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	NAB1907138392	
District RP	2 2RP-5294	
Facility ID		
Application ID	pAB1907137360	

Release Notification

Responsible Party

Responsible Party XTO Energy	OGRID 5380		
Contact Name Kyle Littrell	Contact Telephone 432-221-7331		
Contact email Kyle_Littrell@xtoenergy.com	Incident # (assigned by OCD) NAB1907138392		
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220			

Location of Release Source

Longitude _

-104.105952°

(NAD 83 in decimal degrees to 5 decimal places)		
Site Name Big Eddy Unit 039	Site Type Production Well and Storage Facility	
Date Release Discovered 2/21/2019	API# (if applicable) 30-015-20945	

Unit Letter	Section	Township	Range	County
G	29	215	28E	Eddy

Nature and Volume of Release

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

X Crude Oil	Volume Released (bbls) 5.7	Volume Recovered (bbls) 5
Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	Yes No
Condensate	Volume Released (bbls)	Volume Recovered (bbls)
🗌 Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

A flange at the base of an oil tank corroded and released fluid to the earthen containment. Vacuum trucks removed standing fluid. The tank was removed from service until it can be repaired. An environmental contractor has been retained to assist with remediation efforts.

Form C-141

State of New Mexico Oil Conservation Division

Incident ID	NAB1907138392	
District RP	2 2RP-5294	
Facility ID		
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Was this a major	If YES, for what reason(s) does the responsible party consider this a major release?		
release as defined by	N/A		
19.15.29.7(A) NMAC?			
Yes 🛛 No			
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?			
N/A			
Initial Response			

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

 \mathbf{X} The source of the release has been stopped.

The impacted area has been secured to protect human health and the environment.

Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have <u>not</u> been undertaken, explain why: N/A

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

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

Printed Name: Kyle Littrell	Title:
Signatu re: And And And And And And And And And And	Date: <u>3/7/2019</u> Telephone: <u>432-221-7331</u>
OCD Only Received by:	Date: 3/12/2019

State of New Mexico **Oil Conservation Division**

Incident ID	NAB1907138392
District RP	2RP-5294
Facility ID	
Application ID	pAB1907137360

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><50</u> (ft bgs)
Did this release impact groundwater or surface water?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	🗌 Yes 🛛 No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	🗌 Yes 🛛 No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	🗌 Yes 🛛 No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	🗌 Yes 🛛 No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of a wetland?	🗌 Yes 🛛 No
Are the lateral extents of the release overlying a subsurface mine?	🗌 Yes 🛛 No
Are the lateral extents of the release overlying an unstable area such as karst geology?	🛛 Yes 🗌 No
Are the lateral extents of the release within a 100-year floodplain?	🗌 Yes 🛛 No
Did the release impact areas not on an exploration, development, production, or storage site?	🗌 Yes 🔀 No

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

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

- Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells. Field data
- Data table of soil contaminant concentration data
- \boxtimes Depth to water determination
- Determination of water sources and significant watercourses within ¹/₂-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.

Form C-141	State of New Mexico			
1 0 m C-141	Oil Conservation Division		Incident ID	NAB1907138392
Page 4			District RP	2RP-5294
			Facility ID	
			Application ID	pAB1907137360
I hereby certify that the info regulations all operators are public health or the environ failed to adequately investig addition, OCD acceptance of and/or regulations.	ormation given above is true and complete to the e required to report and/or file certain release noti ument. The acceptance of a C-141 report by the C gate and remediate contamination that pose a three of a C-141 report does not relieve the operator of	best of my knowledge ar fications and perform co DCD does not relieve the eat to groundwater, surfa responsibility for compl	nd understand that purs prrective actions for rele operator of liability sh- ce water, human health iance with any other fee	uant to OCD rules and eases which may endanger ould their operations have or the environment. In deral, state, or local laws
Printed Name: Signature:	Kyle Littrell	_ Title:SH&E S Date:10/25/20	Supervisor	
email: Kyle_Litt	rell@xtoenergy.com	Telephone:	(432)-221-7331	
OCD Only Received by:		Date:		

State of New Mexico Oil Conservation Division

Incident ID	NAB1907138392
District RP	2RP-5294
Facility ID	
Application ID	pAB1907137360

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.

<u>Closure Report Attachment Checklist</u> : 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 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 OD	C District office must be notified 2 days prior to final sampling)			
Description of remediation activities				
I hereby certify that the information given above is true and complete 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 re- human health or the environment. In addition, OCD acceptance of compliance with any other federal, state, or local laws and/or regul restore, reclaim, and re-vegetate the impacted surface area to the co- accordance with 19.15.29.13 NMAC including notification to the O	tet to the best of my knowledge and understand that pursuant to OCD rules in release notifications and perform corrective actions for releases which f a C-141 report by the OCD does not relieve the operator of liability mediate contamination that pose a threat to groundwater, surface water, a C-141 report does not relieve the operator of responsibility for ations. The responsible party acknowledges they must substantially onditions that existed prior to the release or their final land use in OCD when reclamation and re-vegetation are complete.			
Printed Name:Kyle Littrell	Title:SH&E Supervisor			
Signature:	Date: <u>10/25/2019</u>			
email:Kyle_Littrell@xtoenergy.com	Telephone:432-221-7331			
OCD Only				
Received by:	Date:			
Closure approval by the OCD does not relieve the responsible party remediate contamination that poses a threat to groundwater, surface party of compliance with any other federal, state, or local laws and	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:	Date:			
Printed Name:	Title:			





3300 North "A" Street Building 1, Unit 103 Midland, Texas 79705 432.704.5178

LT Environmental, Inc.

October 25, 2019

Mr. Mike Bratcher New Mexico Oil Conservation Division 811 South First Street Artesia, New Mexico 88210

RE: Closure Request Big Eddy Unit 039 Remediation Permit Number 2RP-5294 Eddy County, New Mexico

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following Closure Request detailing site assessment, excavation, and soil sampling activities at the Big Eddy Unit 039 (Site) located in unit G, Section 29, Township 21 South, Range 28 East, in Eddy County, New Mexico (Figure 1). This closure request is being submitted subsequent to a denial of an original Deferral Request submitted to the New Mexico Oil Conservation Division (NMOCD) in May 2019. Additional excavation was conducted after the Deferral Request was denied and shallow groundwater was confirmed. Based on the results of the final soil sampling event, XTO is requesting no further action for this release.

