT AND SOIL SAMPLING ACTIVITIES

On February 10, 2020, WSP personnel visited the Site to evaluate the release extents based on information provided on the Form C-141s and visual observations. The release extent and preliminary soil sample locations were mapped utilizing a handheld Global Positing System (GPS) unit and are presented on Figure 2. The release extents overlapped, and the final mapped extent shown on Figure 2 is the outer boundary of all releases combined. WSP personnel collected six preliminary soil samples (SS01 through SS06) within the release extent from a depth of approximately 0.5 feet bgs to assess the lateral extent of the releases. Soil was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photoionization detector (PID) and Hach® chloride QuanTab® test strips, respectively.

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

Laboratory analytical results for preliminary soil samples SS01 through SS06 indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. However, additional assessment activities were warranted to further confirm the absence of impacted soil within the subsurface. Photographic documentation was conducted during the Site visit. Photographic log is included in Attachment 3.

#### **DELINEATION SOIL SAMPLING ACTIVITIES**

Further delineation and remediation efforts were postponed due to ongoing drilling operations at the well pad near the release, resulting in activity restrictions at the Site due to safety concerns. Per 19.15.29.12.B.(1) NMAC, four extensions for submission of a remediation plan or closure report were requested and approved by the NMOCD. The initial extension was requested and approved on January 16, 2020, the second was approved April 29, 2020, the third was approved September 14, 2020, and the final extension was approved November 24, 2020, extending the deadline to January 20, 2021.

On September 21, 2020, during a brief break in drilling operations, WSP personnel returned to the Site to oversee additional soil assessment activities. Five potholes (PH01 through PH05) were advanced using a track-mounted backhoe to an approximate depth of 3 feet bgs at the SS02 through SS06 preliminary soil sample locations to confirm the absence of impacted soil. One delineation soil sample was collected from each pothole PH01 through PH05, from a depth of 3



feet bgs. Soil from the potholes was field screened for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach© chloride QuanTab© test strips, respectively. Field screening results and observations for each pothole were logged on lithologic/soil sampling logs, which are included in Attachment 1.

Additionally, WSP collected four lateral delineation soil samples (SS07 through SS10) from a depth of 0.5 feet bgs around the release area, to confirm the lateral extent of the release. The potholes and delineation soil sample locations are depicted on Figure 3. The delineation soil samples were collected, handled, and analyzed as described above at Xenco in Carlsbad, New Mexico.

#### **EXCAVATION ACTIVITIES**

Based on observed staining and field screening results, WSP directed excavation activities to remove discolored soil in the area around preliminary soil sample SS01. To direct excavation activities, WSP screened soil for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach® chloride QuanTab® test strips, respectively. The final excavation measured approximately 200 square feet and was completed to a depth of 1-foot bgs. Following removal of impacted soil, LTE collected a 5-point composite soil sample from the floor of the excavation. The 5-point composite sample was collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the sample by thoroughly mixing. One composite floor soil sample (FS01) was collected from the excavation at a depth of approximately 1-foot bgs. The excavation soil sample was collected, handled, and analyzed as described above. The excavation extent and excavation soil sample location are presented on Figure 4.

The excavation measured approximately 200 square feet in area. A total of approximately 7.5 cubic yards of impacted soil were removed during the excavation activities. The impacted soil was transported and properly disposed of at the R360 Facility located in Hobbs, New Mexico. After completion of confirmation sampling, the excavation was backfilled immediately.

#### **ANALYTICAL RESULTS**

Laboratory analytical results for preliminary soil samples SS01 through SS06 indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria.

Laboratory analytical results for delineation soil samples PH01 through PH05 and SS07 through SS10 indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Site Closure Criteria and provide lateral and vertical delineation to below the most stringent Table 1 Closure Criteria.

Laboratory analytical results for excavation floor sample FS01 indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria.



Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Attachment 4.

#### **CLOSURE REQUEST**

Site assessment and excavation activities were conducted at the Site to address the October 22, 2019 and October 25, 2019, produced water releases. Laboratory analytical results for the preliminary, delineation, and excavation soil samples indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria and no further remediation was required.

Based on laboratory analytical results compliant with the Closure Criteria and confirmed depth to groundwater greater than 105 feet bgs, XTO respectfully requests NFA for Incident Numbers NRM1935840155, NRM2000235975, and NRM2000237294.

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

Sincerely,

WSP USA Inc.

Kalei Jennings

Associate Consultant, Environmental Scientist

Ashley L. Ager, P.G.

Ashley L. Ager

Managing Director, Geologist

cc: Kyle Littrell, XTO

Kalli Jennings

Ryan Mann, New Mexico State Land Office

#### Attachments:

Figure 1 Site Location Map

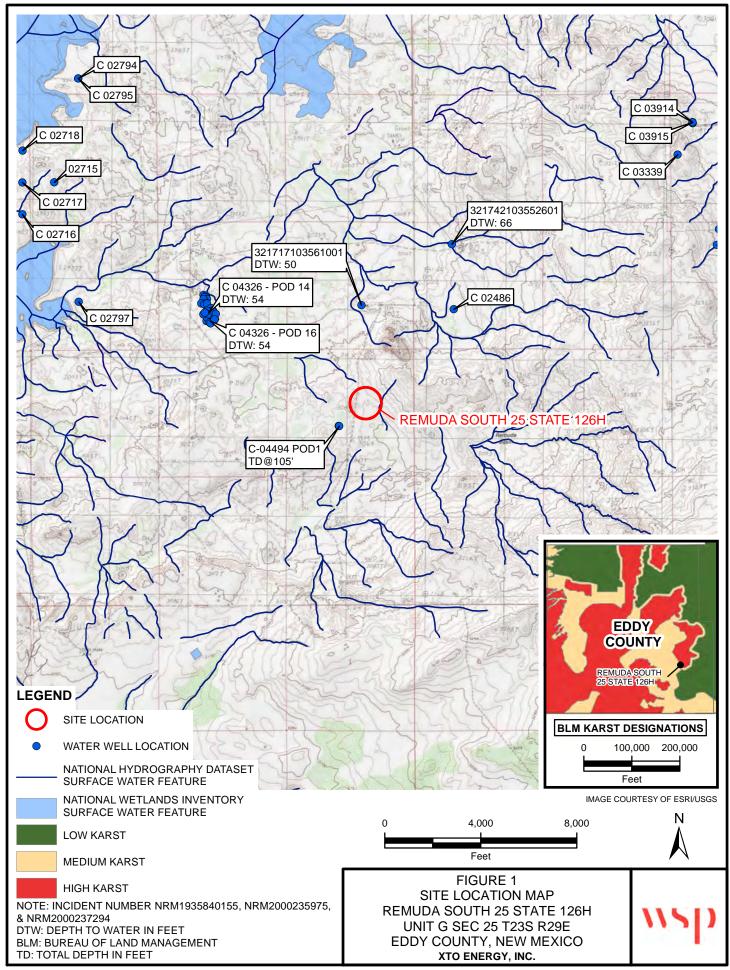
Figure 2 Preliminary Soil Sample Locations
Figure 3 Delineation Soil Sample Locations
Figure 4 Excavation Soil Sample Locations

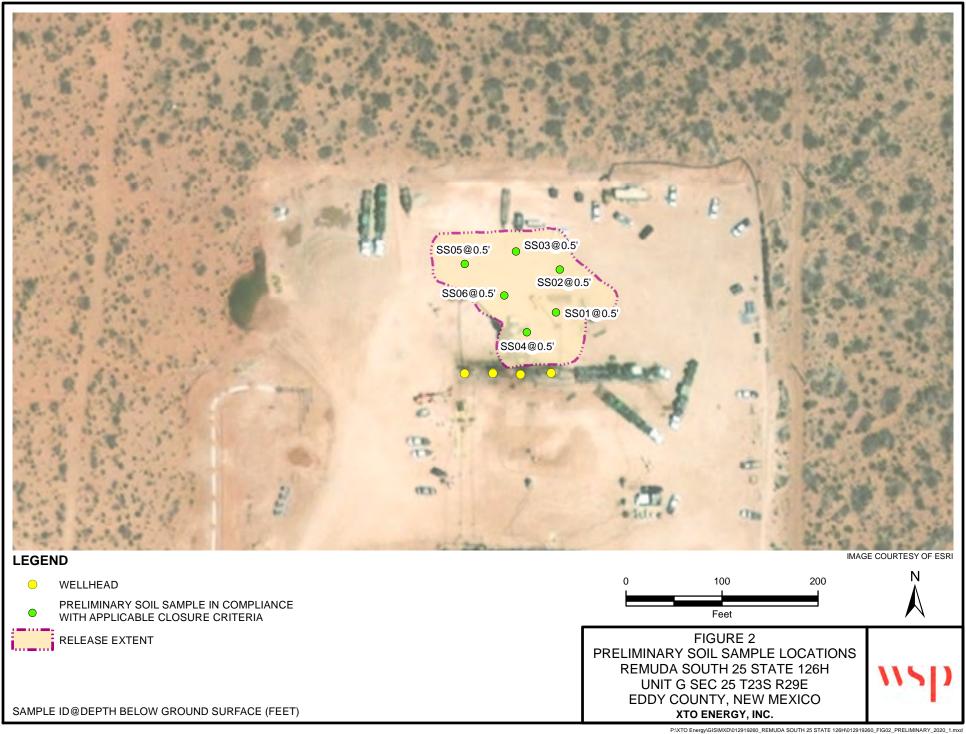
Table 1 Soil Analytical Results
Attachment 1 Referenced Well Records
Attachment 2 Lithologic/Soil Sampling Log

Attachment 3 Photographic Log



Attachment 4 Laboratory Analytical Reports





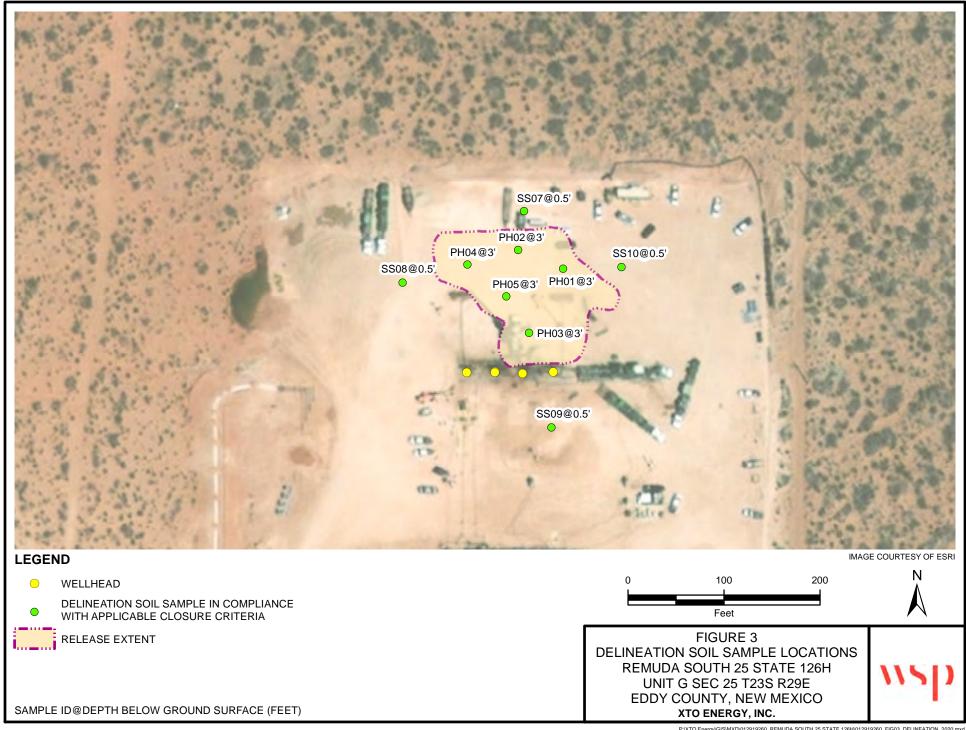




Table 1

#### Soil Analytical Results Remuda South 25 State 126H

#### Incident Numbers: NRM1935840155, NRM2000235975, and NRM2000237294

**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 Clos	ure Criteria (NMAC 1	9.15.29)	10	50	NE	NE	NE	1,000	2,500	20,000
Surface Samples										
SS01	02/10/2020	0.5	< 0.000182	< 0.000182	83.0	<50.1	< 50.1	83.0	83.0	14,700
SS02	02/10/2020	0.5	< 0.00201	< 0.00201	<50.3	<50.3	<50.3	<50.3	<50.3	4,770
SS03	02/10/2020	0.5	< 0.00201	< 0.00201	<50.1	<50.1	<50.1	<50.1	<50.1	4,030
SS04	02/10/2020	0.5	< 0.00201	< 0.00201	<50.2	<50.2	<50.2	<50.2	<50.2	4,580
SS05	02/10/2020	0.5	< 0.00202	< 0.00202	<50.0	<50.0	<50.0	<50.0	<50.0	4,380
SS06	02/10/2020	0.5	< 0.00200	< 0.00200	76.0	<50.2	<50.2	76.0	76.0	1,950
Delineation Samples										
PH01	09/21/2020	3	< 0.00200	< 0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	30.5
PH02	09/21/2020	3	< 0.00199	< 0.00199	<50.1	<50.1	<50.1	<50.1	<50.1	<10.0
PH03	09/21/2020	3	< 0.00200	< 0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	416
PH04	09/21/2020	3	< 0.00201	< 0.00201	<50.0	<50.0	<50.0	<50.0	<50.0	<10.0
PH05	09/21/2020	3	< 0.00198	< 0.00198	<50.1	<50.1	<50.1	<50.1	<50.1	20.7
SS07	09/21/2020	0.5	< 0.00200	< 0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	96.2
SS08	09/22/2020	0.5	< 0.00200	< 0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	205
SS09	09/22/2020	0.5	< 0.00200	< 0.00200	57.1	<49.9	<49.9	57.1	57.1	494
SS10	09/21/2020	0.5	< 0.00200	< 0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	480
Excavation Samples										
FS01	09/21/2020	1	< 0.00198	< 0.00198	<50.1	<50.1	<50.1	<50.1	<50.1	217

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



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#### USGS 321717103561001 23S.29E.24.41321

Eddy County, New Mexico

Latitude 32°17'17", Longitude 103°56'10" NAD27 Land-surface elevation 3,034 feet above NAVD88

This well is completed in the Rustler Formation (312RSLR) local aquifer.

#### **Output formats**

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	iraph of data
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Date	Time	? Water- level date- time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source measul
1983-02-02		D	72019	52.17				U	J	
1987-10-14		D	72019	50.54				L	J	
1992-11-16		D	72019	54.14				S	5	
2003-01-29		D	72019	50.26				9	USG:	5

#### Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Parameter code	72019	Depth to water level, feet below land surface
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	U	Source is unknown.
Water-level approval status	Α	Approved for publication Processing and review completed.

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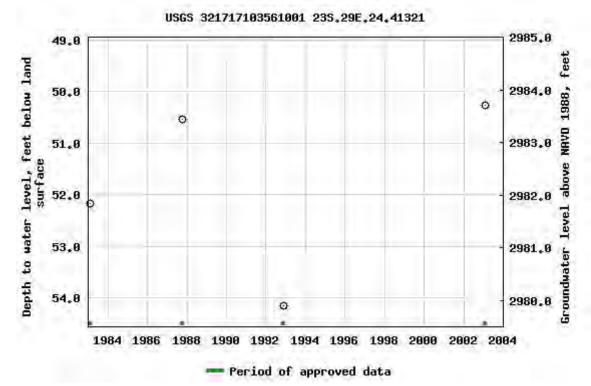
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### USGS 321717103561001 23S.29E.24.41321

Available data for this site	Groundwater:	Field measurements	s <b>v</b>	GO	
Eddy County, New Mexico					
Hydrologic Unit Code 1306	50011				
Latitude 32°17'17", Longi	tude 103°5	6'10" NAD27			
Land-surface elevation 3,0	34 feet abo	ve NAVD88			
This well is completed in the	าe Rustler F	ormation (312F	≀SLR)	local	aquifer.

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Breaks in the plot represent a gap of at least one year between field measurements. <u>Download a presentation-quality graph</u>

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#### USGS 321742103552601 23S.30E.19.123421

Eddy County, New Mexico

Latitude 32°17'42", Longitude 103°55'26" NAD27 Land-surface elevation 3,034 feet above NAVD88 The depth of the well is 100 feet below land surface.

This well is completed in the Rustler Formation (312RSLR) local aquifer.

**Output formats** 

Table of data
<u>Tab-separated data</u>
Graph of data
Reselect period

Date	Time	? Water- level date- time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source measur
1959-02-06		D	72019	78.10			Р	U		
1959-04-07		D	72019	69.30				U		
1972-09-20		D	72019	68.75				U		
1975-12-09		D	72019	68.99				U		
1976-01-15		D	72019	70.10				U		
1977-01-19		D	72019	68.40				U		
1987-10-14		D	72019	67.32				U		
1993-05-06		D	72019	66.10				S		

#### Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Parameter code	72019	Depth to water level, feet below land surface
Status		The reported water-level measurement represents a static level
Status	Р	Water level was affected by pumping at the time of the measurement
Method of measurement	S	Steel-tape measurement.
Method of measurement	U	Unknown method.
Measuring agency		Not determined

Section	Code	Description	
Source of measurement	U	Source is unknown.	
Water-level approval status	Α	Approved for publication Processing and review completed.	

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### USGS 321742103552601 23S.30E.19.123421

Available data for this site Groundwater: Field measurements GO

Eddy County, New Mexico

Hydrologic Unit Code 13060011

Latitude 32°17'42", Longitude 103°55'26" NAD27

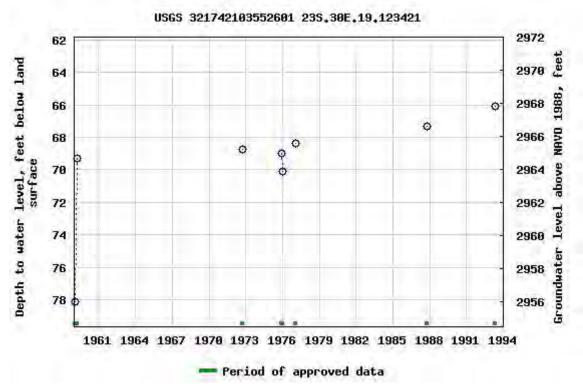
Land-surface elevation 3,034 feet above NAVD88

The depth of the well is 100 feet below land surface.

This well is completed in the Rustler Formation (312RSLR) local aquifer.