BACKGROUND

On February 21, 2019, a corroded flange at the base of a crude oil tank caused the release of approximately 5.7 barrels (bbl) of crude oil into the earthen containment. The initial Form C-141 was submitted to the NMOCD on March 7, 2019, and was assigned Remediation Permit (RP) Number is 2RP-5294. The initial Form C-141 is included as Attachment 1. LTE personnel collected preliminary and excavation soil samples from within the release extent in April 2019 and May 2019, to assess the lateral and vertical extent of impacts to soil. The preliminary and excavation samples are depicted on Figure 2 and Figure 3, respectively. On May 22, 2019, LTE submitted a Deferral Request due to residual impacted soil left in place around and beneath active process equipment and for compliance with XTO's safety policy regarding earth-moving activities within 2 feet of active process equipment.

On May 28, 2019, the NMOCD denied deferral, via email, based on the following reasoning:

With the depth to groundwater being so shallow and the High Karst, the risk to groundwater certainly exists. One option would be to drill a borehole and discover what the depth to Groundwater actually is. If it's less than 50 feet, we would need





you to move the lone tank and remediate the contamination left behind at SW03. If it's over 50 feet we would be willing to approve the deferral.

ADDITIONAL SITE ACTIVITIES

During June 2019, LTE personnel returned to the site to address concerns outlined in the May 28, 2019, email from the NOMCD. On June 4, 2019, LTE personnel oversaw the drilling of a borehole (BH01) to determine depth to groundwater at the Site. The borehole was advanced utilizing a truck-mounted sonic drill rig. The location of the borehole was in the pasture area approximately 118 feet southeast from the point of release. Groundwater was encountered in borehole BH01 at approximately 22 feet below ground surface (bgs) and the total depth of the borehole was approximately 34 feet bgs. A grab groundwater sample was collected from BH01 on June 7, 2019. A lithologic/soil sampling log for BH01 is included in Attachment 2, and the location is depicted on Figure 1.

As a result of groundwater being less than 50 feet bgs at the Site, XTO utilized mechanical equipment to remove the crude oil tank located in the center of the release extent, in the area that was not previously excavated. Following the removal of the tank, LTE returned to the Site to oversee the excavation of impacted soil in this area. On September 30, 2019, LTE personnel collected a composite soil sample (FS05), located on the floor of the final excavation extent at a depth of 5 feet bgs. The confirmation soil sample location and the final excavation extent are depicted on Figure 4. The soil sample was placed directly into a pre-cleaned glass jar, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil sample was shipped at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Xenco Laboratories (Xenco) in Midland, Texas, for analysis of benzene, toluene, ethylbenzene, and xylenes (BTEX) following United States Environmental Protection Agency (USEPA) Method 8021B; total petroleum hydrocarbons (TPH)-gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH-oil range organics (ORO) following USEPA Method 8015M/D; and chloride following USEPA Method 300.0. The groundwater sample was analyzed for BTEX following the USEPA Method 8021B; TPH-GRO, TPH-DRO, and TPH-ORO following USEPA Method 8015M/D; total dissolved solids (TDS) following USEPA Method SM2540C, and chloride following USEPA Method 300.0.

GROUNDWATER AND SOIL ANALYTICAL RESULTS

Laboratory analytical results indicated that the grab groundwater sample WS01, collected from BH01, indicated concentrations of BTEX and TPH were not detected above the laboratory reporting limit. Chloride and total dissolved solids (TDS) concentrations in WS01 were 295 milligrams per liter (mg/L) and 2,940 mg/L, respectively. Groundwater laboratory analytical results are summarized in Table 1.





Laboratory analytical results indicated that excavation floor sample FS05 was compliant with the NMOCD Table 1 Closure Criteria (Closure Criteria) for benzene, BTEX, TPH, and chloride. Soil laboratory analytical results are summarized in Table 2, and the complete laboratory analytical reports are included as Attachment 3.

CLOSURE REQUEST

A total of approximately 130 cubic yards of impacted soil was excavated from the Site. Laboratory analytical results for the initial excavation and the confirmation floor sample from the final excavation, indicated that benzene, BTEX, TPH, and chloride concentrations were compliant with the Closure Criteria and no further excavation was required.

Excavation of impacted soil have mitigated impacts at this Site. XTO requests no further action for RP Number 2RP-5294. Upon approval of this closure request, XTO will backfill the excavation with material purchased locally and recontour the Site to match pre-existing site conditions. An updated NMOCD Form C-141 is included as Attachment 1 and a Photographic Log is included as Attachment 4.

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

Sincerely,

LT ENVIRONMENTAL, INC.

w/ aun Uhalez

Carol Ann Whaley Staff Geologist

Ushley L. Ager

Ashley L. Ager, P.G. Senior Geologist

cc: Kyle Littrell, XTO United States Bureau of Land Management – New Mexico Robert Hamlet, NMOCD Victoria Venegas, NMOCD





Attachments:

- Figure 1 Site Location Map
- Figure 2 Preliminary Soil Sample Locations
- Figure 3 Excavation Soil Sample Locations
- Figure 4 Excavation Confirmation Soil Sample Locations
- Table 1Water Analytical Results
- Table 2Soil Analytical Results
- Attachment 1 Initial/Final NMOCD Form C-141 (2RP-5294)
- Attachment 2 Lithologic/Soil Sample Log
- Attachment 3 Laboratory Analytical Reports

Attachment 4 Photographic Log



FIGURES





P:XTO Energy\GIS\MXD\012919036_BIG EDDY UNIT 039\012919036_FIG01_SL_5294_2019.mxd







P:\XTO Energy\GIS\MXD\012919036_BIG EDDY UNIT 039\012919036_FIG04_EXCAVATION_5294.mxd



TABLE 1 WATER ANALYTICAL RESULTS

BIG EDDY UNIT 039 REMEDIATION PERMIT NUMBER 2RP-5294 EDDY COUNTY, NEW MEXICO XTO ENERGY, INC.

Sample Name	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethyl- benzene (mg/L)	Total Xylenes (mg/L)	GRO (mg/L)	DRO (mg/L)	ORO (mg/L)	Chloride (mg/L)	Total Dissolved Solids (mg/L)
WS01	06/07/2019	<0.00200	<0.00200	<0.00200	<0.00200	<1.28	<1.28	<1.28	295	2,940
NMWQCC Standard		0.01	0.75	0.75	0.62	NE	NE	NE	250	NE

Notes:

- DRO diesel range organics
- GRO gasoline range organics
- ORO motor oil range organics

< - indicates result is below laboratory reporting limits

Bold - indicates result exceeds the applicable regulatory standard

NMWQCC - New Mexico Water Quality Control Commission

mg/L - milligrams per liter NE - not established



TABLE 2 SOIL ANALYTICAL RESULTS

BIG EDDY UNIT 039 REMEDIATION PERMIT NUMBER 2RP-5294 EDDY COUNTY, NEW MEXICO XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl- benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
SS01	0.5	04/10/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	91.8	71.4	91.8	163	1,540
SS02	0.5	04/10/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	940
SS03	0.5	04/10/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	720
SW01	0 - 4	05/13/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	1,560
SW02	0 - 4	05/13/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<14.9	<14.9	<14.9	<14.9	<14.9	446
SW03	0 - 4	05/13/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	134	18.3	134	152	1,150
SW04	0 - 5	05/17/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	238
SW05	0 - 5	05/17/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	483
FS01	4	05/13/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	17.8	<15.0	17.8	17.8	180
FS02	4	05/13/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	742
FS03	5	05/17/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	265
FS04	5	05/17/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	422
FS05	5	09/30/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<49.8	<49.8	<49.8	<49.8	<49.8	179
NMOCD Table	e 1 Closure Crit	eria	10	NE	NE	NE	50	NE	NE	NE	NE	100	600

Notes:

bgs - below ground surface

mg/kg - milligrams per kilogram

BTEX - benzene, toluene, ethylbenzene, and total xylenes

TPH - total petroleum hydrocarbons

DRO - diesel range organics

GRO - gasoline range organics

ORO - motor oil range organics

NMAC - New Mexico Administrative Code

NMOCD - New Mexico Oil Conservation Division

Table 1 - closure criteria for soils impacted by a release per NMAC 19.15.29 August 2018

< - indicates result is below laboratory reporting limits

Bold - indicates result exceeds the applicable regulatory standard NE - not established





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

Incident ID	NAB1907138392
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Facility ID	
Application ID	pAB1907137360

Release Notification

Responsible Party

Responsible Party XTO Energy	OGRID 5380		
Contact Name Kyle Littrell	Contact Telephone 432-221-7331		
Contact email Kyle_Littrell@xtoenergy.com	Incident # (assigned by OCD) NAB1907138392		
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220			

Location of Release Source

Longitude _

-104.105952°

(NAD 83 in decimal degrees to 5 decimal places)				
Site Name Big Eddy Unit 039	Site Type Production Well and Storage Facility			
Date Release Discovered 2/21/2019	API# (if applicable) 30-015-20945			

Unit Letter	Section	Township	Range	County
G	29	215	28E	Eddy

Nature and Volume of Release

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

X Crude Oil	Volume Released (bbls) 5.7	Volume Recovered (bbls) 5
Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	Yes No
Condensate	Volume Released (bbls)	Volume Recovered (bbls)
🗌 Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

A flange at the base of an oil tank corroded and released fluid to the earthen containment. Vacuum trucks removed standing fluid. The tank was removed from service until it can be repaired. An environmental contractor has been retained to assist with remediation efforts.

Form C-141

State of New Mexico Oil Conservation Division

Incident ID	NAB1907138392
District RP	2 2RP-5294
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Was this a major	If YES, for what reason(s) does the responsible party consider this a major release?					
release as defined by	N/A					
19.15.29.7(A) NMAC?						
Yes 🛛 No						
If YES, was immediate n	otice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?					
N/A						
Initial Response						

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

 \mathbf{X} The source of the release has been stopped.

The impacted area has been secured to protect human health and the environment.

Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have <u>not</u> been undertaken, explain why: N/A

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

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

Printed Name: Kyle Littrell	Title:
Signatu re: And And And And And And And And And And	Date: <u>3/7/2019</u> Telephone: <u>432-221-7331</u>
OCD Only Received by:	Date: 3/12/2019

State of New Mexico **Oil Conservation Division**

Incident ID	NAB1907138392
District RP	2RP-5294
Facility ID	
Application ID	pAB1907137360

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><50</u> (ft bgs)
Did this release impact groundwater or surface water?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	🗌 Yes 🛛 No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	🗌 Yes 🛛 No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	🗌 Yes 🛛 No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	🗌 Yes 🛛 No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of a wetland?	🗌 Yes 🛛 No
Are the lateral extents of the release overlying a subsurface mine?	🗌 Yes 🛛 No
Are the lateral extents of the release overlying an unstable area such as karst geology?	🛛 Yes 🗌 No
Are the lateral extents of the release within a 100-year floodplain?	🗌 Yes 🛛 No
Did the release impact areas not on an exploration, development, production, or storage site?	🗌 Yes 🔀 No

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

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

- Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells. Field data
- Data table of soil contaminant concentration data
- \boxtimes Depth to water determination
- Determination of water sources and significant watercourses within ¹/₂-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.

Form C-141	State of New Mexico			
1 0 m C-141			Incident ID	NAB1907138392
Page 4	Oil Conservation Division		District RP	2RP-5294
			Facility ID	
			Application ID	pAB1907137360
I hereby certify that the info regulations all operators are public health or the environ failed to adequately investig addition, OCD acceptance of and/or regulations.	ormation given above is true and complete to the e required to report and/or file certain release noti ument. The acceptance of a C-141 report by the C gate and remediate contamination that pose a three of a C-141 report does not relieve the operator of	best of my knowledge ar fications and perform co DCD does not relieve the eat to groundwater, surfa responsibility for compl	nd understand that purs prrective actions for rele operator of liability sh- ce water, human health iance with any other fee	uant to OCD rules and eases which may endanger ould their operations have or the environment. In deral, state, or local laws
Printed Name: Signature:	Kyle Littrell	_ Title:SH&E S Date:10/25/20	Supervisor	
email: Kyle_Litt	rell@xtoenergy.com	Telephone:	(432)-221-7331	
OCD Only Received by:		Date:		

State of New Mexico Oil Conservation Division

Incident ID	NAB1907138392
District RP	2RP-5294
Facility ID	
Application ID	pAB1907137360

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.