**Output formats** 

Table of data					
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Reselect period					



Breaks in the plot represent a gap of at least one year between field measurements. <u>Download a presentation-quality graph</u>

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## New Mexico Office of the State Engineer

# **Point of Diversion Summary**

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

Well Tag POD Number

Q64 Q16 Q4 Sec Tws Rng

X Y

NA

C 04326 POD14

4 2 3 23 23S 29E

598191 3572765

**Driller License:** 1664

**Driller Company:** 

CASCADE DRILLING, LP

Driller Name:

CAIN, SHAWN N.NJR.L.NER

05/11/2019 Plug Date:

Drill Start Date: Log File Date: 05/11/2019 08/28/2019

2.06

Drill Finish Date: PCW Rcv Date:

Source:

Shallow

Pump Type:

Pipe Discharge Size:

**Estimated Yield:** 

Jiidiio W

Casing Size:

Depth Well:

58 feet

Depth Water:

54 feet

Water Bearing Stratifications:

Top Bottom Description

58

45

48

4 Shale/Mudstone/Siltstone

**Casing Perforations:** 

Top Bottom

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

1/18/21 8:51 AM

POINT OF DIVERSION SUMMARY



## New Mexico Office of the State Engineer

# **Point of Diversion Summary**

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

Well Tag POD Number

Q64 Q16 Q4 Sec Tws Rng

X Y

NA C 04326 POD16

2 4 3 23 23S 29E

598209 3572664

Driller License: 1664 Driller Company: CASCADE DRILLING, LP

**Driller Name:** CAIN, SHAWN N.NJR.L.NER

**Drill Start Date:** 05/14/2019

2.07

**Drill Finish Date:** 

05/14/2019 Plu

Plug Date:

**Log File Date:** 08/28/2019

**PCW Rcv Date:** 

Source:

Shallow

Pump Type:

Pipe Discharge Size:

**Estimated Yield:** 

-----

Casing Size:

Depth Well:

64 feet

Depth Water:

54 feet

Water Bearing Stratifications:

Top Bottom Description

52

60 Limestone/Dolomite/Chalk

**Casing Perforations:** 

**Top Bottom** 54 64

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

1/18/21 8:52 AM

POINT OF DIVERSION SUMMARY

\	//	LITH	) OLOG	50 Carl	08 West S sbad, Ne	P USA Stevens S w Mexico	88220		BH or MW Name: BH01 (POD 1, C-4494) Site Name: Remuda Fra RP or Incident Number: WSP Job Number: Logged By: BB, LD, FS		332462	
Lat/Lo	ng: 4194,-103.	939575			Field Scre N/A	ening:			Hole Diameter: 6.25", 4.25"		Total Depth: 56.1 Depth to Water: DRY	
			on Mat	erials / Comn					0.20 , 4.20		Deptir to Water. Divi	
Litholo	gy and de	scriptions	only, r	o field scree	ning. Bore	hole backfi		rill cuttings	from 56.1' to 10', hydrate	ed bentonite	from 10' to surface.	
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	S SN		Lithology/l			Backfill / Well Completion
						<u> </u> 1 -	SP-SC		ND w/ clay, dry brov ned, 10% clay, som			surface
					- - - - - -	10	CCHE	con gra	ALICHE, dry, light b solidated, some sul vel, very silty, grada odor.	b-round c	aliche pebble and	Hydrated Bentonite Chips from 10' to surface
					- - -	20	CL-S	24'-39', [	erately consolidated	eddish-bro		Hydrated
					- - - -	30		ang	ticity, cohesive, we ular caliche pebble: odor.			
					- - - -	- - - -		gra	ight brown sub-ang	features (	1-3mm).	56.1' to 10'
					- - - -	40	LS	39'-48', I wel mm	, air rotary, hole dia DOLOMITIC LIMES consolidated, some ), sharp transition, I n, no odor.	TONE, dr e dissolut	ry, tan-light brown, ion features (1-3	Drill Cuttings backfilled from 56.1' to
					- - - - -	50	DOLO	12/02/20 48'-56.1' con	020: air rotary refus 020: Continue drillin , DOLOMITE, dry, c solidated, thin dark odor.	ng @ 48'b off white, i	gs moderately	Drill Cutting
					_	<u>L</u>		TD @ 56	.1 feet bgs.			
					_	<u></u>			- 9 -			
						60						

1	11	1	)	0	508 West	Sevens Sevens to Massic	Street 2 RECOL		BH or PH Name:  SHO   (on't)  Site Name: Remada  RP or Incident Number:  WSP, Joh Number: TE 02618	Date: 1-5-2021 N 25 State 6260, TE012419 195, TE01914
Lat/Lo	na:	LITH	OLOG	IC / SO	L SAMP	0.11.19.11.11	G		Logged By: BB F.S	Method: Son 2
32	, 274	194,-10	3.93	9575	Field Scr				Hole Diameter:	Total Depth: 105
Comm	ents: 15	on hel	. h	-1- FM	ed w/	dr. H	cuth	ns An	m 105'- 10', hydn	and be really chips from
Moisture	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	1	Rock	anly, n	- Held Screenby	//Remarks
					1	51	DOL			
						52	A 200			
					-	53				
						54				
					-	55			A'	
					1	1	-	1/5/	£ 55	
		A			1	_ 56				1. 1.1.
					1	57		55 - 1	65 DOLOMITE,	dry, light gray-gray,
					1	58		,	well consolidated,	some calcin
					1	59		4	Entures (Zmm) with	(LImm), some dissolution
					1	60			Crystalling train	of the Calling
					Ŧ	61		:	Staining within diss	orange oxidation olution feetures, no stary
					1	62			10 oder	
					‡			66, br	lowific linestone	Course cogstilline
					+	63				
					1	64		67-65	Abundant Calcite	crystalline winsklim
					‡	65	_	63-65	Paleguer - gra	y, posly ransolidered.
					1	66	H-2	65-69	MUDSTONE, NO	ist reddich brown.
					Ŧ	67		Pour	ly impolidated, I	high play treity, course
1					Ŧ	68			Invala	stalline sypsum, tem mattling, no stale,
					‡			1.	· der.	, no stan,
					+	69	SYP	69-81	GYPSUM WY A	hydritt, day, greensh
					+	70		5	ray, some pale yel	I'm, well consolidered,
					‡	71		1.	a crystalline, 20%	o enhydrite, nostan,
					1	72		1	vepo or	or or tare of
		1			Ŧ	73				
					‡					
					+	74				
					Ī	75				

115		)		Wist St			BH or PH Name:    Continued   Date:   Date:     - 5 - 2021
	U						WSP Job Number, TED12914210, TE 012919 145, TE0129 19039
	LITHO	LOGIC	SOIL	SAMPL	NG LO	G	Logged By. BS. FS. Method: Scale  Hotel Diameter. Total Depth: ,
at/Long: 32.2741	hu -10	1 9 24		Field Scree			Indie Diameter. (#
comments: 27	nology	desc	cription	sonly,	, no f	eld s	eneening. Bunchola backfilled with didl chiftings from 10'- surface.
Moisture Content Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	3/Roc nbol	Lithology/Remarks
					76 77 78 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 91 92 93 94 95 96	CH-S	81'-98' Mudstone, moist, dark reddish bown, moderally consolidated, high plestity, whesher, trace course crystalling sypsum inclusion no stain, no other.  85'-86,5' greenish-gray well consolidated course crystalline sypsum/abydist stringer. 90'-98' some time stain brown send.  97', dark stay-gray sypsum stringer (4cm). 98'-955' GYPSUM, dark stay-stay, some brown, dry, well rensolidated, fine-lorse crystalline, no stain, no odor.  95.5'-105' sendy SICTSTONE, moith, brown, some stay-dark stay, porty consolidated attained with the grain sand, no stain, no odor.  102', thin Klmm) laminated gray well consolidated shale stringer.

111	1	)	1/18/	WE WANT	P USA			BH or PH Nan BH ol Site Name: A RP or Incident	(conf)	Date:	1-5-20 State	44 0) >21
	Ų.									760, TE	E012914195FE	979140
	LITHO	LOGIC	c / soi	LSAMPL	ING LO	G			B, FS	Metho	d: Sonic	
at/Long:	1 142	20 5	25	Field Scre	ening:			Hole Diameter	6.	Total C		
32.274  91 Comments: L	Thology	desc	rist	ons en	7,00	field	School	1-15, Bore	tole brikt	Hed	with drill	enthing
Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)		Rock	hips fr	um 10'-	Lithology	Remark	s	
					101 102 103 103 104 105 106 107 108 109 110 112 113 114 115 116 117 118 119 120 121 122 123 124	M-S		thin kima consolid cha	37.14	and bl	er (4cm the	ell ok)
				+	125							

7		<b>₹</b>	1		WS	SP USA			BH or PH Name: PH01		Date: 9/21/2020	
1					OO Moot 9	Stavana S	`troot		Site Name:	Remuda S		
				Car Car	08 West S Isbad, Ne	Stevens S w Mexico			Incident Number:			0005075 and NDM000
					isbuu, ive	W WICKICO	00220		LTE Job Number:	NKW 1930	0640155, INKIVIZUU	0235975, and NRM200
		I ITLI		SIC / SOIL	CAMPI	INCLO	C			oor	Method:	Backhoe
Lat/Lo		LIIT	JLUG	11C / 301L	Field Scre		G		Logged By Will Math Hole Diameter:	iei	Total Depth:	Васклое
LavLo	ing.				Chloride,				Hole Diameter.		Total Deptil.	
Comm	nents:										<u>.</u>	
	1					1		•				
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol		I	_ithology/F	Remarks	
					- -	0						
	2,004	0.3	N		1' _	1		sand, fir	ne grian, poorly g	raded, Br/	Rd, some silt,	no stain, no odor
	800	0.4	N		2'	2		Same a	s Above (SAA)			
	<168	0.4	N	PH01	3'	3		SAA				
					- -	4						
					- - -	5						
					- - -	6						
					- - -	7						
					- - -	8						
					- - -	9						
					- - -	10						
					- - -	11						
					-	12						

Lat/Lo			) DLOG	5 Car GIC / SOIL	08 West S Isbad, Ne	w Mexico	<b>G</b>		BH or PH Name: PH02 Site Name: Incident Number: LTE Job Number: Logged By Will Matl Hole Diameter:			2000235975, and NRM200 Backhoe
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	(ft bgs)	USCS/Rock Symbol		I	Lithology/F	Remarks	
	2,004 1,752	0.6	ZZ		1' _	1 2			e grian, poorly g s Above (SAA)	raded, Br/	Rd, some si	ilt, no stain, no odor
	1,752	0.1	Z Z	PH02	2' _	2 3 4 5 6 7 8 9 10 11		SAA	s Above (SAA)			

	119		) DLOG	5 Car <b>SIC / SOIL</b>	08 West : Isbad, Ne	SP USA Stevens S w Mexico			BH or PH Name: PH03 Site Name: Incident Number: LTE Job Number: Logged By Will Math			2000235975, and NRM200 Backhoe
Lat/Lo	ng:				Field Scre				Hole Diameter:		Total Depth:	
Comm	nents:				Chloride,	LID						
			,		1	1		1				
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	(ft bgs)	USCS/Rock Symbol		I	Lithology/R	Remarks	
	1,752	0.1	N		1'	0		sand, fin	e grian, poorly g	raded, Br/l	Rd, some s	ilt, no stain, no odor
	1,640	0.3	N		2'	2		Same as	S Above (SAA)			
	509	0.1	N	PH03	3'	3		SAA				
					- - -	4						
					- - -	5						
					- - -	6 - 7						
					- - - -	8						
					- - -	9						
					- - - -	10						
					- - - -	11						

Lat/Lo	ong:	LITH	DLOG	Car GIC / SOIL	508 West Silsbad, Ne  SAMPL Field Screen	LING LO	88220	BH or PH Name: PH04 Site Name: Incident Number: LTE Job Number: Logged By Will Math			0235975, and NRM200 Backhoe
Comm	nents:				Chloride,	PID					
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	(ft bgs)	USCS/Rock Symbol	I	_ithology/F	Remarks	
	207 <168 <168	0.4	Z Z Z	PH04	1'	1 2 3	٦	ne grian, poorly g s Above (SAA)	raded, Br/	Rd, some silt,	no stain, no odor
						5 6 7 8 9 10					

	\\'		) DLOG	5 Car GIC / SOIL	08 West I Isbad, Ne	SP USA Stevens S w Mexico		BH or PH Name: PH05 Site Name: Incident Number: LTE Job Number: Logged By Will Math			2000235975, and NRM200 Backhoe
Lat/Lo	ng:				Field Scre	eening:		Hole Diameter:		Total Depth:	
Comm	nents:				Chloride,	PID					
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	(ft bgs)	USCS/Rock Symbol	L	_ithology/R	Remarks	
Moi Cor	207 257 <168	e/ <sub>A</sub> 0.6 0.5 0.2	Stai	Sam Sam	(ft bgs)	(ft bgs)  0  1 2 3 4 5 6 7 8 9	USCS Syr				ilt, no stain, no odor
					- - - - -	11					



	PHOTOGRAPHIC LOG	
XTO Energy	Remuda South 25 State 126H	NRM1935840155
	<b>Eddy County, New Mexico</b>	NRM2000235975
		NRM2000237294

Photo No.	Date				
1	October 22, 2019	♥ WGS84 32.27703, -103.93566	A <sup>n</sup>	3064	NW304
View of rel	lease on pad.	22Oct19 11:13 Remuda South 25 #126H Loving, NM 88256, United States @ 22-Oct-19 11	13:19	3064	T NW304

Photo No.	Date	
2	February 10, 2020	
View of staining	g remaining on pad.	



PHOTOGRAPHIC LOG							
XTO Energy	Remuda South 25 State 126H	NRM1935840155					
	Eddy County, New Mexico						
		NRM2000237294					

Photo No.	Date	
3	September 21,	
3	2020	
View of excav	ation facing East	
		Later to the same of the same
		AND THE WAY IN COMMENT OF THE PARTY OF THE P
		是一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个

Photo No.	Date							
4	September 22,							
4	2020							
T T1 0.1	1 0111 1							

View of backfill on pad.



## **Analytical Report 652122**

for

LT Environmental, Inc.

Project Manager: Dan Moir Remuda South 25 #126H

13-FEB-20

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122): Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054) Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

> Xenco-Dallas (EPA Lab Code: TX01468): Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16) Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21) Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19) Xenco-Carlsbad (LELAP): Louisiana (05092)

Antonio (EDA Lob Codo: TNIO2205), Tomas (T1047045)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5) Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757) Xenco-Tampa: Florida (E87429), North Carolina (483)



13-FEB-20

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

Reference: XENCO Report No(s): 652122

Remuda South 25 #126H

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 XENCO Report Number(s) 652122. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 652122 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Vermer

**Project Assistant** 

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

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## **Sample Cross Reference 652122**

## LT Environmental, Inc., Arvada, CO

Remuda South 25 #126H

Sample Id	Matrix	<b>Date Collected</b>	Sample Depth	Lab Sample Id
SS01	S	02-10-20 12:25	0.5 ft	652122-001
SS02	S	02-10-20 12:30	0.5 ft	652122-002
SS03	S	02-10-20 12:35	0.5 ft	652122-003
SS04	S	02-10-20 12:40	0.5 ft	652122-004
SS05	S	02-10-20 12:45	0.5 ft	652122-005
SS06	S	02-10-20 13:05	0.5 ft	652122-006

#### **CASE NARRATIVE**

Client Name: LT Environmental, Inc. Project Name: Remuda South 25 #126H

Project ID: Report Date: 13-FEB-20 Work Order Number(s): 652122 Date Received: 02/12/2020

#### Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3116351 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

# Received by OCD: 1/18/2021 2:20:31 PM XENCO LABORATORIES

Dan Moir

**Certificate of Analysis Summary 652122** 

LT Environmental, Inc., Arvada, CO

Project Name: Remuda South 25 #126H

**Date Received in Lab:** Wed Feb-12-20 11:57 am

**Report Date:** 13-FEB-20 **Project Manager:** Jessica Kramer

Project Id: Contact:

**Project Location:** 

	Lab Id:	652122-0	VO 1	652122-	002	652122-0	202	652122-	004	652122-	205	652122-	006
			001					SS04					
Analysis Requested	Field Id:	SS01		SS02 0.5- f			SS03			SS05		SS06	
	Depth:	0.5- ft			t	0.5- ft		0.5- ft		0.5- f	t	0.5- ft	
	Matrix:	SOIL		SOIL	,	SOIL	,	SOIL		SOIL		SOIL	
	Sampled:	Feb-10-20	12:25	Feb-10-20	0-20 12:30 Feb-10-20 12:35		Feb-10-20	12:40	Feb-10-20 12:45		Feb-10-20	13:05	
BTEX by EPA 8021B	Extracted:	Feb-12-20	12:30	Feb-12-20	12:30	Feb-12-20	12:30	Feb-12-20	12:30	Feb-12-20	12:30	Feb-12-20	12:30
	Analyzed:	Feb-12-20	16:46	Feb-12-20	17:06	Feb-12-20	18:08	Feb-12-20	18:28	Feb-12-20	18:48	Feb-12-20	19:09
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		< 0.000182	0.000182	< 0.00201	0.00201	< 0.00201	0.00201	< 0.00201	0.00201	< 0.00202	0.00202	< 0.00200	0.00200
Toluene		< 0.000182	0.000182	< 0.00201	0.00201	< 0.00201	0.00201	< 0.00201	0.00201	< 0.00202	0.00202	< 0.00200	0.00200
Ethylbenzene		< 0.000182	0.000182	< 0.00201	0.00201	< 0.00201	0.00201	< 0.00201	0.00201	< 0.00202	0.00202	< 0.00200	0.00200
m,p-Xylenes		< 0.000364	0.000364	< 0.00402	0.00402	< 0.00402	0.00402	< 0.00402	0.00402	< 0.00404	0.00404	< 0.00401	0.00401
o-Xylene		< 0.000182		< 0.00201	0.00201	< 0.00201	0.00201	< 0.00201	0.00201	< 0.00202	0.00202	< 0.00200	0.00200
Total Xylenes		< 0.000182	0.000182	< 0.00201	0.00201	< 0.00201	0.00201	< 0.00201	0.00201	< 0.00202	0.00202	< 0.00200	0.00200
Total BTEX		< 0.000182	0.000182	< 0.00201	0.00201	< 0.00201	0.00201	< 0.00201	0.00201	< 0.00202	0.00202	< 0.00200	0.00200
Chloride by EPA 300	Extracted:	Feb-12-20	12:30	Feb-12-20 12:30		Feb-12-20	12:30	Feb-12-20	12:30	Feb-12-20 12:30		Feb-12-20 12:30	
	Analyzed:	Feb-12-20	14:15	Feb-12-20 14:21		Feb-12-20 14:27		Feb-12-20 14:32		Feb-12-20 14:38		Feb-12-20 14:44	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		14700	504	4770	503	4030	499	4580	497	4380	502	1950	200
TPH by SW8015 Mod	Extracted:	Feb-12-20	13:00	Feb-12-20	13:00	Feb-12-20	13:00	Feb-12-20	13:00	Feb-12-20	13:00	Feb-12-20	13:00
	Analyzed:	Feb-12-20	13:35	Feb-12-20	13:55	Feb-12-20	14:15	Feb-12-20	14:15	Feb-12-20	14:35	Feb-12-20	14:35
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		< 50.1	50.1	< 50.3	50.3	< 50.1	50.1	< 50.2	50.2	< 50.0	50.0	< 50.2	50.2
Diesel Range Organics (DRO)		83.0	50.1	< 50.3	50.3	< 50.1	50.1	< 50.2	50.2	< 50.0	50.0	76.0	50.2
Motor Oil Range Hydrocarbons (MRO)		< 50.1	50.1	< 50.3	50.3	< 50.1	50.1	< 50.2	50.2	< 50.0	50.0	< 50.2	50.2
Total GRO-DRO		83.0	50.1	<50.3	50.3	< 50.1	50.1	< 50.2	50.2	< 50.0	50.0	76.0	50.2
Total TPH		83.0	50.1	< 50.3	50.3	< 50.1	50.1	< 50.2	50.2	< 50.0	50.0	76.0	50.2