<u>Closure Report Attachment Checklist</u> : Each of the following	items must be included in the closure report.							
\square A scaled site and sampling diagram as described in 19.15.29.	11 NMAC							
Photographs of the remediated site prior to backfill or photos must be notified 2 days prior to liner inspection)	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 OD	C District office must be notified 2 days prior to final sampling)							
Description of remediation activities								
I hereby certify that the information given above is true and complete 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 re- human health or the environment. In addition, OCD acceptance of compliance with any other federal, state, or local laws and/or regul restore, reclaim, and re-vegetate the impacted surface area to the co- accordance with 19.15.29.13 NMAC including notification to the O	tet to the best of my knowledge and understand that pursuant to OCD rules in release notifications and perform corrective actions for releases which f a C-141 report by the OCD does not relieve the operator of liability mediate contamination that pose a threat to groundwater, surface water, a C-141 report does not relieve the operator of responsibility for ations. The responsible party acknowledges they must substantially onditions that existed prior to the release or their final land use in OCD when reclamation and re-vegetation are complete.							
Printed Name:Kyle Littrell	Title:SH&E Supervisor							
Signature:	Date: <u>10/25/2019</u>							
email:Kyle_Littrell@xtoenergy.com	Telephone:432-221-7331							
OCD Only								
Received by:	Date:							
Closure approval by the OCD does not relieve the responsible party remediate contamination that poses a threat to groundwater, surface party of compliance with any other federal, state, or local laws and	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:	Date:							
Printed Name:	Title:							

ATTACHMENT 2: LITHOLOGIC SOIL SAMPLE LOGS

LT Environ	LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220								Identifier: BH01 Project Name: BEU 039	Date: 6/4/19 RP Number: 2RP-5294
j.		UTHO	Compl	liance · E	Engineering · F	Remedi	ation		Logged By: BEN BELILL	Method: SONIC
at/Long: 32,4 Comment	Long: 2.452497104.05589 nment All Chloride test include a 60% error factor.						PH, BTEX,	Hole Diameter:	Total Depth: 34'	
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.) I	ample Depth	Soil/Rock Type		Litholog	gy/Remarks
D	531	0,5	N			1'	ML	SILT	, dry, brown - li stic, no odor. (sut brown, non- (5:30)
D	<112	0.4	N			10'	ML	5.AI	A (Same As Ab	one) (15:45)
				*		+	1.18			

LT Environmental, Inc.	LT E 508 V Carlsba Compliance	nvironmental, Inc. Vest Stevens Street d, New Mexico 88220 · Engineering · Remedi) iation	Project Name: BEU 039	Date: 6/4/19 RP Number: 2RP-5294
L	ITHOLOGIC /	SOIL BORING LOO	G	Logged By: BEN BELILL	Method: SONIC
at/Long:		Field Screening: CHLC GRO, MRO, and DRC	ORIDES, TPH, BTEX,).	Hole Diameter: 4"	Total Depth: 34'
comment All Chloride	test include a 60% er	or factor.			
Moisture Content Chloride (ppm) Vapor	(ppm) Staining	Depth Sample (ft. bgs.) Depth	Soil/Rock Type	Lithology/	Remarks
D 2112 (.7 N WS	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	ML SA,	9 (IS:55)	

LT Environ	P nental, Inc.		L 5 Carl	.T Env 08 Wes Isbad, I	ironment st Stevens New Mexi	al, Inc. Street co 88220		Identifier: BH01 Project Name: BEU 039	Date: 6/4/19 RP Number: 2RP-5294	
			Compli	ance · E	Engineering	g · Remedi	ation			
Lat/Long:	-	LITHO	DLOGI	C / SC	Field Scree	ING LOC	G DRIDES, TI	PH, BTEX,	Hole Diameter:	Total Depth:
Common	All Chio	ride test in	clude a 60	% error	GRO, MR	O, and DRO			9	59
Commen	Anemo	nue test m	ciude a co		1		-		hand the second second	
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type		Lithology	y/Remarks
Carlobad, New Mexico 88520 Carlobad, New Mexico 88520 Compliance : Engineering : Remediation Introduction: CSOIL BORING LOG Field Screening: CHLORIDES, TPH, J GRO, MRO, and DRO. Comment: All Chloride test include a 60% error factor. any oppinging: the field for the basis of the basis							SILT, plass * V SILT plass No SA	Moist, brown - li Hizity, trace cla Nater Table @ r, dry, brown - li rticity, some li o dor. (16:10) A (16:15)	sht brown, low y, no ador. (16:00) 27' Lisht brown, low isht sray dry clay,	
					35				Eo	B @ 34

ATTACHMENT 3: LABORATORY ANALYTICAL REPORTS

Analytical Report 620941

for

LT Environmental, Inc.