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Version: 1.%

Jessica Kramer
Project Assistant



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

Remuda South 25 #126H

Sample Id: **SS01**  Matrix: Soil Date Received:02.12.20 11.57

Lab Sample Id: 652122-001 Date Collected: 02.10.20 12.25 Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

MAB

Prep Method: E300P

Tech: MAB

Analyst:

Date Prep: 02.12.20 12.30

Basis:

% Moisture:

Wet Weight

Seq Number: 3116355

Parameter Cas Number Result RLUnits **Analysis Date** Flag Dil 16887-00-6 Chloride 02.12.20 14.15 50 14700 504 mg/kg

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

% Moisture:

Tech: DTH

Analyst:

DTH

02.12.20 13.00 Date Prep:

Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	< 50.1	50.1		mg/kg	02.12.20 13.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	83.0	50.1		mg/kg	02.12.20 13.35		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.1	50.1		mg/kg	02.12.20 13.35	U	1
Total GRO-DRO	PHC628	83.0	50.1		mg/kg	02.12.20 13.35		1
Total TPH	PHC635	83.0	50.1		mg/kg	02.12.20 13.35		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	93	%	70-135	02.12.20 13.35		
o-Terphenyl		84-15-1	99	%	70-135	02.12.20 13.35		



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

Remuda South 25 #126H

Sample Id: SS01 Matrix: Soil Date Received:02.12.20 11.57

Lab Sample Id: 652122-001 Date Collected: 02.10.20 12.25 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 02.12.20 12.30 Basis: Wet Weight

Parameter	Cas Number	r Result	RL		Units	<b>Analysis Date</b>	Flag	Dil
Benzene	71-43-2	< 0.000182	0.000182		mg/kg	02.12.20 16.46	U	1
Toluene	108-88-3	< 0.000182	0.000182		mg/kg	02.12.20 16.46	U	1
Ethylbenzene	100-41-4	< 0.000182	0.000182		mg/kg	02.12.20 16.46	U	1
m,p-Xylenes	179601-23-1	< 0.000364	0.000364		mg/kg	02.12.20 16.46	U	1
o-Xylene	95-47-6	< 0.000182	0.000182		mg/kg	02.12.20 16.46	U	1
Total Xylenes	1330-20-7	< 0.000182	0.000182		mg/kg	02.12.20 16.46	U	1
Total BTEX		< 0.000182	0.000182		mg/kg	02.12.20 16.46	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	110	%	70-130	02.12.20 16.46		
4-Bromofluorobenzene		460-00-4	96	%	70-130	02.12.20 16.46		



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

Remuda South 25 #126H

Sample Id: SS02

Matrix: Soil

Date Received:02.12.20 11.57

Lab Sample Id: 652122-002

Date Collected: 02.10.20 12.30

Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P % Moisture:

Tech: N

Analyst:

MAB MAB

Date Prep: 02.12.20 12.30

Basis:

Wet Weight

Seq Number: 3116355

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	4770	503	mg/kg	02.12.20 14.21		50

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

% Moisture:

Tech:

Analyst:

DTH DTH

Date Prep: 02.12.20 13.00

Basis: V

Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	< 50.3	50.3		mg/kg	02.12.20 13.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.3	50.3		mg/kg	02.12.20 13.55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.3	50.3		mg/kg	02.12.20 13.55	U	1
Total GRO-DRO	PHC628	< 50.3	50.3		mg/kg	02.12.20 13.55	U	1
Total TPH	PHC635	<50.3	50.3		mg/kg	02.12.20 13.55	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	97	%	70-135	02.12.20 13.55		
o-Terphenyl		84-15-1	97	%	70-135	02.12.20 13.55		



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

Remuda South 25 #126H

Sample Id: SS02 Matrix: Soil Date Received:02.12.20 11.57

Lab Sample Id: 652122-002 Date Collected: 02.10.20 12.30 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 02.12.20 12.30 Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	<b>Analysis Date</b>	Flag	Dil
Benzene	71-43-2	< 0.00201	0.00201		mg/kg	02.12.20 17.06	U	1
Toluene	108-88-3	< 0.00201	0.00201		mg/kg	02.12.20 17.06	U	1
Ethylbenzene	100-41-4	< 0.00201	0.00201		mg/kg	02.12.20 17.06	U	1
m,p-Xylenes	179601-23-1	< 0.00402	0.00402		mg/kg	02.12.20 17.06	U	1
o-Xylene	95-47-6	< 0.00201	0.00201		mg/kg	02.12.20 17.06	U	1
Total Xylenes	1330-20-7	< 0.00201	0.00201		mg/kg	02.12.20 17.06	U	1
Total BTEX		< 0.00201	0.00201		mg/kg	02.12.20 17.06	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	111	%	70-130	02.12.20 17.06		
4-Bromofluorobenzene		460-00-4	98	%	70-130	02.12.20 17.06		



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

Remuda South 25 #126H

Sample Id: SS03

Matrix: Soil

Date Received:02.12.20 11.57

Lab Sample Id: 652122-003 Date Collected: 02.10.20 12.35

Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

Analyst:

MAB

% Moisture:

Date Prep:

02.12.20 12.30

Basis:

Wet Weight

Seq Number: 3116355

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	4030	499	mg/kg	02.12.20 14.27		50

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

% Moisture:

Tech: Analyst: DTH DTH

Date Prep: 02.12.20 13.00

Basis:

Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1		mg/kg	02.12.20 14.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.1	50.1		mg/kg	02.12.20 14.15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.1	50.1		mg/kg	02.12.20 14.15	U	1
Total GRO-DRO	PHC628	< 50.1	50.1		mg/kg	02.12.20 14.15	U	1
Total TPH	PHC635	< 50.1	50.1		mg/kg	02.12.20 14.15	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	82	%	70-135	02.12.20 14.15		
o-Terphenyl		84-15-1	90	%	70-135	02.12.20 14.15		



MAB

1,4-Difluorobenzene

4-Bromofluorobenzene

Analyst:

## **Certificate of Analytical Results 652122**

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

Remuda South 25 #126H

02.12.20 12.30

Basis:

Wet Weight

Sample Id: Matrix: Soil Date Received:02.12.20 11.57 **SS03** 

Lab Sample Id: 652122-003 Date Collected: 02.10.20 12.35 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: MAB % Moisture:

540-36-3

460-00-4

Date Prep: Seq Number: 3116351

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00201	0.00201		mg/kg	02.12.20 18.08	U	1
Toluene	108-88-3	< 0.00201	0.00201		mg/kg	02.12.20 18.08	U	1
Ethylbenzene	100-41-4	< 0.00201	0.00201		mg/kg	02.12.20 18.08	U	1
m,p-Xylenes	179601-23-1	< 0.00402	0.00402		mg/kg	02.12.20 18.08	U	1
o-Xylene	95-47-6	< 0.00201	0.00201		mg/kg	02.12.20 18.08	U	1
Total Xylenes	1330-20-7	< 0.00201	0.00201		mg/kg	02.12.20 18.08	U	1
Total BTEX		< 0.00201	0.00201		mg/kg	02.12.20 18.08	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	

111

97

%

70-130

70-130

02.12.20 18.08

02.12.20 18.08



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

Remuda South 25 #126H

Sample Id: **SS04** 

Soil Matrix:

Date Received:02.12.20 11.57

Lab Sample Id: 652122-004

Date Collected: 02.10.20 12.40

Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P % Moisture:

Tech: MAB

Analyst:

MAB

Date Prep: 02.12.20 12.30 Basis:

Wet Weight

Seq Number: 3116355

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	4580	497	mg/kg	02.12.20 14.32		50

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

% Moisture:

DTH Tech: DTH

Analyst:

02.12.20 13.00 Date Prep:

Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	< 50.2	50.2		mg/kg	02.12.20 14.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.2	50.2		mg/kg	02.12.20 14.15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.2	50.2		mg/kg	02.12.20 14.15	U	1
Total GRO-DRO	PHC628	< 50.2	50.2		mg/kg	02.12.20 14.15	U	1
Total TPH	PHC635	< 50.2	50.2		mg/kg	02.12.20 14.15	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	97	%	70-135	02.12.20 14.15		
o-Terphenyl		84-15-1	98	%	70-135	02.12.20 14.15		



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

Remuda South 25 #126H

Basis:

Wet Weight

Sample Id: SS04 Matrix: Soil Date Received:02.12.20 11.57

Lab Sample Id: 652122-004 Date Collected: 02.10.20 12.40 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 02.12.20 12.30 Seq Number: 3116351

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00201	0.00201		mg/kg	02.12.20 18.28	U	1
Toluene	108-88-3	< 0.00201	0.00201		mg/kg	02.12.20 18.28	U	1
Ethylbenzene	100-41-4	< 0.00201	0.00201		mg/kg	02.12.20 18.28	U	1
m,p-Xylenes	179601-23-1	< 0.00402	0.00402		mg/kg	02.12.20 18.28	U	1
o-Xylene	95-47-6	< 0.00201	0.00201		mg/kg	02.12.20 18.28	U	1
Total Xylenes	1330-20-7	< 0.00201	0.00201		mg/kg	02.12.20 18.28	U	1
Total BTEX		< 0.00201	0.00201		mg/kg	02.12.20 18.28	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	



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

Remuda South 25 #126H

Sample Id: SS05

Matrix: Soil

Date Received:02.12.20 11.57

Lab Sample Id: 652122-005

Date Collected: 02.10.20 12.45

Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech:

MAB

% Moisture:

Analyst: MAB

Date Prep:

02.12.20 12.30

Basis:

Wet Weight

Seq Number: 3116355

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	4380	502	mg/kg	02.12.20 14.38		50

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

% Moisture:

Tech: Analyst: DTH DTH

Date Prep: 02.12.20 13.00

Basis:

Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	< 50.0	50.0		mg/kg	02.12.20 14.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.0	50.0		mg/kg	02.12.20 14.35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.0	50.0		mg/kg	02.12.20 14.35	U	1
Total GRO-DRO	PHC628	< 50.0	50.0		mg/kg	02.12.20 14.35	U	1
Total TPH	PHC635	< 50.0	50.0		mg/kg	02.12.20 14.35	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	92	%	70-135	02.12.20 14.35		
o-Terphenyl		84-15-1	97	%	70-135	02.12.20 14.35		



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

Remuda South 25 #126H

Sample Id: SS05 Matrix: Soil Date Received:02.12.20 11.57

Lab Sample Id: 652122-005 Date Collected: 02.10.20 12.45 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 02.12.20 12.30 Basis: Wet Weight

Parameter	Cas Number	r Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00202	0.00202		mg/kg	02.12.20 18.48	U	1
Toluene	108-88-3	< 0.00202	0.00202		mg/kg	02.12.20 18.48	U	1
Ethylbenzene	100-41-4	< 0.00202	0.00202		mg/kg	02.12.20 18.48	U	1
m,p-Xylenes	179601-23-1	< 0.00404	0.00404		mg/kg	02.12.20 18.48	U	1
o-Xylene	95-47-6	< 0.00202	0.00202		mg/kg	02.12.20 18.48	U	1
Total Xylenes	1330-20-7	< 0.00202	0.00202		mg/kg	02.12.20 18.48	U	1
Total BTEX		< 0.00202	0.00202		mg/kg	02.12.20 18.48	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	111	%	70-130	02.12.20 18.48		
4-Bromofluorobenzene		460-00-4	95	%	70-130	02.12.20 18.48		



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

Remuda South 25 #126H

Sample Id: **SS06** 

Analytical Method: Chloride by EPA 300

MAB

MAB

Lab Sample Id: 652122-006

Soil Matrix:

Date Received:02.12.20 11.57

Date Collected: 02.10.20 13.05

Sample Depth: 0.5 ft

Prep Method: E300P

% Moisture:

Seq Number: 3116355

Tech:

Analyst:

Date Prep: 02.12.20 12.30 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1950	200	mg/kg	02.12.20 14.44		20

Analytical Method: TPH by SW8015 Mod

DTH

Tech:

DTH Analyst:

Seq Number: 3116314

Date Prep:

02.12.20 13.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	< 50.2	50.2		mg/kg	02.12.20 14.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	76.0	50.2		mg/kg	02.12.20 14.35		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.2	50.2		mg/kg	02.12.20 14.35	U	1
Total GRO-DRO	PHC628	76.0	50.2		mg/kg	02.12.20 14.35		1
Total TPH	PHC635	76.0	50.2		mg/kg	02.12.20 14.35		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	96	%	70-135	02.12.20 14.35		
o-Terphenyl		84-15-1	97	%	70-135	02.12.20 14.35		



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

Remuda South 25 #126H

02.12.20 12.30

Basis:

Wet Weight

Sample Id: SS06 Matrix: Soil Date Received:02.12.20 11.57

Lab Sample Id: 652122-006 Date Collected: 02.10.20 13.05 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Date Prep:

MAB % Moisture:

Seq Number: 3116351

MAB

Tech:

Analyst:

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	02.12.20 19.09	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	02.12.20 19.09	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	02.12.20 19.09	U	1
m,p-Xylenes	179601-23-1	< 0.00401	0.00401		mg/kg	02.12.20 19.09	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	02.12.20 19.09	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	02.12.20 19.09	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	02.12.20 19.09	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	111	%	70-130	02.12.20 19.09		
4-Bromofluorobenzene		460-00-4	97	%	70-130	02.12.20 19.09		



## **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.

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

Flag



#### **QC Summary** 652122

#### LT Environmental, Inc.

Remuda South 25 #126H

Analytical Method: Chloride by EPA 300

Seq Number: 3116355 Matrix: Solid

LCS Sample Id: 7696487-1-BKS MB Sample Id: 7696487-1-BLK

Date Prep: 02.12.20

Prep Method:

LCSD Sample Id: 7696487-1-BSD

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

Result 02.12.20 11:58 Chloride <10.0 250 255 102 256 102 90-110 0 20 mg/kg

Analytical Method: Chloride by EPA 300

Seq Number: 3116355

Matrix: Soil

Prep Method: Date Prep: E300P 02.12.20

E300P

Parent Sample Id: 652094-001 MS Sample Id: 652094-001 S

MSD Sample Id: 652094-001 SD

Date Prep:

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

Chloride 9040 200 9250 105 9220 90 90-110 0 20 mg/kg 02.12.20 12:15

Analytical Method: Chloride by EPA 300

Seq Number:

3116355

Matrix: Soil

Prep Method:

E300P

02.12.20

MSD Sample Id: 652112-004 SD MS Sample Id: 652112-004 652112-004 S Parent Sample Id:

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

Chloride 565 200 763 99 764 90-110 0 20 02.12.20 13:47 100 mg/kg

Analytical Method: TPH by SW8015 Mod

Seq Number:

3116314

Matrix: Solid

Prep Method:

SW8015P

Date Prep: 02.12.20

7696489-1-BKS LCSD Sample Id: LCS Sample Id: 7696489-1-BSD MB Sample Id: 7696489-1-BLK

%RPD RPD Limit Units MB Spike LCS LCS Limits Analysis LCSD LCSD **Parameter** Result %Rec Date Result Amount %Rec Result Gasoline Range Hydrocarbons (GRO) 795 80 834 70-135 02.12.20 11:36 < 50.0 1000 83 5 35 mg/kg 02.12.20 11:36 707 71 747 70-135 Diesel Range Organics (DRO) 1000 75 6 35 < 50.0 mg/kg

LCS MB MB LCS LCSD LCSD Limits Units Analysis **Surrogate** %Rec Flag %Rec Flag Flag Date %Rec 1-Chlorooctane 132 117 112 70-135 % 02.12.20 11:36 02.12.20 11:36 o-Terphenyl 130 100 100 70-135 %

Analytical Method: TPH by SW8015 Mod

Seq Number:

3116314

Matrix: Solid

Prep Method:

SW8015P 02.12.20

mg/kg

MB Sample Id: 7696489-1-BLK

MB

< 50.0

Date Prep:

Units Analysis Flag **Parameter** Result Date

Motor Oil Range Hydrocarbons (MRO)

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 A = Parent Result

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

02.12.20 11:16

Flag

Flag



Seq Number:

**Parameter** 

#### **QC Summary** 652122

#### LT Environmental, Inc.

Remuda South 25 #126H

**MSD** 

Result

**MSD** 

%Rec

Limits

Analytical Method: TPH by SW8015 Mod

3116314 Matrix: Soil

MS

Result

Parent Sample Id: MS Sample Id: 652094-001 S 652094-001

Parent

Result

Spike

Amount

SW8015P Prep Method:

Date Prep: 02.12.20

MSD Sample Id: 652094-001 SD

%RPD RPD Limit Units Analysis Flag Date

Gasoline Range Hydrocarbons (GRO) 02.12.20 11:56 < 50.2 1000 883 88 932 93 70-135 5 35 mg/kg 97 1020 02.12.20 11:56 Diesel Range Organics (DRO) < 50.2 1000 967 102 70-135 5 35 mg/kg

MS

%Rec

MS MS **MSD MSD** Limits Units Analysis **Surrogate** Flag %Rec %Rec Flag Date 1-Chlorooctane 106 112 70-135 % 02.12.20 11:56 o-Terphenyl 101 108 70-135 % 02.12.20 11:56

Analytical Method: BTEX by EPA 8021B

Seq Number: 3116351

Matrix: Solid

Prep Method: SW5030B

Date Prep: 02.12.20

LCS Sample Id: 7696486-1-BKS LCSD Sample Id: 7696486-1-BSD 7696486-1-BLK MB Sample Id:

%RPD RPD Limit Units LCS LCS MB Spike Limits Analysis **LCSD** LCSD **Parameter** Date Result Amount Result %Rec Result %Rec 02.12.20 12:21 Benzene < 0.00200 0.100 0.118 118 0.125 125 70-130 6 35 mg/kg Toluene 0.100 0.110 110 0.116 70-130 35 02.12.20 12:21 < 0.00200 116 5 mg/kg 02.12.20 12:21 0.106 106 71-129 35 Ethylbenzene < 0.00200 0.100 0.112 112 6 mg/kg 02.12.20 12:21 m,p-Xylenes < 0.00400 0.200 0.209 105 0.220 110 70-135 5 35 mg/kg 0.104 71-133 35 02.12.20 12:21 o-Xylene < 0.00200 0.100 104 0.110 110 mg/kg

MB MB LCS LCS LCSD LCSD Limits Units Analysis **Surrogate** %Rec %Rec Flag Flag Flag Date %Rec 1.4-Difluorobenzene 110 108 108 70-130 % 02.12.20 12:21 02.12.20 12:21 4-Bromofluorobenzene 93 94 70-130 % 96

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B Seq Number: 3116351 Matrix: Soil 02.12.20 Date Prep:

652094-001 S MSD Sample Id: 652094-001 SD MS Sample Id: Parent Sample Id: 652094-001

MS %RPD RPD Limit Units Parent Spike MS MSD MSD Limits Analysis **Parameter** Result Amount Result %Rec Date Result %Rec 02.12.20 13:02 0.0996 106 Benzene < 0.00199 0.106 0.125 125 70-130 16 35 mg/kg Toluene < 0.00199 0.0996 0.111 111 0.116 70-130 4 35 02.12.20 13:02 116 mg/kg 02.12.20 13:02 Ethylbenzene < 0.00199 0.0996 0.108 108 0.112 112 71-129 4 35 mg/kg 0.219 02.12.20 13:02 < 0.00398 0.199 0.190 95 70-135 14 35 m,p-Xylenes 110 mg/kg 02.12.20 13:02 0.102 102 0.110 71-133 o-Xylene < 0.00199 0.0996 110 35 mg/kg

MS MS **MSD MSD** Limits Units Analysis **Surrogate** %Rec Flag Flag Date %Rec 1,4-Difluorobenzene 106 107 70-130 % 02.12.20 13:02 4-Bromofluorobenzene 95 94 70-130 % 02.12.20 13:02

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

A = Parent Result

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

it.	Bulk m	Relinquished by: (Signature)	Aprice A minimum charge of \$75,00 will be applied to each project and a charge of \$5 for each sample summittee to zeros, but rest universess.		Total 200.7 / 6010	0:3			5506	5505	SSON	5005	2000	1000	1055	Sample Identification	Sample Custody Seals.	Comple Custody Spale.	Cooler Custody Seals:	Received Intact:	femperature (°C):	SAMPLE RECEIPT	Sampler's Name: Ro	P.O. Number: Sp. II	er.	Project Name:		City, State ZIP: Mic		Company Name: LT	Project Manager: Dai	Pa	ge 74	
	College C	(Signature)	ge of \$75.00 will be appli	cument and relinquishm able only for the cost of s	otal 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed				4						S	ication Matrix		8	Yes No NIA	Yes No		T Temp Blank:	Robert McAfee	date		Remada South	432.704.5178	Midland, TX 79705	3300 North A Street	LT Environmental, Inc.,	Dan Moir		BORATORIES	
	X X CO	Received	ed to each project an	ent of samples const	analyzed 8F	-			•	-					02/10/20	rix Sampled				1	11	nk: Yes No		10/25/19		25 #126#				c., Permian office		Hobbs, N		
	C	Received by: (Signature)	d a charge of \$6	tutes a valid pur assume any res	TCLP / SPLP 6	11 1			000	700	700	1740	1235	1230	1225	Sampled		Total Containers:	Correction Factor:	2	Thermometer ID	Wet Ice:	Due Date:	Rush:	Routine	Turn	Email: di	Q	Ac		<u> </u>	IM (575-392-75	Houston,TX Midland,T	
		re)	for each sample	rchase order from	TCLP / SPLP 6010: 8RCRA Sb As	10 1			V	+					0.5	Depth		6	40	4001		(es) No	ate:	5 day	N	Turn Around	dmoir@ltenv.com/mcatee@itenv.com	City, State ZIP:	Address:	Company Name:	Bill to: (if different)	Hobbs, NM (575-392-7550) Phoenix, AZ (480-355-0900) Aliania, Car (770-443-0000)	Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio, IX (210) 509-5354 Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296	
	2/12/	Da	Subminedit	m client comp	CRA Sb		1		4	+	×	x	×	×	- ×	Num					ine	rs					com rinca	Caris				2 (480-355	00 Dallas,TX	Cha
	£5:11 00	Date/Time	Adino, pur	pany to Xence expenses in	As Ba E		1	R	3	X	×	×	×	×	×	ВТЕ											iee(witen	Carisbad, NM		XIO-Energy	Kyle Littrei	OSOO) Allai	c,TX (915)5	Cliam of Custody
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		Relinquished by: (Signature)		ntractors. It assigns standard terms and condit h losses are due to circumstances beyond the cost will be enforced unless previously negotiated.	Pb Mn Mo Ni Se Ag TI U	Co Cii Eo																				YSIS REQUEST						lampa, L (olo oco zooo)		200
		nature)		signs standa e to circumst ed unless pro	Ni Se A	Ph Ma N									+											DEST		Delive	Report	Sta	Droger		13-620-2000	
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		ceived by:		the control lated.		K Se Aa																							□evel III		7	Work	www.xer	AROLE CLOCK INC.
		Received by: (Signature)				SiO2	-																						II ST/UST	[	bRP Brownfields	Work Order Comments	www.xenco.com	1001
		re)			31 / 245.1	Na Sr TI				4					000	1	San	idib,	TAT stan								_ 11				ields Rc	omments	Page	1
		Date/Time			1631 / 245.1 / 7470 / 7471 : Hg	Sr TI Sn U V Zn									SCIETE	The second	Sample Comments	lab, il received by 4.50pm	TAT starts the day recevied by the								Work Order Notes	Other:	RRP bvel IV		C   uperfund	ui .	of _	

#### **XENCO Laboratories**

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

Client: LT Environmental, Inc.

Acceptable Temperature Range: 0 - 6 degC

Date/ Time Received: 02.12.2020 11.57.00 AM

Air and Metal samples Acceptable Range: Ambient

Work Order #: 652122

Temperature Measuring device used: T-NM-007

	Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?		.4	
#2 *Shipping container in good condition?		Yes	
#3 *Samples received on ice?		Yes	
#4 *Custody Seals intact on shipping conta	iner/ 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	hed/ received?	Yes	
#10 Chain of Custody agrees with sample I	abels/matrix?	Yes	
#11 Container label(s) legible and intact?		Yes	
#12 Samples in proper container/ bottle?		Yes	
#13 Samples properly preserved?		Yes	
#14 Sample container(s) intact?		Yes	
#15 Sufficient sample amount for indicated	test(s)?	Yes	
#16 All samples received within hold time?		Yes	
#17 Subcontract of sample(s)?		No	
#18 Water VOC samples have zero headsp	pace?	N/A	

* Must be completed for after-hours deliver	v of samp	oles prior to	placing in the	he refrigerator
made be completed for ditor medic deliver	<i>,</i> 0. 0ap	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	p.aog t.	

Analvst:	PH Device/Lot#
milalyst.	I I I DC VICC/ LOT

Checklist completed by:

Elizabeth McClellan

Checklist reviewed by:

Lasia Karnek Date: 02.12.2020

Date: 02.12.2020

# Received by OCD: 1/18/2021 2:20:31 PM created by OCD: 1/18/2021 2:20:31 PM Environment Testing

# **Certificate of Analysis Summary 673152**

LT Environmental, Inc., Arvada, CO

Project Name: Remuda South 25 #126H

Project Id: Contact:

**Project Location:** 

012919260

Dan Moir Eddy County **Date Received in Lab:** Mon 09.21.2020 16:31

**Report Date:** 09.23.2020 14:07

Project Manager: Jessica Kramer

	Lab Id:	673152-0	001	673152-0	002	673152-0	003	673152-	004	673152-0	005	673152-0	006
Analysis Requested	Field Id:	PH01		PH02	2	PH03		PH04		PH05		FS01	
Anaiysis Requesica	Depth:	3- ft											
	Matrix:	SOIL		SOIL	,	SOIL	,	SOIL		SOIL		SOIL	,
	Sampled:	09.21.2020	13:20	09.21.2020	13:29	09.21.2020	10:59	09.21.2020	12:10	09.21.2020	12:29	09.21.2020	14:46
BTEX by EPA 8021B	Extracted:	09.21.2020	17:06	09.21.2020	17:06	09.21.2020	17:06	09.21.2020	17:06	09.21.2020	17:06	09.21.2020	17:06
	Analyzed:	09.21.2020	18:43	09.21.2020	19:05	09.21.2020	19:28	09.21.2020	19:50	09.21.2020	20:13	09.21.2020	20:35
	Units/RL:	mg/kg	RL										
Benzene		< 0.00200	0.00200	< 0.00199	0.00199	< 0.00200	0.00200	< 0.00201	0.00201	< 0.00198	0.00198	< 0.00198	0.00198
Toluene		< 0.00200	0.00200	< 0.00199	0.00199	< 0.00200	0.00200	< 0.00201	0.00201	< 0.00198	0.00198	< 0.00198	0.00198
Ethylbenzene		< 0.00200	0.00200	< 0.00199	0.00199	< 0.00200	0.00200	< 0.00201	0.00201	< 0.00198	0.00198	< 0.00198	0.00198
m,p-Xylenes		< 0.00400	0.00400	< 0.00398	0.00398	< 0.00399	0.00399	< 0.00402	0.00402	< 0.00396	0.00396	< 0.00396	0.00396
o-Xylene		< 0.00200	0.00200	< 0.00199	0.00199	< 0.00200	0.00200	< 0.00201	0.00201	< 0.00198	0.00198	< 0.00198	0.00198
Total Xylenes		< 0.00200	0.00200	< 0.00199	0.00199	< 0.00200	0.00200	< 0.00201	0.00201	< 0.00198	0.00198	< 0.00198	0.00198
Total BTEX		< 0.00200	0.00200	< 0.00199	0.00199	< 0.00200	0.00200	< 0.00201	0.00201	< 0.00198	0.00198	< 0.00198	0.00198
Chloride by EPA 300	Extracted:	09.22.2020	09:23	09.22.2020	09:23	09.22.2020	09:23	09.22.2020	09:23	09.22.2020	09:23	09.22.2020	09:23
	Analyzed:	09.22.2020	11:55	09.22.2020	12:22	09.22.2020	12:28	09.22.2020	12:33	09.22.2020	12:39	09.22.2020	12:44
	Units/RL:	mg/kg	RL										
Chloride		30.5	9.92	<10.0	10.0	416	10.0	<10.0	10.0	20.7	9.98	217	9.94
TPH by SW8015 Mod	Extracted:	09.21.2020	16:50	09.21.2020	16:50	09.21.2020	16:50	09.21.2020	16:50	09.21.2020	16:50	09.21.2020	16:50
	Analyzed:	09.21.2020	18:39	09.21.2020	18:59	09.21.2020	19:19	09.21.2020	19:40	09.21.2020	20:00	09.21.2020	20:20
	Units/RL:	mg/kg	RL										
Gasoline Range Hydrocarbons (GRO)		< 50.2	50.2	< 50.1	50.1	<50.1	50.1	<50.0	50.0	<50.1	50.1	<50.1	50.1
Diesel Range Organics (DRO)		< 50.2	50.2	<50.1	50.1	< 50.1	50.1	<50.0	50.0	< 50.1	50.1	<50.1	50.1
Motor Oil Range Hydrocarbons (MRO)		< 50.2	50.2	<50.1	50.1	< 50.1	50.1	<50.0	50.0	<50.1	50.1	<50.1	50.1
Total GRO-DRO		< 50.2	50.2	<50.1	50.1	< 50.1	50.1	<50.0	50.0	< 50.1	50.1	<50.1	50.1
Total TPH		< 50.2	50.2	<50.1	50.1	< 50.1	50.1	< 50.0	50.0	< 50.1	50.1	< 50.1	50.1

BRL - Below Reporting Limit

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

Jessica Wramer



# **Analytical Report 673152**

for

## LT Environmental, Inc.

Project Manager: Dan Moir

Remuda South 25 #126H 012919260 09.23.2020

Collected By: Client

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

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

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

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



09.23.2020

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

Reference: Eurofins Xenco, LLC Report No(s): 673152

Remuda South 25 #126H Project Address: Eddy County

#### Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 673152. 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. 673152 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 673152**

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

Remuda South 25 #126H

Sample Id	Matrix	<b>Date Collected</b>	Sample Depth	Lab Sample Id
PH01	S	09.21.2020 13:20	3 ft	673152-001
PH02	S	09.21.2020 13:29	3 ft	673152-002
PH03	S	09.21.2020 10:59	3 ft	673152-003
PH04	S	09.21.2020 12:10	3 ft	673152-004
PH05	S	09.21.2020 12:29	3 ft	673152-005
FS01	S	09.21.2020 14:46	3 ft	673152-006

#### **CASE NARRATIVE**

Client Name: LT Environmental, Inc. Project Name: Remuda South 25 #126H

 Project ID:
 012919260
 Report Date:
 09.23.2020

 Work Order Number(s):
 673152
 Date Received:
 09.21.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Final 1.000

#### **Certificate of Analytical Results 673152**

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

Remuda South 25 #126H

Sample Id: PH01 Matrix: Soil Date Received:09.21.2020 16:31

Lab Sample Id: 673152-001 Date Collected: 09.21.2020 13:20 Sample Depth: 3 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 09.22.2020 09:23 Basis: Wet Weight

Seq Number: 3137776

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	30.5	9.92	mg/kg	09.22.2020 11:55		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 09.21.2020 16:50 Basis: Wet Weight

Parameter	Cas Numbe	r Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2		mg/kg	09.21.2020 18:39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2		mg/kg	09.21.2020 18:39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2		mg/kg	09.21.2020 18:39	U	1
Total GRO-DRO	PHC628	< 50.2	50.2		mg/kg	09.21.2020 18:39	U	1
Total TPH	PHC635	<50.2	50.2		mg/kg	09.21.2020 18:39	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	100	%	70-135	09.21.2020 18:39		
o-Terphenyl		84-15-1	93	%	70-135	09.21.2020 18:39		

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

Remuda South 25 #126H

Sample Id: PH01 Matrix: Soil Date Received:09.21.2020 16:31

Lab Sample Id: 673152-001 Date Collected: 09.21.2020 13:20 Sample Depth: 3 ft

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

Tech: MAB % Moisture:

540-36-3

Analyst: MAB Date Prep: 09.21.2020 17:06 Basis: Wet Weight

Seq Number: 3137712

1,4-Difluorobenzene

Parameter	Cas Number	Result	$\mathbf{RL}$		Units	<b>Analysis Date</b>	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	09.21.2020 18:43	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	09.21.2020 18:43	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	09.21.2020 18:43	U	1
m,p-Xylenes	179601-23-1	< 0.00400	0.00400		mg/kg	09.21.2020 18:43	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	09.21.2020 18:43	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	09.21.2020 18:43	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	09.21.2020 18:43	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	87	%	70-130	09.21.2020 18:43		

99

%

70-130

09.21.2020 18:43



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

Remuda South 25 #126H

Sample Id: **PH02** Matrix: Soil Date Received:09.21.2020 16:31

Lab Sample Id: 673152-002 Date Collected: 09.21.2020 13:29 Sample Depth: 3 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB % Moisture:

MAB Analyst: Date Prep: 09.22.2020 09:23 Basis: Wet Weight

Seq Number: 3137776

Parameter	Cas Number	Result	RL	Units	<b>Analysis Date</b>	Flag	Dil
Chloride	16887-00-6	<10.0	10.0	mg/kg	09.22.2020 12:22	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

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

Analyst: DTH Basis: Wet Weight Date Prep: 09.21.2020 16:50

Parameter	Cas Number	r Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	< 50.1	50.1		mg/kg	09.21.2020 18:59	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.1	50.1		mg/kg	09.21.2020 18:59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.1	50.1		mg/kg	09.21.2020 18:59	U	1
Total GRO-DRO	PHC628	< 50.1	50.1		mg/kg	09.21.2020 18:59	U	1
Total TPH	PHC635	<50.1	50.1		mg/kg	09.21.2020 18:59	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	97	%	70-135	09.21.2020 18:59		
o-Terphenyl		84-15-1	92	%	70-135	09.21.2020 18:59		

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

Remuda South 25 #126H

Sample Id: PH02 Matrix: Soil Date Received:09.21.2020 16:31

Lab Sample Id: 673152-002 Date Collected: 09.21.2020 13:29 Sample Depth: 3 ft

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

Tech: MAB % Moisture:

460-00-4

Analyst: MAB Date Prep: 09.21.2020 17:06 Basis: Wet Weight

Seq Number: 3137712

4-Bromofluorobenzene

Parameter	Cas Number	Result	$\mathbf{RL}$		Units	<b>Analysis Date</b>	Flag	Dil
Benzene	71-43-2	< 0.00199	0.00199		mg/kg	09.21.2020 19:05	U	1
Toluene	108-88-3	< 0.00199	0.00199		mg/kg	09.21.2020 19:05	U	1
Ethylbenzene	100-41-4	< 0.00199	0.00199		mg/kg	09.21.2020 19:05	U	1
m,p-Xylenes	179601-23-1	< 0.00398	0.00398		mg/kg	09.21.2020 19:05	U	1
o-Xylene	95-47-6	< 0.00199	0.00199		mg/kg	09.21.2020 19:05	U	1
Total Xylenes	1330-20-7	< 0.00199	0.00199		mg/kg	09.21.2020 19:05	U	1
Total BTEX		< 0.00199	0.00199		mg/kg	09.21.2020 19:05	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	101	%	70-130	09.21.2020 19:05		

92

%

70-130

09.21.2020 19:05

#### **Certificate of Analytical Results 673152**

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

Remuda South 25 #126H

Sample Id: PH03 Matrix: Soil Date Received:09.21.2020 16:31

Lab Sample Id: 673152-003 Date Collected: 09.21.2020 10:59 Sample Depth: 3 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 09.22.2020 09:23 Basis: Wet Weight

Seq Number: 3137776

Parameter	Cas Number	Result	RL	Units	<b>Analysis Date</b>	Flag	Dil
Chloride	16887-00-6	416	10.0	mg/kg	09.22.2020 12:28		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 09.21.2020 16:50 Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	< 50.1	50.1		mg/kg	09.21.2020 19:19	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.1	50.1		mg/kg	09.21.2020 19:19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.1	50.1		mg/kg	09.21.2020 19:19	U	1
Total GRO-DRO	PHC628	< 50.1	50.1		mg/kg	09.21.2020 19:19	U	1
Total TPH	PHC635	<50.1	50.1		mg/kg	09.21.2020 19:19	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	
1-Chlorooctane	111-85-3	96	%	70-135	09.21.2020 19:19	
o-Terphenyl	84-15-1	93	%	70-135	09.21.2020 19:19	