Project Manager: Adrian Baker

BEU 039

15-APR-19

Collected By: Client





1211 W. Florida Ave Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122): Texas (T104704215-18-28), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054) Oklahoma (2017-142)

> Xenco-Dallas (EPA Lab Code: TX01468): Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14) Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18) Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18) Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4) Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757) Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757) Xenco-Atlanta (LELAP Lab ID #04176) Xenco-Tampa: Florida (E87429), North Carolina (483) Xenco-Lakeland: Florida (E84098)



15-APR-19

TNI Free ORATORY

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

Reference: XENCO Report No(s): 620941 BEU 039 Project Address: ---

Adrian Baker:

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) 620941. 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. 620941 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,

Kalei Stout Midland Laboratory Director

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994. Certified and approved by numerous States and Agencies. A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America



Sample Cross Reference 620941



LT Environmental, Inc., Arvada, CO

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	04-10-19 09:15	0.5	620941-001
SS02	S	04-10-19 09:20	0.5	620941-002
SS03	S	04-10-19 09:10	0.5	620941-003



CASE NARRATIVE

Client Name: LT Environmental, Inc. Project Name: BEU 039

Project ID: ---Work Order Number(s): 620941 Report Date: 15-APR-19 Date Received: 04/12/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments: Batch: LBA-3085717 BTEX by EPA 8021B Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3085721 BTEX by EPA 8021BSurrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.Samples affected are: 620366-010 SD.Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



Project Id: Adrian Baker **Contact:** ____

Project Location:

Certificate of Analysis Summary 620941

LT Environmental, Inc., Arvada, CO Project Name: BEU 039



Date Received in Lab: Fri Apr-12-19 10:52 am Report Date: 15-APR-19 Project Manager: Kalei Stout

	Lab Id:	620941-0	001	620941-0	002	620941-	003		
Analysis Paguested	Field Id:	SS01		SS02		SS03			
Analysis Kequestea	Depth:	0.5-		0.5-		0.5-			
	Matrix:	SOIL		SOIL	,	SOIL	,		
	Sampled:	Apr-10-19	09:15	Apr-10-19	09:20	Apr-10-19	09:10		
BTEX by EPA 8021B	Extracted:	Apr-14-19	16:07	Apr-14-19	16:19	Apr-14-19	16:19		
	Analyzed:	Apr-15-19	01:39	Apr-15-19	06:21	Apr-15-19	06:40		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzene		< 0.00199	0.00199	< 0.00200	0.00200	< 0.00199	0.00199		
Toluene		< 0.00199	0.00199	< 0.00200	0.00200	< 0.00199	0.00199		
Ethylbenzene		< 0.00199	0.00199	< 0.00200	0.00200	< 0.00199	0.00199		
m,p-Xylenes		< 0.00398	0.00398	< 0.00401	0.00401	< 0.00398	0.00398		
o-Xylene		< 0.00199	0.00199	< 0.00200	0.00200	< 0.00199	0.00199		
Total Xylenes		< 0.00199	0.00199	< 0.00200	0.00200	< 0.00199	0.00199		
Total BTEX		< 0.00199	0.00199	< 0.00200	0.00200	< 0.00199	0.00199		
Chloride by EPA 300	Extracted:	Apr-12-19	17:50	Apr-12-19	17:50	Apr-12-19	17:50		
	Analyzed:	Apr-14-19	23:22	Apr-14-19	23:30	Apr-15-19	01:18		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		1540	25.2	940	5.04	720	24.8		
TPH by SW8015 Mod	Extracted:	Apr-13-19	11:00	Apr-13-19	11:00	Apr-13-19	11:00		
	Analyzed:	Apr-14-19	01:31	Apr-14-19	01:51	Apr-14-19	02:10		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0		
Diesel Range Organics (DRO)		91.8	15.0	<15.0	15.0	<15.0	15.0		
Motor Oil Range Hydrocarbons (MRO)		71.4	15.0	<15.0	15.0	<15.0	15.0		
Total TPH		163	15.0	<15.0	15.0	<15.0	15.0		
Total GRO-DRO		91.8	15.0	<15.0	15.0	<15.0	15.0		

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

Kalei Stout Midland Laboratory Director



Certificate of Analytical Results 620941



LT Environmental, Inc., Arvada, CO

Sample Id: SS01	Matrix:	Soil		Date Received:04.12.19 10.52				
Lab Sample Id: 620941-001		Date Collec	cted: 04.10.19 09.15		Sample Depth: 0.5			
Analytical Method: Chloride by EP	PA 300				Prep Method: E30)0P		
Tech: CHE					% Moisture:			
Analyst: CHE		Date Prep:	04.12.19 17.50		Basis: We	t Weight		
Seq Number: 3085674								
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil	
Chloride	16887-00-6	1540	25.2	mg/kg	04.14.19 23.22		5	
Analytical Method: TPH by SW80	15 Mod				Prep Method: TX	1005P		
Tech: ARM					% Moisture:			
Analyst: ARM		Date Prep:	04.13.19 11.00		Basis: We	t Weight		
Seq Number: 3085702		Ĩ						
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil	
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.14.19 01.31	U	1	
Diesel Range Organics (DRO)	C10C28DRO	01.8	15.0	ma/ka	04 14 19 01 31		1	

Seq Number. 5005702								
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	04.14.19 01.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	91.8	15.0		mg/kg	04.14.19 01.31		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	71.4	15.0		mg/kg	04.14.19 01.31		1
Total TPH	PHC635	163	15.0		mg/kg	04.14.19 01.31		1
Total GRO-DRO	PHC628	91.8	15.0		mg/kg	04.14.19 01.31		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	102	%	70-135	04.14.19 01.31		
o-Terphenyl		84-15-1	102	%	70-135	04.14.19 01.31		



Certificate of Analytical Results 620941



LT Environmental, Inc., Arvada, CO

Sample Id:	SS01	Matrix:	Soil	Date Received	:04.12.19 10.52	
Lab Sample Id	: 620941-001	Date Collected	: 04.10.19 09.15	Sample Depth: 0.5		
Analytical Me Tech: Analyst: Seq Number:	thod: BTEX by EPA 8021B SCM SCM 3085717	Date Prep:	04.14.19 16.07	Prep Method: % Moisture: Basis:	SW5030B Wet Weight	

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199		mg/kg	04.15.19 01.39	U	1
Toluene	108-88-3	< 0.00199	0.00199		mg/kg	04.15.19 01.39	U	1
Ethylbenzene	100-41-4	< 0.00199	0.00199		mg/kg	04.15.19 01.39	U	1
m,p-Xylenes	179601-23-1	< 0.00398	0.00398		mg/kg	04.15.19 01.39	U	1
o-Xylene	95-47-6	< 0.00199	0.00199		mg/kg	04.15.19 01.39	U	1
Total Xylenes	1330-20-7	< 0.00199	0.00199		mg/kg	04.15.19 01.39	U	1
Total BTEX		< 0.00199	0.00199		mg/kg	04.15.19 01.39	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	103	%	70-130	04.15.19 01.39		
4-Bromofluorobenzene		460-00-4	124	%	70-130	04.15.19 01.39		