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

Remuda South 25 #126H

09.21.2020 17:06

%

70-130

Sample Id: **PH03** Matrix: Soil Date Received:09.21.2020 16:31

Date Prep:

Lab Sample Id: 673152-003 Date Collected: 09.21.2020 10:59 Sample Depth: 3 ft

Prep Method: SW5035A

% Moisture:

Tech: MAB

460-00-4

Basis: Wet Weight

09.21.2020 19:28

Seq Number: 3137712

4-Bromofluorobenzene

Analyst:

Analytical Method: BTEX by EPA 8021B

MAB

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	09.21.2020 19:28	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	09.21.2020 19:28	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	09.21.2020 19:28	U	1
m,p-Xylenes	179601-23-1	< 0.00399	0.00399		mg/kg	09.21.2020 19:28	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	09.21.2020 19:28	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	09.21.2020 19:28	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	09.21.2020 19:28	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	102	%	70-130	09.21.2020 19:28		

90

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#### **Certificate of Analytical Results 673152**

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

Remuda South 25 #126H

Sample Id: **PH04** Matrix: Soil Date Received:09.21.2020 16:31

Lab Sample Id: 673152-004 Date Collected: 09.21.2020 12:10 Sample Depth: 3 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

% Moisture:

Tech: MAB MAB Analyst: Date Prep: 09.22.2020 09:23 Basis: Wet Weight

Seq Number: 3137776

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<10.0	10.0	mg/kg	09.22.2020 12:33	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

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

Analyst: DTH Basis: Wet Weight Date Prep: 09.21.2020 16:50

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0		mg/kg	09.21.2020 19:40	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.0	50.0		mg/kg	09.21.2020 19:40	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.0	50.0		mg/kg	09.21.2020 19:40	U	1
Total GRO-DRO	PHC628	< 50.0	50.0		mg/kg	09.21.2020 19:40	U	1
Total TPH	PHC635	< 50.0	50.0		mg/kg	09.21.2020 19:40	U	1
Surrogate	C	as Number (	% Recovery	Units	Limits	Analysis Date	Flag	

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date
1-Chlorooctane	111-85-3	94	%	70-135	09.21.2020 19:40
o-Terphenyl	84-15-1	89	%	70-135	09.21.2020 19:40

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

Remuda South 25 #126H

Sample Id: **PH04** Matrix: Soil Date Received:09.21.2020 16:31

Lab Sample Id: 673152-004 Date Collected: 09.21.2020 12:10 Sample Depth: 3 ft

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

Tech: MAB % Moisture:

MAB Analyst: Date Prep: 09.21.2020 17:06 Basis: Wet Weight

Seq Number: 3137712

Parameter	Cas Numbe	r Result	RL		Units	<b>Analysis Date</b>	Flag	Dil
Benzene	71-43-2	< 0.00201	0.00201		mg/kg	09.21.2020 19:50	U	1
Toluene	108-88-3	< 0.00201	0.00201		mg/kg	09.21.2020 19:50	U	1
Ethylbenzene	100-41-4	< 0.00201	0.00201		mg/kg	09.21.2020 19:50	U	1
m,p-Xylenes	179601-23-1	< 0.00402	0.00402		mg/kg	09.21.2020 19:50	U	1
o-Xylene	95-47-6	< 0.00201	0.00201		mg/kg	09.21.2020 19:50	U	1
Total Xylenes	1330-20-7	< 0.00201	0.00201		mg/kg	09.21.2020 19:50	U	1
Total BTEX		< 0.00201	0.00201		mg/kg	09.21.2020 19:50	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	101	%	70-130	09.21.2020 19:50		
4-Bromofluorobenzene		460-00-4	91	%	70-130	09.21.2020 19:50		

**PH05** 

#### **Certificate of Analytical Results 673152**

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

Remuda South 25 #126H

Sample Id: Matrix: Soil

Lab Sample Id: 673152-005 Date Collected: 09.21.2020 12:29 Sample Depth: 3 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Date Received:09.21.2020 16:31

MAB % Moisture: Tech:

MAB Analyst: Date Prep: 09.22.2020 09:23 Basis: Wet Weight

Seq Number: 3137776

Result **Parameter** Cas Number RLUnits **Analysis Date** Dil Flag Chloride 16887-00-6 20.7 9.98 mg/kg 09.22.2020 12:39 1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

DTH % Moisture: Tech:

Analyst: DTH Basis: Wet Weight Date Prep: 09.21.2020 16:50

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	< 50.1	50.1		mg/kg	09.21.2020 20:00	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.1	50.1		mg/kg	09.21.2020 20:00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.1	50.1		mg/kg	09.21.2020 20:00	U	1
Total GRO-DRO	PHC628	< 50.1	50.1		mg/kg	09.21.2020 20:00	U	1
Total TPH	PHC635	< 50.1	50.1		mg/kg	09.21.2020 20:00	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	95	%	70-135	09.21.2020 20:00	
o-Terphenyl	84-15-1	90	%	70-135	09.21.2020 20:00	

#### **Certificate of Analytical Results 673152**

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

Remuda South 25 #126H

Sample Id: **PH05** Matrix: Soil Date Received:09.21.2020 16:31

Lab Sample Id: 673152-005 Date Collected: 09.21.2020 12:29 Sample Depth: 3 ft

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

% Moisture:

%

70-130

09.21.2020 20:13

Tech: MAB MAB Analyst: Date Prep: 09.21.2020 17:06 Basis: Wet Weight

540-36-3

Seq Number: 3137712

1,4-Difluorobenzene

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00198	0.00198		mg/kg	09.21.2020 20:13	U	1
Toluene	108-88-3	< 0.00198	0.00198		mg/kg	09.21.2020 20:13	U	1
Ethylbenzene	100-41-4	< 0.00198	0.00198		mg/kg	09.21.2020 20:13	U	1
m,p-Xylenes	179601-23-1	< 0.00396	0.00396		mg/kg	09.21.2020 20:13	U	1
o-Xylene	95-47-6	< 0.00198	0.00198		mg/kg	09.21.2020 20:13	U	1
Total Xylenes	1330-20-7	< 0.00198	0.00198		mg/kg	09.21.2020 20:13	U	1
Total BTEX		< 0.00198	0.00198		mg/kg	09.21.2020 20:13	U	1
Surrogate	(	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	4	60-00-4	94	%	70-130	09.21.2020 20:13		

88

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MAB

#### **Certificate of Analytical Results 673152**

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

Remuda South 25 #126H

09.22.2020 09:23

Sample Id: **FS01** Matrix: Soil Date Received:09.21.2020 16:31

Lab Sample Id: 673152-006 Date Collected: 09.21.2020 14:46 Sample Depth: 3 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

% Moisture:

Basis:

Wet Weight

MAB Tech:

Analyst: Date Prep: Seq Number: 3137776

Result **Parameter** Cas Number RLUnits **Analysis Date** Dil Flag Chloride 16887-00-6 217 9.94 mg/kg 09.22.2020 12:44 1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

DTH % Moisture: Tech:

Analyst: DTH Basis: Wet Weight Date Prep: 09.21.2020 16:50

Parameter	Cas Number	r Result	RL		Units	<b>Analysis Date</b>	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1		mg/kg	09.21.2020 20:20	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.1	50.1		mg/kg	09.21.2020 20:20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.1	50.1		mg/kg	09.21.2020 20:20	U	1
Total GRO-DRO	PHC628	< 50.1	50.1		mg/kg	09.21.2020 20:20	U	1
Total TPH	PHC635	< 50.1	50.1		mg/kg	09.21.2020 20:20	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	93	%	70-135	09.21.2020 20:20		
o-Terphenyl		84-15-1	86	%	70-135	09.21.2020 20:20		

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

Remuda South 25 #126H

Sample Id: FS01 Matrix: Soil Date Received:09.21.2020 16:31

Lab Sample Id: 673152-006 Date Collected: 09.21.2020 14:46 Sample Depth: 3 ft

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

Tech: MAB % Moisture:

460-00-4

Analyst: MAB Date Prep: 09.21.2020 17:06 Basis: Wet Weight

Seq Number: 3137712

4-Bromofluorobenzene

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00198	0.00198		mg/kg	09.21.2020 20:35	U	1
Toluene	108-88-3	< 0.00198	0.00198		mg/kg	09.21.2020 20:35	U	1
Ethylbenzene	100-41-4	< 0.00198	0.00198		mg/kg	09.21.2020 20:35	U	1
m,p-Xylenes	179601-23-1	< 0.00396	0.00396		mg/kg	09.21.2020 20:35	U	1
o-Xylene	95-47-6	< 0.00198	0.00198		mg/kg	09.21.2020 20:35	U	1
Total Xylenes	1330-20-7	< 0.00198	0.00198		mg/kg	09.21.2020 20:35	U	1
Total BTEX		< 0.00198	0.00198		mg/kg	09.21.2020 20:35	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	:	540-36-3	99	%	70-130	09.21.2020 20:35		

88

70-130

09.21.2020 20:35



# **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** 673152

#### LT Environmental, Inc.

Remuda South 25 #126H

Analytical Method: Chloride by EPA 300

Seq Number: 3137776

7711799-1-BLK

Matrix: Solid

LCS Sample Id: 7711799-1-BKS

Prep Method: Date Prep: 09.22.2020

E300P

LCSD Sample Id: 7711799-1-BSD

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

Chloride

MB Sample Id:

<10.0

252 101

253

90-110 101

0

09.22.2020 10:01 mg/kg

Flag Date

Analytical Method: Chloride by EPA 300

3137776 Seq Number:

Matrix: Soil

E300P Prep Method: Date Prep:

20

09.22.2020

Parent Sample Id:

673152-001

MS Sample Id: MS MS Result %Rec

231

673152-001 S MSD Result

MSD Limits %Rec

MSD Sample Id: 673152-001 SD %RPD RPD Units

Analysis

Chloride

**Parameter** 

Result 30.5

Parent

Amount 199

250

Spike

101

234

102 90-110

90-110

Limit 20 1

mg/kg

Flag Date 09.22.2020 12:00

Analytical Method: Chloride by EPA 300

Seq Number: Parent Sample Id: 3137776

Matrix: Soil

MS Sample Id:

673161-001 S

Prep Method: Date Prep:

**RPD** 

Limit

20

09.22.2020 MSD Sample Id: 673161-001 SD

**Parameter** 

673161-001

Spike **Parent** Result Amount

385

MS MS Result %Rec

602

MSD Result

587

**MSD** Limits %Rec 100

%RPD

3

Units

mg/kg

E300P

Analysis Flag Date

09.22.2020 10:20

Chloride

Analytical Method: TPH by SW8015 Mod Seq Number:

3137717

198

Matrix: Solid

110

Prep Method: Date Prep: SW8015P

09.21.2020

7711777-1-BLK

LCS Sample Id: 7711777-1-BKS LCSD Sample Id: 7711777-1-BSD

**Parameter** 

MB Sample Id:

MB Spike Result Amount < 50.0 1000

MB

1000

LCS LCS Result %Rec

LCSD LCSD Limits %Rec Result

%RPD **RPD** Limit

Units

Analysis Date

Gasoline Range Hydrocarbons (GRO) 09.21.2020 12:16 848 85 35 811 81 70-135 4 mg/kg 09.21.2020 12:16 Diesel Range Organics (DRO) 872 87 832 83 70-135 5 35 < 50.0 mg/kg

**Surrogate** 1-Chlorooctane

%Rec 88 o-Terphenyl 84

MB Flag

LCS LCS Flag %Rec

94

83

LCSD

%Rec

93

80

LCSD

Flag

Limits Units

70-135

70-135

%

%

Units

Analysis Date

09.21.2020 12:16

09.21.2020 12:16

Analysis

Date

3137717

Analytical Method: TPH by SW8015 Mod

Matrix: Solid

Prep Method:

SW8015P

09.21.2020

Seq Number: **Parameter** 

MBResult

MB Sample Id: 7711777-1-BLK

Date Prep:

Flag

Flag

Motor Oil Range Hydrocarbons (MRO)

< 50.0

09.21.2020 11:56 mg/kg

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 AddedD = MSD/LCSD % Rec

Flag

Seq Number:

Parent Sample Id:

#### **QC Summary** 673152

#### LT Environmental, Inc.

Remuda South 25 #126H

Analytical Method: TPH by SW8015 Mod

3137717

673097-001

Matrix: Soil

SW8015P Prep Method:

Date Prep:

MSD Sample Id: 673097-001 SD

09.21.2020

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date
Gasoline Range Hydrocarbons (GRO)	< 50.1	1000	852	85	846	85	70-135	1	35	mg/kg	09.21.2020 13:17
Diesel Range Organics (DRO)	68.8	1000	948	88	964	90	70-135	2	35	mg/kg	09.21.2020 13:17

MS Sample Id: 673097-001 S

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	108		107		70-135	%	09.21.2020 13:17
o-Terphenyl	93		93		70-135	%	09.21.2020 13:17

Analytical Method: BTEX by EPA 8021B

3137712 Seq Number:

MB Sample Id:

7711754-1-BLK

Matrix: Solid

LCS Sample Id: 7711754-1-BKS

Prep Method:

SW5035A

09.21.2020

Date Prep: LCSD Sample Id: 7711754-1-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	0.0978	98	0.104	104	70-130	6	35	mg/kg	09.21.2020 11:38	
Toluene	< 0.00200	0.100	0.0948	95	0.101	101	70-130	6	35	mg/kg	09.21.2020 11:38	
Ethylbenzene	< 0.00200	0.100	0.0885	89	0.0941	94	71-129	6	35	mg/kg	09.21.2020 11:38	
m,p-Xylenes	< 0.00400	0.200	0.179	90	0.191	96	70-135	6	35	mg/kg	09.21.2020 11:38	
o-Xylene	< 0.00200	0.100	0.0873	87	0.0933	93	71-133	7	35	mg/kg	09.21.2020 11:38	
Surrogate	MB %Rec	MB Flag			LCS Flag	LCSI %Re			imits	Units	Analysis Date	

1,4-Difluorobenzene	100	99	99	70-130	%	09.21.2020 11:38
4-Bromofluorobenzene	86	89	93	70-130	%	09.21.2020 11:38

Analytical Method: BTEX by EPA 8021B

Seq Number: 3137712 Parent Sample Id: 673097-001

Matrix: Soil MS Sample Id: 673097-001 S Prep Method: SW5035A Date Prep:

09.21.2020

MSD Sample Id: 673097-001 SD

Flag

RPD **Parent** Spike MS MS MSD MSD Limits %RPD Units Analysis **Parameter** Limit Date Result Amount Result %Rec Result %Rec 09.21.2020 12:23 < 0.00201 0.101 0.121 120 0.122 70-130 35 Benzene 121 1 mg/kg 09.21.2020 12:23 70-130 35 Toluene < 0.00201 0.101 0.111 110 0.127 126 13 mg/kg Ethylbenzene < 0.00201 0.101 0.0935 93 0.118 117 71-129 23 35 mg/kg 09.21.2020 12:23 m,p-Xylenes < 0.00402 0.201 0.187 93 0.238 70-135 24 35 09.21.2020 12:23 118 mg/kg o-Xylene < 0.00201 0.101 0.0916 91 0.116 115 71-133 24 35 09.21.2020 12:23 mg/kg

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		98		70-130	%	09.21.2020 12:23
4-Bromofluorobenzene	92		85		70-130	%	09.21.2020 12:23

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 A = Parent Result

= MS/LCS Result E = MSD/LCSD Result MS = Matrix Spike B = Spike AddedD = MSD/LCSD % Rec

Page	96	of	138
4			



# Chain of Custody

Work Order No: 673150

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

	d by	Of regulation by (old		of service. Xenco will be liable of	Circle Method(s) and	Total 200.7 / 6010			1	FS01	PH05	PH04	PH03	PH02	PHUT	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: (43	City, State ZIP: Mic	Address: 33	y Name:	
		(Signature)	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	ent and relinquishment of sam only for the cost of samples ar	Circle Method(s) and Metal(s) to be analyzed	200.8 / 6020:		100		s 9/:	s 9/	s 9/	s 9/	s 9/	s 9,	Matrix	Yes (No NIA	1	)(2)	h.t/9.t	Temp Blank:	William Mather	Eddy	Ø12919260	Remuda South 25 #126H	(432) 236-3849	Midland, Tx 79705	3300 North A Street	nc.,	Dan Moir
	Sch Mary	eived by: (	project and a charge of	ples constitutes a valid	red TCLP / SI	BRCRA 12	0	1					9/21/2020 10:59	9/21/2020 13:29	9/21/2020 13:20	Date Time Sampled Sampled	Total Containers:	Correction Factor:	J-NM-00	Thermometer ID	Wet Ice:		Z)		5 #126H	En			Permian office	
			\$5 for each sample subn	purchase order from clie	TCLP / SPLP 6010: 8RCRA	- 11 1		1			3	3 1	3' 1	<u>ي</u>	ω -	d Depth	و	6.0	1		ce: Yos No	Due Date:	Rush:	Routine P	Turn Around	nail: wmather@ltenv	City, State ZIP:	Address:	Company Name:	Bill to: (if different)
	15.01 06.16.31	Time	nitted to Xenco, but not ar	ent company to Xenco, its	A Sb As Ba Be C	Ch /o Po Po			,	× ;	×	×	×	× ×	×	TPH (E BTEX (I	PA 80 EPA 0	15) =80	21)	iers						Email: wmather@ltenv.com, dmoir@ltenv.com			e: XTO Energy	Kyle Littrell
D 4	4 2	Relinquished by: (Signature)	nalyzed. These terms will be enforced unles	office. 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 described.	Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U																				ANALYSIS REQUEST					Bill to: (if different) Kyle Littrell
		Received by: (Signature)	vill be enforced unless previously negotiated.		\g SiO2																				AT .	_ 	evel III		Program: UST/PST RP Rownfields	
		ле) Date/Time			Na Sr Tl Sn U V Zn 1631/245.1/7470/7471:Hg				Composite	Discrete	Discrete	Discrete	Discrete	Disciple	Discrete	Sample Comments	TAT starts the day recevied by the lab, if received by 4:30pm							Sacra Cidel Motes	Work Order Notes	_ 0∰	TST/UST TRP IT VALUE	minimum The Albertain	200	Work Order Comments

## **Eurofins Xenco, LLC**

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

Client: LT Environmental, Inc.

Acceptable Temperature Range: 0 - 6 degC

Date/ Time Received: 09.21.2020 04.31.00 PM

Air and Metal samples Acceptable Range: Ambient

Work Order #: 673152

Analyst:

Temperature Measuring device used: T\_NM\_007

S	ample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	7.	4	
#2 *Shipping container in good condition?	Ye	es	
#3 *Samples received on ice?	Ye	es	
#4 *Custody Seals intact on shipping container	/ cooler?	es	
#5 Custody Seals intact on sample bottles?	Ye	es	
#6*Custody Seals Signed and dated?	Ye	es	
#7 *Chain of Custody present?	Ye	es	
#8 Any missing/extra samples?	N	0	
#9 Chain of Custody signed when relinquished	/ received? Ye	es	
#10 Chain of Custody agrees with sample labe	ls/matrix? Ye	es	
#11 Container label(s) legible and intact?	Υe	es	
#12 Samples in proper container/ bottle?	Ye		Samples received in bulk containers.
#13 Samples properly preserved?	Ye		
#14 Sample container(s) intact?	Ye	es	
#15 Sufficient sample amount for indicated tes	t(s)?	es	
#16 All samples received within hold time?	Ye	es	
#17 Subcontract of sample(s)?	N	0	
#18 Water VOC samples have zero headspace	e? N	/Α	

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

Checklist completed by:	Cloe Clifton	Date: 09.21.2020	
Checklist reviewed by:	Jessian Vramer	Date: 09 23 2020	

Jessica Kramer

PH Device/Lot#:

# Received by OCD: 1/18/2021 2:20:31 PM the eurofins | Environment Testing

# **Certificate of Analysis Summary 673152**

LT Environmental, Inc., Arvada, CO

Project Name: Remuda South 25 #126H

Project Id:

**Project Location:** 

**Contact:** 

012919260

Dan Moir

Eddy County

**Date Received in Lab:** Mon 09.21.2020 16:31

**Report Date:** 09.24.2020 08:02

Project Manager: Jessica Kramer

	Lab Id:	673152-0	001	673152-0	002	673152-0	003	673152-	004	673152-0	005	673152-0	006
Analysis Requested	Field Id:	PH01		PH02		PH03		PH04		PH05		FS01	
Anaiysis Requesieu	Depth:	3- ft		3- ft		3- ft		3- ft		3- ft		1- ft	
	Matrix:	SOIL		SOIL	SOIL		,	SOIL	_	SOIL		SOIL	,
	Sampled:	09.21.2020	13:20	09.21.2020	13:29	09.21.2020	10:59	09.21.2020	12:10	09.21.2020	12:29	09.21.2020	14:46
BTEX by EPA 8021B	Extracted:	09.21.2020	17:06	09.21.2020	17:06	09.21.2020	17:06	09.21.2020	17:06	09.21.2020	17:06	09.21.2020	17:06
	Analyzed:	09.21.2020	18:43	09.21.2020	19:05	09.21.2020	19:28	09.21.2020	19:50	09.21.2020	20:13	09.21.2020	20:35
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		< 0.00200	0.00200	< 0.00199	0.00199	< 0.00200	0.00200	< 0.00201	0.00201	< 0.00198	0.00198	< 0.00198	0.00198
Toluene		< 0.00200	0.00200	< 0.00199	0.00199	< 0.00200	0.00200	< 0.00201	0.00201	< 0.00198	0.00198	< 0.00198	0.00198
Ethylbenzene		< 0.00200	0.00200	< 0.00199	0.00199	< 0.00200	0.00200	< 0.00201	0.00201	< 0.00198	0.00198	< 0.00198	0.00198
m,p-Xylenes		< 0.00400	0.00400	< 0.00398	0.00398	< 0.00399	0.00399	< 0.00402	0.00402	< 0.00396	0.00396	< 0.00396	0.00396
o-Xylene		< 0.00200	0.00200	< 0.00199	0.00199	< 0.00200	0.00200	< 0.00201	0.00201	< 0.00198	0.00198	< 0.00198	0.00198
Total Xylenes		< 0.00200	0.00200	< 0.00199	0.00199	< 0.00200	0.00200	< 0.00201	0.00201	< 0.00198	0.00198	< 0.00198	0.00198
Total BTEX		< 0.00200	0.00200	<0.00199 0.00199		< 0.00200	0.00200	< 0.00201	0.00201	<0.00198 0.00198		< 0.00198	0.00198
Chloride by EPA 300	Extracted:	09.22.2020	09:23	09.22.2020	09:23	09.22.2020	09:23	09.22.2020	09:23	09.22.2020	09:23	09.22.2020	09:23
	Analyzed:	09.22.2020	11:55	09.22.2020	12:22	09.22.2020	12:28	09.22.2020	12:33	09.22.2020	12:39	09.22.2020	12:44
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		30.5	9.92	<10.0	10.0	416	10.0	<10.0	10.0	20.7	9.98	217	9.94
TPH by SW8015 Mod	Extracted:	09.21.2020	16:50	09.21.2020	16:50	09.21.2020	16:50	09.21.2020	16:50	09.21.2020	16:50	09.21.2020	16:50
	Analyzed:	09.21.2020	18:39	09.21.2020	18:59	09.21.2020	19:19	09.21.2020	19:40	09.21.2020	20:00	09.21.2020	20:20
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		< 50.2	50.2	< 50.1	50.1	< 50.1	50.1	< 50.0	50.0	< 50.1	50.1	< 50.1	50.1
Diesel Range Organics (DRO)		<50.2	50.2	<50.1	50.1	< 50.1	50.1	<50.0	50.0	<50.1	50.1	<50.1	50.1
Motor Oil Range Hydrocarbons (MRO)		< 50.2	50.2	<50.1	50.1	< 50.1	50.1	< 50.0	50.0	< 50.1	50.1	< 50.1	50.1
Total GRO-DRO		< 50.2	50.2	< 50.1	50.1	< 50.1	50.1	< 50.0	50.0	<50.1	50.1	< 50.1	50.1
Total TPH		< 50.2	50.2	< 50.1	50.1	< 50.1	50.1	< 50.0	50.0	<50.1	50.1	< 50.1	50.1

BRL - Below Reporting Limit

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

Jessica Vramer



# **Analytical Report 673152**

for

## LT Environmental, Inc.

Project Manager: Dan Moir

Remuda South 25 #126H 012919260 09.24.2020

Collected By: Client

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

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

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

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



09.24.2020

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

Reference: Eurofins Xenco, LLC Report No(s): 673152

Remuda South 25 #126H Project Address: Eddy County

#### Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 673152. 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. 673152 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 673152

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

Remuda South 25 #126H

Sample Id	Matrix	<b>Date Collected</b>	Sample Depth	Lab Sample Id
PH01	S	09.21.2020 13:20	3 ft	673152-001
PH02	S	09.21.2020 13:29	3 ft	673152-002
PH03	S	09.21.2020 10:59	3 ft	673152-003
PH04	S	09.21.2020 12:10	3 ft	673152-004
PH05	S	09.21.2020 12:29	3 ft	673152-005
FS01	S	09.21.2020 14:46	1 ft	673152-006

**Environment Testing** 

#### **CASE NARRATIVE**

Client Name: LT Environmental, Inc. Project Name: Remuda South 25 #126H

 Project ID:
 012919260
 Report Date:
 09.24.2020

 Work Order Number(s):
 673152
 Date Received:
 09.21.2020

Sample receipt non conformances and comments:

V1.001 Revision - Corrected sample depth on FS01 to 1'

Sample receipt non conformances and comments per sample:

None

Final 1.001

#### Certificate of Analytical Results 673152

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

Remuda South 25 #126H

Sample Id: PH01 Matrix: Soil Date Received:09.21.2020 16:31

Lab Sample Id: 673152-001 Date Collected: 09.21.2020 13:20 Sample Depth: 3 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 09.22.2020 09:23 Basis: Wet Weight

Seq Number: 3137776

 Parameter
 Cas Number
 Result
 RL
 Units
 Analysis Date
 Flag
 Dil

 Chloride
 16887-00-6
 30.5
 9.92
 mg/kg
 09.22.2020 11:55
 1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 09.21.2020 16:50 Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	< 50.2	50.2		mg/kg	09.21.2020 18:39	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.2	50.2		mg/kg	09.21.2020 18:39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.2	50.2		mg/kg	09.21.2020 18:39	U	1
Total GRO-DRO	PHC628	< 50.2	50.2		mg/kg	09.21.2020 18:39	U	1
Total TPH	PHC635	< 50.2	50.2		mg/kg	09.21.2020 18:39	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	F
1-Chlorooctane	111-85-3	100	%	70-135	09.21.2020 18:39	
o-Terphenyl	84-15-1	93	%	70-135	09.21.2020 18:39	

#### **Certificate of Analytical Results 673152**

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

Remuda South 25 #126H

Sample Id: PH01 Matrix: Soil Date Received:09.21.2020 16:31

Lab Sample Id: 673152-001 Date Collected: 09.21.2020 13:20 Sample Depth: 3 ft

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

Tech: MAB % Moisture:

540-36-3

Analyst: MAB Date Prep: 09.21.2020 17:06 Basis: Wet Weight

Seq Number: 3137712

1,4-Difluorobenzene

Parameter	Cas Number	Result	$\mathbf{RL}$		Units	<b>Analysis Date</b>	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	09.21.2020 18:43	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	09.21.2020 18:43	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	09.21.2020 18:43	U	1
m,p-Xylenes	179601-23-1	< 0.00400	0.00400		mg/kg	09.21.2020 18:43	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	09.21.2020 18:43	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	09.21.2020 18:43	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	09.21.2020 18:43	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	87	%	70-130	09.21.2020 18:43		

99

%

70-130

09.21.2020 18:43

#### **Certificate of Analytical Results 673152**

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

Remuda South 25 #126H

Sample Id: **PH02** Matrix: Soil

Date Received:09.21.2020 16:31

Lab Sample Id: 673152-002 Date Collected: 09.21.2020 13:29 Sample Depth: 3 ft

Analytical Method: Chloride by EPA 300

MAB

Prep Method: E300P

Tech: MAB % Moisture:

Seq Number: 3137776

Analyst:

Date Prep: 09.22.2020 09:23 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	<b>Analysis Date</b>	Flag	Dil
Chloride	16887-00-6	<10.0	10.0	mg/kg	09.22.2020 12:22	U	1

Analytical Method: TPH by SW8015 Mod

DTH

Prep Method: SW8015P

% Moisture:

 $\operatorname{DTH}$ Tech:

Analyst:

Date Prep: 09.21.2020 16:50

Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1		mg/kg	09.21.2020 18:59	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.1	50.1		mg/kg	09.21.2020 18:59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.1	50.1		mg/kg	09.21.2020 18:59	U	1
Total GRO-DRO	PHC628	< 50.1	50.1		mg/kg	09.21.2020 18:59	U	1
Total TPH	PHC635	< 50.1	50.1		mg/kg	09.21.2020 18:59	U	1
Surrogate	C	as Number	% Recovery	Units	Limits	Analysis Date	Flag	

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date
1-Chlorooctane	111-85-3	97	%	70-135	09.21.2020 18:59
o-Terphenyl	84-15-1	92	%	70-135	09.21.2020 18:59

#### Certificate of Analytical Results 673152

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

Remuda South 25 #126H

Sample Id: PH02 Matrix: Soil Date Received:09.21.2020 16:31

Lab Sample Id: 673152-002 Date Collected: 09.21.2020 13:29 Sample Depth: 3 ft

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

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 09.21.2020 17:06 Basis: Wet Weight

Parameter	Cas Numbe	r Result	RL		Units	<b>Analysis Date</b>	Flag	Dil
Benzene	71-43-2	< 0.00199	0.00199		mg/kg	09.21.2020 19:05	U	1
Toluene	108-88-3	< 0.00199	0.00199		mg/kg	09.21.2020 19:05	U	1
Ethylbenzene	100-41-4	< 0.00199	0.00199		mg/kg	09.21.2020 19:05	U	1
m,p-Xylenes	179601-23-1	< 0.00398	0.00398		mg/kg	09.21.2020 19:05	U	1
o-Xylene	95-47-6	< 0.00199	0.00199		mg/kg	09.21.2020 19:05	U	1
Total Xylenes	1330-20-7	< 0.00199	0.00199		mg/kg	09.21.2020 19:05	U	1
Total BTEX		< 0.00199	0.00199		mg/kg	09.21.2020 19:05	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	101	%	70-130	09.21.2020 19:05		
4-Bromofluorobenzene		460-00-4	92	%	70-130	09.21.2020 19:05		

**PH03** 

MAB

Analytical Method: Chloride by EPA 300

#### Certificate of Analytical Results 673152

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

Remuda South 25 #126H

Soil

09.22.2020 09:23

Lab Sample Id: 673152-003 Date Collected: 09.21.2020 10:59 Sample Depth: 3 ft

Matrix:

Date Prep:

Prep Method: E300P

Basis:

Date Received:09.21.2020 16:31

Wet Weight

Tech: MAB % Moisture:

Seq Number: 3137776

Sample Id:

Analyst:

 Parameter
 Cas Number
 Result
 RL
 Units
 Analysis Date
 Flag
 Dil

 Chloride
 16887-00-6
 416
 10.0
 mg/kg
 09.22.2020 12:28
 1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 09.21.2020 16:50 Basis: Wet Weight

mg/kg	09.21.2020 19:19	U	1
mg/kg	09.21.2020 19:19	U	1
mg/kg	09.21.2020 19:19	U	1
mg/kg	09.21.2020 19:19	U	1
mg/kg	09.21.2020 19:19	U	1
v Units Limits	Analysis Date	Flag	
	mg/kg mg/kg	mg/kg 09.21.2020 19:19 mg/kg 09.21.2020 19:19	mg/kg 09.21.2020 19:19 U mg/kg 09.21.2020 19:19 U

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date
1-Chlorooctane	111-85-3	96	%	70-135	09.21.2020 19:19
o-Terphenyl	84-15-1	93	%	70-135	09.21.2020 19:19

#### **Certificate of Analytical Results 673152**

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

Remuda South 25 #126H

Sample Id: **PH03** Matrix: Soil Date Received:09.21.2020 16:31

Lab Sample Id: 673152-003 Date Collected: 09.21.2020 10:59 Sample Depth: 3 ft

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

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 09.21.2020 17:06 Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	<b>Analysis Date</b>	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	09.21.2020 19:28	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	09.21.2020 19:28	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	09.21.2020 19:28	U	1
m,p-Xylenes	179601-23-1	< 0.00399	0.00399		mg/kg	09.21.2020 19:28	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	09.21.2020 19:28	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	09.21.2020 19:28	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	09.21.2020 19:28	U	1
Surrogate	(	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1.4-Diffuorobenzene	5	340-36-3	102	0%	70-130	09 21 2020 19:28		

Surrogate	Cas Number	% Recovery	Units	Limits	<b>Analysis Date</b>	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	09.21.2020 19:28	
4-Bromofluorobenzene	460-00-4	90	%	70-130	09.21.2020 19:28	

### Certificate of Analytical Results 673152

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

Remuda South 25 #126H

Sample Id: PH04 Matrix: Soil Date Received:09.21.2020 16:31

Lab Sample Id: 673152-004 Date Collected: 09.21.2020 12:10 Sample Depth: 3 ft

. .

Analytical Method: Chloride by EPA 300 Prep Method: E300P

% Moisture:

% Moisture:

Analyst: MAB Date Prep: 09.22.2020 09:23 Basis: Wet Weight

Seq Number: 3137776

MAB

Tech:

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<10.0	10.0	mg/kg	09.22.2020 12:33	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DTH

Analyst: DTH Date Prep: 09.21.2020 16:50 Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0		mg/kg	09.21.2020 19:40	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.0	50.0		mg/kg	09.21.2020 19:40	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.0	50.0		mg/kg	09.21.2020 19:40	U	1
Total GRO-DRO	PHC628	< 50.0	50.0		mg/kg	09.21.2020 19:40	U	1
Total TPH	PHC635	<50.0	50.0		mg/kg	09.21.2020 19:40	U	1
Surrogate	(	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date
1-Chlorooctane	111-85-3	94	%	70-135	09.21.2020 19:40
o-Terphenyl	84-15-1	89	%	70-135	09.21.2020 19:40

## Certificate of Analytical Results 673152

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

Remuda South 25 #126H

Sample Id: PH04 Matrix: Soil Date Received:09.21.2020 16:31

Lab Sample Id: 673152-004 Date Collected: 09.21.2020 12:10 Sample Depth: 3 ft

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

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 09.21.2020 17:06 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	09.21.2020 19:50	U	1
Toluene	108-88-3	< 0.00201	0.00201		mg/kg	09.21.2020 19:50	U	1
Ethylbenzene	100-41-4	< 0.00201	0.00201		mg/kg	09.21.2020 19:50	U	1
m,p-Xylenes	179601-23-1	< 0.00402	0.00402		mg/kg	09.21.2020 19:50	U	1
o-Xylene	95-47-6	< 0.00201	0.00201		mg/kg	09.21.2020 19:50	U	1
Total Xylenes	1330-20-7	< 0.00201	0.00201		mg/kg	09.21.2020 19:50	U	1
Total BTEX		< 0.00201	0.00201		mg/kg	09.21.2020 19:50	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	101	%	70-130	09.21.2020 19:50		
4-Bromofluorobenzene		460-00-4	91	%	70-130	09.21.2020 19:50		

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

Remuda South 25 #126H

Sample Id: PH05 Matrix: Soil Date Received:09.21.2020 16:31

Lab Sample Id: 673152-005 Date Collected: 09.21.2020 12:29 Sample Depth: 3 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 09.22.2020 09:23 Basis: Wet Weight

Seq Number: 3137776

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	20.7	9.98	mg/kg	09.22.2020 12:39		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 09.21.2020 16:50 Basis: Wet Weight

Parameter	Cas Numbe	r Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	< 50.1	50.1		mg/kg	09.21.2020 20:00	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.1	50.1		mg/kg	09.21.2020 20:00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.1	50.1		mg/kg	09.21.2020 20:00	U	1
Total GRO-DRO	PHC628	< 50.1	50.1		mg/kg	09.21.2020 20:00	U	1
Total TPH	PHC635	<50.1	50.1		mg/kg	09.21.2020 20:00	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	95	%	70-135	09.21.2020 20:00		
o-Terphenyl		84-15-1	90	%	70-135	09.21.2020 20:00		

## Certificate of Analytical Results 673152

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

Remuda South 25 #126H

Sample Id: **PH05** Matrix: Soil Date Received:09.21.2020 16:31

Lab Sample Id: 673152-005 Date Collected: 09.21.2020 12:29 Sample Depth: 3 ft

Prep Method: SW5035A

Tech: MAB % Moisture:

MAB Analyst: Date Prep: 09.21.2020 17:06 Basis: Wet Weight

Seq Number: 3137712

Analytical Method: BTEX by EPA 8021B

Parameter	Cas Numbe	r Result	RL		Units	<b>Analysis Date</b>	Flag	Dil
Benzene	71-43-2	< 0.00198	0.00198		mg/kg	09.21.2020 20:13	U	1
Toluene	108-88-3	< 0.00198	0.00198		mg/kg	09.21.2020 20:13	U	1
Ethylbenzene	100-41-4	< 0.00198	0.00198		mg/kg	09.21.2020 20:13	U	1
m,p-Xylenes	179601-23-1	< 0.00396	0.00396		mg/kg	09.21.2020 20:13	U	1
o-Xylene	95-47-6	< 0.00198	0.00198		mg/kg	09.21.2020 20:13	U	1
Total Xylenes	1330-20-7	< 0.00198	0.00198		mg/kg	09.21.2020 20:13	U	1
Total BTEX		< 0.00198	0.00198		mg/kg	09.21.2020 20:13	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	94	%	70-130	09.21.2020 20:13		
1,4-Difluorobenzene		540-36-3	88	%	70-130	09.21.2020 20:13		