Certificate of Analytical Results 620941



LT Environmental, Inc., Arvada, CO

Sample Id:	ample Id: SS02			Soil		Date Received:04.12.19 10.52			
Lab Sample Id: 620941-002			Date Collec	ted: 04.10.19 09.20		Sample Depth: 0.5			
Analytical Me Tech:	ethod: Chloride by EPA 3	300				Prep Method: E30 % Moisture:	0P		
Analyst:	CHE		Date Prep:	04.12.19 17.50		Basis: Wet	Weight		
Seq Number:	3085674		ľ						
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil	
Chloride		16887-00-6	940	5.04	mg/kg	04.14.19 23.30		1	
Analytical Me	ethod: TPH by SW8015	Mod				Prep Method: TX1	005P		
Tech: ARM				% Moisture:					

Analyst: ARM		Date Prep	p: 04.13.	04.13.19 11.00		Basis: We		t Weight	
Seq Number: 3085702									
Parameter	Cas Number	Result	RL		Units	Analysis Date	e Flag	Dil	
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	04.14.19 01.51	U	1	
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0		mg/kg	04.14.19 01.51	U	1	
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0		mg/kg	04.14.19 01.51	U	1	
Total TPH	PHC635	<15.0	15.0		mg/kg	04.14.19 01.51	U	1	
Total GRO-DRO	PHC628	<15.0	15.0		mg/kg	04.14.19 01.51	U	1	
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Dat	e Flag		
1-Chlorooctane		111-85-3	100	%	70-135	04.14.19 01.5	1		
o-Terphenyl		84-15-1	100	%	70-135	04.14.19 01.5	1		




LT Environmental, Inc., Arvada, CO

Sample Id:	SS02	Matrix:	Soil	Date Received	:04.12.19 10.52
Lab Sample Id	: 620941-002	Date Collected	: 04.10.19 09.20	Sample Depth:	:0.5
Analytical Me Tech: Analyst: Seq Number:	thod: BTEX by EPA 8021B SCM SCM 3085721	Date Prep:	04.14.19 16.19	Prep Method: % Moisture: Basis:	SW5030B Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	04.15.19 06.21	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	04.15.19 06.21	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	04.15.19 06.21	U	1
m,p-Xylenes	179601-23-1	< 0.00401	0.00401		mg/kg	04.15.19 06.21	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	04.15.19 06.21	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	04.15.19 06.21	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	04.15.19 06.21	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	112	%	70-130	04.15.19 06.21		
1,4-Difluorobenzene		540-36-3	105	%	70-130	04.15.19 06.21		





LT Environmental, Inc., Arvada, CO

Sample Id:	SS03		Matrix:	Soil		Date Received:04.	12.19 10.52	
Lab Sample Id	: 620941-003		Date Colle	ected: 04.10.19 09.10		Sample Depth: 0.5		
Analytical Me	thod: Chloride by EPA	300				Prep Method: E30	00P	
Tech:	CHE					% Moisture:		
Analyst:	CHE		Date Prep:	04.12.19 17.50		Basis: We	t Weight	
Seq Number:	3085674							
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride		16887-00-6	720	24.8	mg/kg	04.15.19 01.18		5

Analytical Method: TPH by SW801	15 Mod				P	Prep Method: TX	1005P	
Tech: ARM					9	6 Moisture:		
Analyst: ARM		Date Prep	o: 04.13	.19 11.00	E	Basis: We	et Weight	
Seq Number: 3085702		-						
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	04.14.19 02.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0		mg/kg	04.14.19 02.10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0		mg/kg	04.14.19 02.10	U	1
Total TPH	PHC635	<15.0	15.0		mg/kg	04.14.19 02.10	U	1
Total GRO-DRO	PHC628	<15.0	15.0		mg/kg	04.14.19 02.10	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	97	%	70-135	04.14.19 02.10		
o-Terphenyl		84-15-1	97	%	70-135	04.14.19 02.10		





LT Environmental, Inc., Arvada, CO

Sample Id:	SS03	Matrix:	Soil	Date Received	:04.12.19 10.52
Lab Sample Id	: 620941-003	Date Collected	: 04.10.19 09.10	Sample Depth	:0.5
Analytical Me Tech: Analyst: Seq Number:	thod: BTEX by EPA 8021B SCM SCM 3085721	Date Prep:	04.14.19 16.19	Prep Method: % Moisture: Basis:	SW5030B Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00199	0.00199		mg/kg	04.15.19 06.40	U	1
Toluene	108-88-3	< 0.00199	0.00199		mg/kg	04.15.19 06.40	U	1
Ethylbenzene	100-41-4	< 0.00199	0.00199		mg/kg	04.15.19 06.40	U	1
m,p-Xylenes	179601-23-1	< 0.00398	0.00398		mg/kg	04.15.19 06.40	U	1
o-Xylene	95-47-6	< 0.00199	0.00199		mg/kg	04.15.19 06.40	U	1
Total Xylenes	1330-20-7	< 0.00199	0.00199		mg/kg	04.15.19 06.40	U	1
Total BTEX		< 0.00199	0.00199		mg/kg	04.15.19 06.40	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	106	%	70-130	04.15.19 06.40		
4-Bromofluorobenzene		460-00-4	117	%	70-130	04.15.19 06.40		



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.
- RL Reporting Limit
- MDL Method Detection LimitSDLSample Detection LimitLOD Limit of Detection
- PQL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation
- DL Method Detection Limit
- NC Non-Calculable

SMP Clie	nt Sample	BLK	Method Blank	
BKS/LCS	Blank Spike/Laboratory Control Sample	BKSD/LCSD	Blank Spike Duplicate/Laboration	atory Control Sample Duplicate
MD/SD	Method Duplicate/Sample Duplicate	MS	Matrix Spike	MSD: Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

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



LT Environmental, Inc. BEU 039

Analytical Method:	Chloride by EPA 30	0						Pı	ep Meth	od: E30	0P	
Seq Number:	3085674			Matrix:	Solid				Date Pr	ep: 04.1	2.19	
MB Sample Id:	7675690-1-BLK		LCS Sar	nple Id:	7675690-	1-BKS		LCS	D Sample	e Id: 767	5690-1-BSD	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Lim	uit Units	Analysis Date	Flag
Chloride	< 0.858	250	259	104	260	104	90-110	0	20	mg/kg	04.14.19 22:39	