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

Remuda South 25 #126H

Soil

Date Received:09.21.2020 16:31

Lab Sample Id: 673152-006 Date Collected: 09.21.2020 14:46

Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

**FS01** 

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Sample Id:

Date Prep: 09.22.2020 09:23

Basis:

Wet Weight

Seq Number: 3137776

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	217	9.94	mg/kg	09.22.2020 12:44		1

Matrix:

Analytical Method: TPH by SW8015 Mod

DTH

Prep Method: SW8015P

% Moisture:

Tech: DTH

Analyst:

Date Prep: 09.21.2020 16:50

Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	< 50.1	50.1		mg/kg	09.21.2020 20:20	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.1	50.1		mg/kg	09.21.2020 20:20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.1	50.1		mg/kg	09.21.2020 20:20	U	1
Total GRO-DRO	PHC628	< 50.1	50.1		mg/kg	09.21.2020 20:20	U	1
Total TPH	PHC635	< 50.1	50.1		mg/kg	09.21.2020 20:20	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	09.21.2020 20:20
o-Terphenyl	84-15-1	86	%	70-135	09.21.2020 20:20

## Certificate of Analytical Results 673152

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

Remuda South 25 #126H

Sample Id: FS01 Matrix: Soil Date Received:09.21.2020 16:31

Lab Sample Id: 673152-006 Date Collected: 09.21.2020 14:46 Sample Depth: 1 ft

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

Tech: MAB % Moisture:

460-00-4

Analyst: MAB Date Prep: 09.21.2020 17:06 Basis: Wet Weight

Seq Number: 3137712

4-Bromofluorobenzene

Parameter	Cas Number	Result	$\mathbf{RL}$		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00198	0.00198		mg/kg	09.21.2020 20:35	U	1
Toluene	108-88-3	< 0.00198	0.00198		mg/kg	09.21.2020 20:35	U	1
Ethylbenzene	100-41-4	< 0.00198	0.00198		mg/kg	09.21.2020 20:35	U	1
m,p-Xylenes	179601-23-1	< 0.00396	0.00396		mg/kg	09.21.2020 20:35	U	1
o-Xylene	95-47-6	< 0.00198	0.00198		mg/kg	09.21.2020 20:35	U	1
Total Xylenes	1330-20-7	< 0.00198	0.00198		mg/kg	09.21.2020 20:35	U	1
Total BTEX		< 0.00198	0.00198		mg/kg	09.21.2020 20:35	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	99	%	70-130	09.21.2020 20:35		

88

%

70-130

09.21.2020 20:35



# Flagging Criteria

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

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

**RL** Reporting Limit

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

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

**DL** Method Detection Limit

NC Non-Calculable

SMP Client Sample BLK Method Blank

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

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

- + NELAC certification not offered for this compound.
- \* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



### **QC Summary** 673152

### LT Environmental, Inc.

Remuda South 25 #126H

Analytical Method: Chloride by EPA 300

Seq Number: 3137776 Matrix: Solid Date Prep:

7711799-1-BLK LCS Sample Id: 7711799-1-BKS LCSD Sample Id: 7711799-1-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 <10.0 250 252 101 253 90-110 0 20 09.22.2020 10:01 101 mg/kg

Analytical Method: Chloride by EPA 300

Prep Method: 3137776 Seq Number: Matrix: Soil Date Prep: 09.22.2020

673152-001 MS Sample Id: 673152-001 S MSD Sample Id: 673152-001 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 20 09.22.2020 12:00 Chloride 30.5 199 231 101 234 102 90-110 1 mg/kg

Analytical Method: Chloride by EPA 300

Prep Method: 3137776 Seq Number: Matrix: Soil Date Prep: 09.22.2020

MS Sample Id: 673161-001 S MSD Sample Id: 673161-001 SD Parent Sample Id: 673161-001

Spike **RPD Parent** MS MS %RPD Units MSD **MSD** Limits Analysis Flag **Parameter** Result Result Limit Date Amount %Rec Result %Rec Chloride 385 198 602 3 20 09.22.2020 10:20 110 587 100 90-110 mg/kg

Analytical Method: TPH by SW8015 Mod

SW8015P Prep Method: Matrix: Solid Seq Number: 3137717 Date Prep: 09.21.2020

MB Sample Id: 7711777-1-BLK LCS Sample Id: 7711777-1-BKS LCSD Sample Id: 7711777-1-BSD

MB Spike LCS LCS LCSD LCSD Limits %RPD **RPD** Units Analysis Flag **Parameter** Result Limit Date Result Amount %Rec %Rec Result Gasoline Range Hydrocarbons (GRO) 09.21.2020 12:16 848 85 35 < 50.0 1000 811 81 70-135 4 mg/kg 09.21.2020 12:16 Diesel Range Organics (DRO) 872 87 832 83 70-135 5 35 < 50.0 1000 mg/kg

LCS MBMB LCS LCSD Limits Units Analysis LCSD **Surrogate** Flag %Rec %Rec Flag Date Flag %Rec 09.21.2020 12:16 1-Chlorooctane 88 94 93 70-135 % 09.21.2020 12:16 83 o-Terphenyl 84 80 70-135 %

Analytical Method: TPH by SW8015 Mod Prep Method:

Seq Number: 3137717 Matrix: Solid Date Prep: 09.21.2020

MB Sample Id: 7711777-1-BLK

MBUnits Analysis Flag **Parameter** Result Date

Motor Oil Range Hydrocarbons (MRO) 09.21.2020 11:56 < 50.0 mg/kg

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 AddedD = MSD/LCSD % Rec

SW8015P

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E300P

E300P

E300P

09.22.2020

Prep Method:

Flag



Seq Number:

Parent Sample Id:

### LT Environmental, Inc.

Remuda South 25 #126H

Analytical Method: TPH by SW8015 Mod

3137717

Matrix: Soil MS Sample Id: 673097-001 S 673097-001

SW8015P Prep Method:

Date Prep:

MSD Sample Id: 673097-001 SD

09.21.2020

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date
Gasoline Range Hydrocarbons (GRO)	< 50.1	1000	852	85	846	85	70-135	1	35	mg/kg	09.21.2020 13:17
Diesel Range Organics (DRO)	68.8	1000	948	88	964	90	70-135	2	35	mg/kg	09.21.2020 13:17

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	108		107		70-135	%	09.21.2020 13:17
o-Terphenyl	93		93		70-135	%	09.21.2020 13:17

Analytical Method: BTEX by EPA 8021B

Seq Number: 3137712

MB Sample Id:

7711754-1-BLK

Matrix: Solid

LCS Sample Id: 7711754-1-BKS

Prep Method:

SW5035A

09.21.2020

Date Prep: LCSD Sample Id: 7711754-1-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	0.0978	98	0.104	104	70-130	6	35	mg/kg	09.21.2020 11:38	
Toluene	< 0.00200	0.100	0.0948	95	0.101	101	70-130	6	35	mg/kg	09.21.2020 11:38	
Ethylbenzene	< 0.00200	0.100	0.0885	89	0.0941	94	71-129	6	35	mg/kg	09.21.2020 11:38	
m,p-Xylenes	< 0.00400	0.200	0.179	90	0.191	96	70-135	6	35	mg/kg	09.21.2020 11:38	
o-Xylene	< 0.00200	0.100	0.0873	87	0.0933	93	71-133	7	35	mg/kg	09.21.2020 11:38	
Surrogate	MB %Rec	MB Flag			LCS Flag	LCSI %Re		_	imits	Units	Analysis Date	

100	99	99	70-130	%	09.21.2020 11:38
86	89	93	70-130	%	09.21.2020 11:38

SW5035A Analytical Method: BTEX by EPA 8021B Prep Method: Seq Number: 3137712 Matrix: Soil Date Prep: 09.21.2020 MS Sample Id: 673097-001 S MSD Sample Id: 673097-001 SD Parent Sample Id: 673097-001

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	< 0.00201	0.101	0.121	120	0.122	121	70-130	1	35	mg/kg	09.21.2020 12:23	
Toluene	< 0.00201	0.101	0.111	110	0.127	126	70-130	13	35	mg/kg	09.21.2020 12:23	
Ethylbenzene	< 0.00201	0.101	0.0935	93	0.118	117	71-129	23	35	mg/kg	09.21.2020 12:23	
m,p-Xylenes	< 0.00402	0.201	0.187	93	0.238	118	70-135	24	35	mg/kg	09.21.2020 12:23	
o-Xylene	< 0.00201	0.101	0.0916	91	0.116	115	71-133	24	35	mg/kg	09.21.2020 12:23	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		98		70-130	%	09.21.2020 12:23
4-Bromofluorobenzene	92		85		70-130	%	09.21.2020 12:23

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# Chain of Custody

Work Order No: 673152

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334 Midland, TX (432-704-5440) EL Pas

ceived	Will the	Reiniquisned by: (Signature)	Relinquished by (C	Service. Xenco will be liab	Circle Method(s)	Total 200.7 / 6010			1	FS01	PH05	PH04	PH03	PH02	PH01	Sample Identification	Sample Custody Seals:	Comple Created Sedis.	Cooler Custody Scale:	remperature (°C):	SAMPLE RECEIPT	Sampler's Name:	P.O. Number:	Project Number:	Project Name:		ate ZIP:		y Name:	1.
	1	iggaature)	or \$75.00 will be applied to	ument and relinquishment of le only for the cost of sample of \$75.00 will be a sample of \$75.00 will b	Circle Method(s) and Metal(s) to be analyzed	0 200.8 / 6020:		M		S	S	s	S	S	S	fication Matrix	: Yes No NIA	res (NO	CY CYCL	4.4 0.4	PT Temp Blank:	William Mather	Eddy	Ø12919260	Remuda South 25 #126H	(432) 236-3849	Midland, Tx 79705	3300 North A Street	LT Environmental, Inc.,	Dan Moir
	we Chap	Received by: (Signature)	each project and a ch	samples constitutes	alyzed TCL	8BCB4	9	The			9/21/2020 1	9/21/2020 1	9/21/2020	9/21/2020	9/21/2020	Date Sampled	Total Co	Correction Factor:		The	No No	Mather	ly	260	h 25 #126H				c., Permian office	
	To the second	Signature)	arge of \$5 for each sam	a valid purchase order i me any responsibility fo	TCLP / SPLP 6010: 8RCRA	13DDM	0				12:29 3'	12:10 3'	10:59 3'	13:29 3'	13:20 3'	Time Depth	Total Containers:	n Factor: "O. O	7	Thermometer ID	Wet Ice: Yes N	Due Date:	Rush:	Routine	Turn Around	Email: wmather	City, State ZIP:	Address:	Company Name:	Bill to: (if different)
	9-21-26-16:3	Date/Time	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	rom client company to Xend r any losses or expenses in	RCRA Sb As Ba	2 -			> >	< >			1 × ×	^ ×	1 ×	Numb	PA 80	15)		ner	No S				1	Email: wmather@ltenv.com, dmoir@ltenv.com	e ZIP:		Name: XTO Energy	different) Kyle Littrell
4 0	31 2	Relinquished by: (Signature)	not analyzed. These terms will be enforced unless previously negotiated.	where originature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of Service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of the normal control of Xenco.	As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U				*	* >	<	×	×	×	×	Chlorid	le (EP	A 3	00.0						ANALYSIS REQUEST		R			Bill to: (it different) Kyle Littrell
		Received by: (Signature)	previously negotiated.		\g SiO2	⊪																			T	_ '	Reporting:Level II   evel III   \$T/UST	Ę	Program: UST/PST TRP Trownfields	Work Order Comments
		Date/Time			Na Sr Tl Sn U V Zn 1631/245.1/7470/7471: Hg				Composite	Discrete	Discrete	Discrete	Disciple	Disciplina	Discrete	Sample Comments	TAT starts the day recevied by the lab, if received by 4:30pm								Work Order Notes		UST ∏RP U}velIV ∏	The Therman	,	omments

# **Eurofins Xenco, LLC**

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

Client: LT Environmental, Inc.

Acceptable Temperature Range: 0 - 6 degC

Date/ Time Received: 09.21.2020 04.31.00 PM

Air and Metal samples Acceptable Range: Ambient

Work Order #: 673152

Analyst:

Temperature Measuring device used: T\_NM\_007

	Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?		7.4	
#2 *Shipping container in good condition?		Yes	
#3 *Samples received on ice?		Yes	
#4 *Custody Seals intact on shipping contai	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 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: 09.21.2020
Checklist reviewed by:	Jessica Vramer	Date: 09.23.2020

Jessica Kramer

PH Device/Lot#:

eurofins Environment Testing

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# **Certificate of Analysis Summary 673230**

LT Environmental, Inc., Arvada, CO

Project Name: Remuda South 25 #126H

Project Id: Contact:

**Project Location:** 

012919260

**Eddy County** 

Dan Moir

**Date Received in Lab:** Tue 09.22.2020 13:25

**Report Date:** 09.23.2020 14:07

Project Manager: Jessica Kramer

	Lab Id:	673230-0	001	673230-0	02	673230-0	003	673230-	004		
Analysis Requested	Field Id:	SS07		SS08		SS09		SS010			
Analysis Nequesica	Depth:	0.5- ft		0.5- ft		0.5- ft		0.5- f	t		
	Matrix:	SOIL		SOIL		SOIL		SOIL			
	Sampled:	09.21.2020	12:01	09.22.2020	10:22	09.22.2020	11:22	09.21.2020	14:05		
BTEX by EPA 8021B	Extracted:	09.22.2020	14:30	09.22.2020	14:30	09.22.2020	14:30	09.22.2020	14:30		
	Analyzed:	09.22.2020	18:19	09.22.2020	18:42	09.22.2020	19:04	09.22.2020	19:27		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzene		< 0.00200	0.00200	< 0.00200	0.00200	< 0.00200	0.00200	< 0.00200	0.00200		
Toluene		< 0.00200	0.00200	< 0.00200	0.00200	< 0.00200	0.00200	< 0.00200	0.00200		
Ethylbenzene		< 0.00200	0.00200	< 0.00200	0.00200	< 0.00200	0.00200	< 0.00200	0.00200		
m,p-Xylenes		< 0.00400	0.00400	< 0.00399	0.00399	< 0.00401	0.00401	< 0.00401	0.00401		
o-Xylene		< 0.00200	0.00200	< 0.00200	0.00200	< 0.00200	0.00200	< 0.00200	0.00200		
Total Xylenes		< 0.00200	0.00200	< 0.00200	0.00200	< 0.00200	0.00200	< 0.00200	0.00200		
Total BTEX		< 0.00200	0.00200	< 0.00200	0.00200	< 0.00200	0.00200	< 0.00200	0.00200		
Chloride by EPA 300	Extracted:	09.22.2020	16:30	09.22.2020	16:30	09.22.2020	16:30	09.22.2020	16:30		
	Analyzed:	** ** **	**	09.22.2020	16:43	09.22.2020	16:51	09.22.2020	16:58		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		96.2	49.9	205	10.0	494	50.5	480	49.5		
TPH by SW8015 Mod	Extracted:	09.22.2020	14:10	09.22.2020	14:10	09.22.2020	14:10	09.22.2020	14:10		
	Analyzed:	09.22.2020	14:53	09.22.2020	15:13	09.22.2020	15:33	09.22.2020	15:53		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)		<49.8	49.8	< 50.1	50.1	<49.9	49.9	<49.8	49.8		
Diesel Range Organics (DRO)		<49.8	49.8	< 50.1	50.1	57.1	49.9	<49.8	49.8		
Motor Oil Range Hydrocarbons (MRO)		<49.8	49.8	< 50.1	50.1	<49.9	49.9	<49.8	49.8		
Total GRO-DRO		<49.8	49.8	< 50.1	50.1	57.1	49.9	<49.8	49.8		
Total TPH		<49.8	49.8	< 50.1	50.1	57.1	49.9	<49.8	49.8		

BRL - Below Reporting Limit

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

Jessica Vramer



# **Analytical Report 673230**

for

## LT Environmental, Inc.

Project Manager: Dan Moir

Remuda South 25 #126H 012919260 09.23.2020

Collected By: Client

### 1089 N Canal Street Carlsbad, NM 88220

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

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

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



09.23.2020

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

Reference: Eurofins Xenco, LLC Report No(s): 673230

Remuda South 25 #126H Project Address: Eddy County

### Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 673230. 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. 673230 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 673230**

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

Remuda South 25 #126H

Sample Id	Matrix	<b>Date Collected</b>	Sample Depth	Lab Sample Id
SS07	S	09.21.2020 12:01	0.5 ft	673230-001
SS08	S	09.22.2020 10:22	0.5 ft	673230-002
SS09	S	09.22.2020 11:22	0.5 ft	673230-003
SS010	S	09.21.2020 14:05	0.5 ft	673230-004

**Environment Testing** 

### **CASE NARRATIVE**

Client Name: LT Environmental, Inc. Project Name: Remuda South 25 #126H

Project ID: Report Date: 09.23.2020 012919260 Work Order Number(s): 673230 Date Received: 09.22.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

# LT Environmental, Inc., Arvada, CO

Remuda South 25 #126H

Soil

Date Received:09.22.2020 13:25

Lab Sample Id: 673230-001 Date Collected: 09.21.2020 12:01

Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

**SS07** 

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Sample Id:

Date Prep: 09.22.2020 16:30

Basis:

Wet Weight

Seq Number: 3137842

Parameter	Cas Number	Result	RL	Units	<b>Analysis Date</b>	Flag	Dil
Chloride	16887-00-6	96.2	49.9	mg/kg	09.22.2020 16:21		5

Matrix:

Analytical Method: TPH by SW8015 Mod

DTH

Prep Method: SW8015P

% Moisture:

Tech: DTH

Analyst:

Date Prep: 09.22.2020 14:10

Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8		mg/kg	09.22.2020 14:53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8		mg/kg	09.22.2020 14:53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8		mg/kg	09.22.2020 14:53	U	1
Total GRO-DRO	PHC628	<49.8	49.8		mg/kg	09.22.2020 14:53	U	1
Total TPH	PHC635	<49.8	49.8		mg/kg	09.22.2020 14:53	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date
1-Chlorooctane	111-85-3	103	%	70-135	09.22.2020 14:53
o-Terphenyl	84-15-1	100	%	70-135	09.22.2020 14:53

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

Remuda South 25 #126H

Sample Id: SS07 Matrix: Soil Date Received:09.22.2020 13:25

Lab Sample Id: 673230-001 Date Collected: 09.21.2020 12:01 Sample Depth: 0.5 ft

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

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 09.22.2020 14:30 Basis: Wet Weight

Parameter	Cas Number	r Result	RL		Units	<b>Analysis Date</b>	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	09.22.2020 18:19	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	09.22.2020 18:19	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	09.22.2020 18:19	U	1
m,p-Xylenes	179601-23-1	< 0.00400	0.00400		mg/kg	09.22.2020 18:19	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	09.22.2020 18:19	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	09.22.2020 18:19	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	09.22.2020 18:19	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	102	%	70-130	09.22.2020 18:19		
4-Bromofluorobenzene		460-00-4	92	%	70-130	09.22.2020 18:19		

Date Received:09.22.2020 13:25

**SS08** 

### Certificate of Analytical Results 673230

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

Remuda South 25 #126H

Soil

Lab Sample Id: 673230-002 Date Collected: 09.22.2020 10:22 Sample Depth: 0.5 ft

Matrix:

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 09.22.2020 16:30 Basis: Wet Weight

Seq Number: 3137842

Sample Id:

Parameter	Cas Number	Result	RL	Units	<b>Analysis Date</b>	Flag	Dil
Chloride	16887-00-6	205	10.0	mg/kg	09.22.2020 16:43		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 09.22.2020 14:10 Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	< 50.1	50.1		mg/kg	09.22.2020 15:13	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.1	50.1		mg/kg	09.22.2020 15:13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.1	50.1		mg/kg	09.22.2020 15:13	U	1
Total GRO-DRO	PHC628	< 50.1	50.1		mg/kg	09.22.2020 15:13	U	1
Total TPH	PHC635	< 50.1	50.1		mg/kg	09.22.2020 15:13	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	
1-Chlorooctane	111-85-3	104	%	70-135	09.22.2020 15:13	
o-Terphenyl	84-15-1	98	%	70-135	09.22.2020 15:13	

## **Certificate of Analytical Results 673230**

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

Remuda South 25 #126H

Sample Id: SS08 Matrix: Soil Date Received:09.22.2020 13:25

Lab Sample Id: 673230-002 Date Collected: 09.22.2020 10:22 Sample Depth: 0.5 ft

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

Tech: MAB % Moisture:

540-36-3

Analyst: MAB Date Prep: 09.22.2020 14:30 Basis: Wet Weight

Seq Number: 3137826

1,4-Difluorobenzene

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	09.22.2020 18:42	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	09.22.2020 18:42	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	09.22.2020 18:42	U	1
m,p-Xylenes	179601-23-1	< 0.00399	0.00399		mg/kg	09.22.2020 18:42	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	09.22.2020 18:42	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	09.22.2020 18:42	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	09.22.2020 18:42	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	4	160-00-4	94	%	70-130	09.22.2020 18:42		

102

%

70-130

09.22.2020 18:42

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

Remuda South 25 #126H

Soil

Date Received:09.22.2020 13:25

Lab Sample Id: 673230-003 Date Collected: 09.22.2020 11:22

Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

**SS09** 

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Sample Id:

Date Prep: 09.22.2020 16:30

Basis:

Wet Weight

Seq Number: 3137842

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	494	50.5	mg/kg	09.22.2020 16:51		5

Matrix:

Analytical Method: TPH by SW8015 Mod

DTH

Prep Method: SW8015P

% Moisture:

Tech: DTH

Analyst:

Date Prep: 09.22.2020 14:10

Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9		mg/kg	09.22.2020 15:33	U	1
Diesel Range Organics (DRO)	C10C28DRO	57.1	49.9		mg/kg	09.22.2020 15:33		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9		mg/kg	09.22.2020 15:33	U	1
Total GRO-DRO	PHC628	57.1	49.9		mg/kg	09.22.2020 15:33		1
Total TPH	PHC635	57.1	49.9		mg/kg	09.22.2020 15:33		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date
1-Chlorooctane	111-85-3	99	%	70-135	09.22.2020 15:33
o-Terphenyl	84-15-1	95	%	70-135	09.22.2020 15:33

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

Remuda South 25 #126H

Sample Id: SS09 Matrix: Soil Date Received:09.22.2020 13:25

Lab Sample Id: 673230-003 Date Collected: 09.22.2020 11:22 Sample Depth: 0.5 ft

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

Tech: MAB % Moisture:

540-36-3

Analyst: MAB Date Prep: 09.22.2020 14:30 Basis: Wet Weight

Seq Number: 3137826

1,4-Difluorobenzene

Parameter	Cas Number	r Result	RL		Units	<b>Analysis Date</b>	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	09.22.2020 19:04	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	09.22.2020 19:04	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	09.22.2020 19:04	U	1
m,p-Xylenes	179601-23-1	< 0.00401	0.00401		mg/kg	09.22.2020 19:04	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	09.22.2020 19:04	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	09.22.2020 19:04	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	09.22.2020 19:04	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	88	%	70-130	09.22.2020 19:04		

103

70-130

09.22.2020 19:04

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

Remuda South 25 #126H

Sample Id: Matrix: Soil

Date Received:09.22.2020 13:25

Wet Weight

Lab Sample Id: 673230-004 Date Collected: 09.21.2020 14:05 Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

**SS010** 

Prep Method: E300P

Tech: MAB % Moisture:

MAB Analyst:

Date Prep: 09.22.2020 16:30 Basis:

Seq Number: 3137842

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	480	49.5	mg/kg	09.22.2020 16:58		5

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

09.22.2020 15:53

DTH Tech:

% Moisture:

Basis:

70-135

Analyst: DTH

o-Terphenyl

Date Prep: 09.22.2020 14:10 Wet Weight

Seq Number: 3137782

Parameter	Cas Number	Result	RL		Units	<b>Analysis Date</b>	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8		mg/kg	09.22.2020 15:53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8		mg/kg	09.22.2020 15:53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8		mg/kg	09.22.2020 15:53	U	1
Total GRO-DRO	PHC628	<49.8	49.8		mg/kg	09.22.2020 15:53	U	1
Total TPH	PHC635	<49.8	49.8		mg/kg	09.22.2020 15:53	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	98	%	70-135	09.22.2020 15:53		

94

84-15-1

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

Remuda South 25 #126H

Sample Id: SS010 Matrix: Soil Date Received:09.22.2020 13:25

Lab Sample Id: 673230-004 Date Collected: 09.21.2020 14:05 Sample Depth: 0.5 ft

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

Tech: MAB % Moisture:

460-00-4

Analyst: MAB Date Prep: 09.22.2020 14:30 Basis: Wet Weight

Seq Number: 3137826

4-Bromofluorobenzene

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	09.22.2020 19:27	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	09.22.2020 19:27	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	09.22.2020 19:27	U	1
m,p-Xylenes	179601-23-1	< 0.00401	0.00401		mg/kg	09.22.2020 19:27	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	09.22.2020 19:27	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	09.22.2020 19:27	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	09.22.2020 19:27	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	:	540-36-3	102	%	70-130	09.22.2020 19:27		

89

%

70-130

09.22.2020 19:27



# **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.



MB Sample Id:

### LT Environmental, Inc.

673230

Remuda South 25 #126H

Analytical Method: Chloride by EPA 300

Seq Number: 3137842

7711862-1-BLK

Matrix: Solid LCS Sample Id: 7711862-1-BKS

E300P Prep Method:

Date Prep: 09.22.2020

LCSD Sample Id: 7711862-1-BSD

Analysis

Date

Flag

Flag

Flag

LCS RPD MB Spike LCS Limits %RPD Units LCSD LCSD **Parameter** 

Result

Result Amount %Rec Result %Rec Limit Chloride <10.0 250 252 101 252 90-110 0 20 09.22.2020 16:10 101 mg/kg

Analytical Method: Chloride by EPA 300

Seq Number: 3137842

Matrix: Soil

Prep Method: Date Prep: 09.22.2020

E300P

673230-001 S 673230-001 MS Sample Id: MSD Sample Id: 673230-001 SD Parent Sample Id:

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

20 09.22.2020 16:27 Chloride 96.2 200 295 99 290 98 90-110 2 mg/kg

Analytical Method: Chloride by EPA 300

3137842 Seq Number:

Prep Method:

E300P

Matrix: Soil Date Prep: 09.22.2020

MS Sample Id: 673274-003 S Parent Sample Id: 673274-003

MSD Sample Id: 673274-003 SD

Spike **RPD Parent** MS MS %RPD Units MSD **MSD** Limits Analysis Flag **Parameter** Result Result Limit Date Amount %Rec Result %Rec Chloride 20 09.22.2020 18:06 861 198 1050 95 1040 90 90-110 1 mg/kg

Analytical Method: TPH by SW8015 Mod

Seq Number:

Prep Method:

SW8015P

Matrix: Solid 3137782 Date Prep: 09.22.2020

MB Sample Id: 7711834-1-BLK LCS Sample Id: 7711834-1-BKS LCSD Sample Id: 7711834-1-BSD

MB Spike LCS LCS LCSD LCSD Limits %RPD **RPD** Units Analysis **Parameter** Result Limit Date Result Amount %Rec %Rec Result Gasoline Range Hydrocarbons (GRO) 09.22.2020 10:15 91 912 35 < 50.0 1000 913 91 70-135 0 mg/kg 09.22.2020 10:15 Diesel Range Organics (DRO) 918 92 926 93 70-135 35 < 50.0 1000 1 mg/kg

LCS MBMB LCS LCSD Limits Units Analysis LCSD **Surrogate** Flag %Rec %Rec Flag Date Flag %Rec 09.22.2020 10:15 1-Chlorooctane 96 101 104 70-135 % 09.22.2020 10:15 91 o-Terphenyl 86 90 70-135 %

Analytical Method: TPH by SW8015 Mod

Seq Number: 3137782

Matrix: Solid

Prep Method: Date Prep: SW8015P 09.22.2020

MB Sample Id: 7711834-1-BLK

**Parameter** 

MBResult

Units

Analysis Date

09.22.2020 09:54 mg/kg

Motor Oil Range Hydrocarbons (MRO)

< 50.0

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 AddedD = MSD/LCSD % Rec

Flag

Flag

Flag

### **QC Summary** 673230

### LT Environmental, Inc.

Remuda South 25 #126H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3137782

Parent Sample Id: 673161-001

Prep Method: SW8015P

09.22.2020 Date Prep:

Matrix: Soil MS Sample Id: 673161-001 S

MSD Sample Id: 673161-001 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)	< 50.2	1000	838	84	859	86	70-135	2	35	mg/kg	09.22.2020 11:15	
Diesel Range Organics (DRO)	< 50.2	1000	856	86	874	88	70-135	2	35	mg/kg	09.22.2020 11:15	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	108		111		70-135	%	09.22.2020 11:15
o-Terphenyl	94		96		70-135	%	09.22.2020 11:15

Analytical Method: BTEX by EPA 8021B

Seq Number: 3137826

MB Sample Id:

7711823-1-BLK

Matrix: Solid

LCS Sample Id: 7711823-1-BKS

Prep Method:

SW5035A

Date Prep: 09.22.2020

LCSD Sample Id: 7711823-1-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	0.112	112	0.103	103	70-130	8	35	mg/kg	09.22.2020 10:52
Toluene	< 0.00200	0.100	0.108	108	0.0992	99	70-130	8	35	mg/kg	09.22.2020 10:52
Ethylbenzene	< 0.00200	0.100	0.101	101	0.0923	92	71-129	9	35	mg/kg	09.22.2020 10:52
m,p-Xylenes	< 0.00400	0.200	0.202	101	0.186	93	70-135	8	35	mg/kg	09.22.2020 10:52
o-Xylene	< 0.00200	0.100	0.100	100	0.0922	92	71-133	8	35	mg/kg	09.22.2020 10:52
	MR	MR	T	cs i	CS	LCCI	n ICS	D I	imite	Unite	Analycic

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		99		99		70-130	%	09.22.2020 10:52
4-Bromofluorobenzene	87		86		92		70-130	%	09.22.2020 10:52

Analytical Method: BTEX by EPA 8021B

Seq Number: 3137826 Parent Sample Id:

673161-001

Matrix: Soil

MS Sample Id: 673161-001 S

Prep Method: Date Prep:

SW5035A

09.22.2020

MSD Sample Id: 673161-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	I
Benzene	< 0.00200	0.100	0.123	123	0.104	104	70-130	17	35	mg/kg	09.22.2020 11:37	
Toluene	< 0.00200	0.100	0.127	127	0.0993	99	70-130	24	35	mg/kg	09.22.2020 11:37	
Ethylbenzene	< 0.00200	0.100	0.117	117	0.0895	90	71-129	27	35	mg/kg	09.22.2020 11:37	
m,p-Xylenes	< 0.00400	0.200	0.237	119	0.181	90	70-135	27	35	mg/kg	09.22.2020 11:37	
o-Xylene	< 0.00200	0.100	0.116	116	0.0885	89	71-133	27	35	mg/kg	09.22.2020 11:37	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		99		70-130	%	09.22.2020 11:37
4-Bromofluorobenzene	89		89		70-130	%	09.22.2020 11:37

Page	126	of	12
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City, State ZIP:

Address:

Company Name: Project Manager:

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

Chain of Custody

Work Order No: 673230

Hobbs, NM	(575-392-7550) Phoenix,AZ (4	Hobbs, NM (575-392-7550) Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813-620-2000)	(813-620-2000) <u>www.xenco.com</u> Page / of /
Dan Moir	Bill to: (if different)	Kyle Littrell	Work Order Comments
_T Environmental, Inc., Permian office	Company Name: XTO Energy	XTO Energy	Program: UST/PST □RP □rownfields □RC ⑤perfund □
3300 North A Street	Address:		State of Project:
۸idland, Tx 79705	City, State ZIP:		Reporting:Level II
432) 236-3849	Email: wmather@ltenv.com, dmoir@ltenv.com	n, dmoir@ltenv.com	Deliverables: EDD ADaPT Other:

Dan Moir	Bill to: (if different)	Kyle Littrell	Work Order Comments	
LT Environmental, Inc., Permian office	Company Name: XTO Energy	XTO Energy	Program: UST/PST ☐RP ☐rownfields ☐RC ☐perfund ☐	**Dperfund
3300 North A Street	Address:		State of Project:	
Midland, Tx 79705	City, State ZIP:		Reporting:Level III	Level IV
(432) 236-3849 E	Email: wmather@lteny.com dmoir@lteny.com	m dmoir@lteny.com	Deliverables: EDD ADaPT Other:	7

Project Name:	Remuda South 25 #126H	th 25 #126H	Turn A	Turn Around	,					A	ANALYSIS REQUEST	SISR	EQUI	TS						W	Work Order Notes
Project Number:	0 12919260	9260	Routine	7														-			
P.O. Number:	Eddy	dy	Rush:															_			
Sampler's Name:	William Mather	Mather	Due Date:	e.																	
SAMPLE RECEIPT	Teṃp Blank:	nk: (Yes) No	Wet Ice:	Yes No																	
Temperature (°C):	3.6/3.4		Thermometer ID		ners																
Received Intact:	1004	士	TUMOOT		ıtaiı		21)	(0.0													
Cooler Custody Seals:	Yes Ale NA		1	2-0	Con	15)	=80	A 30												1 1 1	de the day, same that he the
Sample Custody Seals:	Yes (No) N/A		Total Containers:	4	r of	A 80	PA 0	(EP										-		lab,	lab, if received by 4:30pm
Sample Identification	ation Matrix	Date Sampled	Time	Depth	lumbe	PH (EP	TEX (E	hloride												Sai	Sample Comments
\$507	0	9/21/2020	12:01 0 5		1	۲ .	(	<							1	1	+	+	1		Discreto
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0000	0	212212020	0.0		-	×	×	×									T	+	+		Disciele
SS09	S	9/22/2020	11:22 0.5		_	×	×	×													Discrete
SS10	w	9/21/2020	14:05 0.5		_	×	×	×													Discrete
1																ī		-			
					Ц																
		1/	1		1																
		1	X	1																	
			X											1							
														7				H	H		
Total 200.7 / 6010	200.8 / 6020:	8RC	8RCRA 13PPM	Texas 11		Al Sb As	Ba	Ве В	Cd	Ca Cr	8	Cu F	e Pb	Mg	Cu Fe Pb Mg Mn Mo Ni	O Z	X S	e Ag	SiO	2 Na Sr TI	K Se Ag SiO2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed	nd Metal(s) to be a		TCLP / SPLP 6010: 8RCRA	010: 8RC	A	Sb As Ba Be	Ba	Ge Co	Cd Cr Co Cu Pb	Co C		Mn	No N	Se	Mn Mo Ni Se Ag Ti U				3	1631 / 245.1	1631 / 245.1 / 7470 / 7471 : Hg
lotice: 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 if 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 contro	nent and relinquishmen	t of samples constitut	es a valid purchas sume any respons	se order from sibility for any	lient co	or expe	to Xen	o, its at	filiates by the c	and sub	contrac uch los	ses are	assign due to	s stand	stors. It assigns standard terms and conditions ses are due to circumstances beyond the control	ns and beyond	conditi	ons			
if 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	of \$75.00 will be applied	to each project and a	charge of \$5 for e	each sample s	bmitte	to Xer	ico but	not ana	VZed T	hese te	rms wil	he enf	orced u	be enforced unless previously negotiated	Siloine	v nego	tiated				

Released to Imaging: 4/7/2021 9:10:22 AM

Relinquished by: (Signature)

Received by: (Signature)

9/22/20 13:35

Date/Time

Relinquished by: (Signature)

Received by: (Signature)

Date/Time

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: 09.22.2020 01.25.00 PM

Air and Metal samples Acceptable Range: Ambient

Work Order #: 673230

Analyst:

Temperature Measuring device used: T\_NM\_007

Sample	Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	3.4	
#2 *Shipping container in good condition?	Yes	
#3 *Samples received on ice?	Yes	
#4 *Custody Seals intact on shipping container/ coole	r? 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	ved? Yes	
#10 Chain of Custody agrees with sample labels/matr	rix? 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	nlacing in the	refrigerator
Must be completed for	aitei-ilouis delivei	V OI SAIIIDIES DI IOI K	J DIACILIA III LIIC	i eli idei albi

Checklist completed by:		Date: 09.22.2020
	Cloe Clifton	
Checklist reviewed by:	Jessica Warmer  Jessica Kramer	Date: 09.23.2020

PH Device/Lot#:

<u>District I</u> 1625 N. French Dr., Hobbs, NM 88240 Phone:(575) 393-6161 Fax:(575) 393-0720

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 14934

### **CONDITIONS OF APPROVAL**

Operator:	OGRID:	Action Number:	Action Type:
XTO ENERGY, INC 6401 Holiday Hill Road	5380	14934	C-141
Building #5 Midland, TX79707			

OCD Reviewer	Condition
kcollins	When submitting future reports please submit each incident individually. Each should be submitted with a separate fee for each.