Analytical Method:	Chloride by	EPA 30	0						Р	rep Metho	od: E30	0P	
Seq Number:	3085674				Matrix:	Soil				Date Pre	ep: 04.1	2.19	
Parent Sample Id:	620551-013			MS San	nple Id:	620551-01	3 S		MS	D Sample	e Id: 620	551-013 SD	
Parameter]	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Lim	it Units	Analysis Date	Flag
Chloride		629	251	852	89	844	86	90-110	1	20	mg/kg	04.15.19 00:57	Х

Analytical Method:	Chloride by	EPA 30	0						P	rep Meth	od: E30	0P	
Seq Number:	3085674				Matrix:	Soil				Date Pr	ep: 04.1	2.19	
Parent Sample Id:	620943-013			MS San	nple Id:	620943-01	3 S		MS	D Sampl	e Id: 620	943-013 SD	
Parameter	F 1	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Lim	ut Units	Analysis Date	Flag
Chloride		< 0.853	249	222	89	275	110	90-110	21	20	mg/kg	04.14.19 23:01	XF

Analytical Method:	TPH by S	W8015 M	od						F	Prep Method	l: TX	1005P	
Seq Number:	3085702				Matrix:	Solid				Date Prep	p: 04.	13.19	
MB Sample Id:	7675751-1	-BLK		LCS Sample Id: 7675751-1-BKS			LCSD Sample Id: 7675751-1-BSD						
Parameter		MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbo	ons (GRO)	<8.00	1000	960	96	936	94	70-135	3	20	mg/kg	04.13.19 19:19	
Diesel Range Organics ((DRO)	<8.13	1000	978	98	969	97	70-135	1	20	mg/kg	04.13.19 19:19	
Surrogate		MB %Rec	MB Flag	L %	CS Rec	LCS Flag	LCSI %Re) LCS c Flag	D I g	Limits	Units	Analysis Date	
1-Chlorooctane		107		1	23		120		7	0-135	%	04.13.19 19:19	
o-Terphenyl		108		1	19		115		7	0-135	%	04.13.19 19:19	

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

LCS = Laboratory Control SampleA = Parent ResultC = MS/LCS ResultE = MSD/LCSD Result

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



LT Environmental, Inc.

BEU 039

Analytical Method	TPH by SW8015 Mod
mary ucar miculou.	1111 by Swoo15 mou

Analytical Method: TPH by SW8015 Mod									Р	rep Method	l: TX	1005P	
Seq Number:	3085702]	Matrix:	Soil				Date Prep	o: 04.	13.19	
Parent Sample Id: 621017-001				MS Sample Id: 621017-001 S			01 S	S MSD Sample Id: 621017-001 SD					
Parameter		Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbo	ons (GRO)	<7.99	998	911	91	887	89	70-135	3	20	mg/kg	04.13.19 20:18	
Diesel Range Organics (DRO)	<8.11	998	920	92	937	94	70-135	2	20	mg/kg	04.13.19 20:18	
Surrogate				N %1	IS Rec	MS Flag	MSD %Rec	MSD Flag	L	imits	Units	Analysis Date	
1-Chlorooctane				1	18		117		7	0-135	%	04.13.19 20:18	
o-Terphenyl				1	14		110		7	0-135	%	04.13.19 20:18	

Analytical Method:	BTEX by EPA 8021]	Prep Metho	d: SW	5030B		
Seq Number:	3085717			Matrix:	Solid				Date Prep: 04.14.19			
MB Sample Id:	7675773-1-BLK		LCS Sar	nple Id:	7675773-	1-BKS		LC	SD Sample	Id: 767	5773-1-BSD	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPI) RPD Limit	Units	Analysis Date	Flag
Benzene	< 0.00198	0.0992	0.100	101	0.0939	94	70-130	6	35	mg/kg	04.14.19 18:06	
Toluene	< 0.00198	0.0992	0.0996	100	0.0951	95	70-130	5	35	mg/kg	04.14.19 18:06	
Ethylbenzene	< 0.00198	0.0992	0.105	106	0.0997	100	70-130	5	35	mg/kg	04.14.19 18:06	
m,p-Xylenes	< 0.00101	0.198	0.210	106	0.201	101	70-130	4	35	mg/kg	04.14.19 18:06	
o-Xylene	< 0.00198	0.0992	0.105	106	0.102	102	70-130	3	35	mg/kg	04.14.19 18:06	
Surrogate	MB %Rec	MB Flag	L %	CS Rec	LCS Flag	LCSD %Rec	D LCSI 2 Flag)]	Limits	Units	Analysis Date	
1,4-Difluorobenzene	104		ç	96		96		-	70-130	%	04.14.19 18:06	
4-Bromofluorobenzene	105		1	06		106		-	70-130	%	04.14.19 18:06	

Analytical Method: Seq Number: MB Sample Id:	BTEX by EPA 802 3085721 7675776-1-BLK	Matrix: Solid LCS Sample Id: 7675776-1-BKS				Prep Method: SW5030B Date Prep: 04.14.19 LCSD Sample Id: 7675776-1-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	0.0998	0.0945	95	0.0923	92	70-130	2	35	mg/kg	04.15.19 03:51	
Toluene	< 0.00200	0.0998	0.0908	91	0.0898	90	70-130	1	35	mg/kg	04.15.19 03:51	
Ethylbenzene	< 0.00200	0.0998	0.0937	94	0.0933	93	70-130	0	35	mg/kg	04.15.19 03:51	
m,p-Xylenes	< 0.00399	0.200	0.185	93	0.184	92	70-130	1	35	mg/kg	04.15.19 03:51	
o-Xylene	< 0.00200	0.0998	0.0951	95	0.0946	95	70-130	1	35	mg/kg	04.15.19 03:51	
Surrogate	MB %Rec	MB Flag	L0 %1	CS Rec	LCS Flag	LCSD %Rec) LCSI 2 Flag	D] ç	Limits	Units	Analysis Date	
1,4-Difluorobenzene	106		10	00		98		7	0-130	%	04.15.19 03:51	
4-Bromofluorobenzene	101		10	02		102		7	0-130	%	04.15.19 03:51	

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

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

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

MS = Matrix Spike B = Spike AddedD = MSD/LCSD % Rec



LT Environmental, Inc.

BEU 039

Analytical Method: BTEX by EPA 8021B

Analytical Method:	thod: BTEX by EPA 8021B							F	Prep Method	i: SW:	5030B		
Seq Number:	3085717		I	Matrix:	Soil			Date Prep: 04.14.19					
Parent Sample Id:	620919-001		MS San	nple Id:	620919-00	01 S		MS	SD Sample	Id: 620	919-001 SD		
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag	
Benzene	< 0.00199	0.0996	0.0550	55	0.0570	57	70-130	4	35	mg/kg	04.14.19 18:44	Х	
Toluene	< 0.00199	0.0996	0.0675	68	0.0710	71	70-130	5	35	mg/kg	04.14.19 18:44	Х	
Ethylbenzene	< 0.00199	0.0996	0.0663	67	0.0699	70	70-130	5	35	mg/kg	04.14.19 18:44	Х	
m,p-Xylenes	0.00273	0.199	0.141	69	0.149	73	70-130	6	35	mg/kg	04.14.19 18:44	Х	
o-Xylene	< 0.00199	0.0996	0.0722	72	0.0772	77	70-130	7	35	mg/kg	04.14.19 18:44		
Surrogate			M %1	IS Rec	MS Flag	MSD %Rec	MSI Flag) I ;	Limits	Units	Analysis Date		
1,4-Difluorobenzene			8	57		88		7	0-130	%	04.14.19 18:44		
4-Bromofluorobenzene			12	23		128		7	0-130	%	04.14.19 18:44		

Analytical Method:	I: BTEX by EPA 8021B]	Prep Metho	d: SW	5030B	
Seq Number:	3085721		Ν	Aatrix:	: Soil Date Prep: 04.14.19						4.19	
Parent Sample Id:	620366-010		MS Sample Id: 620366-010 S			MSD Sample Id: 620366-010 SD						
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPE) RPD Limi	t Units	Analysis Date	Flag
Benzene	< 0.000386	0.100	0.0806	81	0.0292	29	70-130	94	35	mg/kg	04.15.19 04:29	XF
Toluene	< 0.000457	0.100	0.0774	77	0.0422	42	70-130	59	35	mg/kg	04.15.19 04:29	XF
Ethylbenzene	< 0.000567	0.100	0.0767	77	0.0487	48	70-130	45	35	mg/kg	04.15.19 04:29	XF
m,p-Xylenes	0.00120	0.201	0.153	76	0.0932	46	70-130	49	35	mg/kg	04.15.19 04:29	XF
o-Xylene	0.000651	0.100	0.0787	78	0.0497	49	70-130	45	35	mg/kg	04.15.19 04:29	XF
Surrogate			M %R	S lec	MS Flag	MSD %Rec	MSD Flag]	Limits	Units	Analysis Date	
1,4-Difluorobenzene			99	9		91		-	70-130	%	04.15.19 04:29	
4-Bromofluorobenzene			10	8		148	**	-	70-130	%	04.15.19 04:29	

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

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

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

MS = Matrix Spike B = Spike AddedD = MSD/LCSD % Rec

5 Nebut P. M. C. M	Circle Method(s) and Metal(s) to be analyzed TCLP / S Notice: Signature of this document and relinquishment of samples constitutes a valid of service. Xenco will be liable only for the cost of samples and shall not assume any of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of Received by: (Signature) Received by: (Signature) Relinquished by: (Signature) Received by: (Signature) Received by: (Signature)	Sample Identification Matrix Sampled Sampled SSO1 SO2 SO2 SO2 SO2 SSO2 SO2 SO2 SO2 SO2	Project Number: $2RP-52qH$ Ru P.O. Number: $2RP-52qH$ Ru Sampler's Name: $Gobert$ M. Du SAMPLE RECEIPT Temp Blank: Yes No Wet Ic Temperature (°C): $Gobert$ No Thermore Received Intact: Yes No Correction Factor Sample Custody Seals: Yes No Total Container Sample Custody Seals: Yes No Total Container	Project Name: BEU 039	Cuty, state ZIP: Milolano, TX 79705 Phone: 432.704.5178 Ema	Address: 3300 North A Street	Project Manager: Adrian Baker Company Name: I I Environmental Inc. Dermian office	Hou Michael House
apply that a check and all	PLP 6010: BRCRA Sb As Ba Be Cd Ca Cr Co Cu Fe FipLP 6010: BRCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Na purchase order from client company to Xenco, its affiliates and subcontractors. It assign y responsibility for any losses or expenses incurred by the client if such losses are due to Y store each sample submitted to Xenco, but not analyzed. These terms will be enforced ature) Date/Time Relinquished by: (Signature)	$\begin{array}{c c} & & & \\ & & \\ & & \\ & & \\ & \\ \hline \\ & \\ &$	Image: String of Containers Image: String of Containers (EPA 8015) K (EPA 8021) rride (EPA 300.0)	Turn Around ANALYSIS REQU	ili: 1°mca fee QL tenv.com	Address:	Bill to: (it different) Ky (e. Liftre)	Chain of Custody ston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334 dland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296 -392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (81
TTMPS/MARK	b Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn <u>Vi Se Ag Ti U</u> <u>1631/245.1/7470/7471: Hg</u> ns standard terms and conditions o circumstances beyond the control unless previously negotiated. hture)	Sample Comments	TAT starts the day received by the fab, if received by 4:30pm	JEST Work Order Notes	Reporting:Level II Level III ST/UST LRP Lvel IV Deliverables: EDD ADaPT Other:	Program: UST/PST PRP rownfields FC perfund State of Project:	Work Order Comments	Work Order No: WAUUU

Final 1.000



After printing this label:

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XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc. Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient Date/ Time Received: 04/12/2019 10:52:00 AM Temperature Measuring device used : R8 Work Order #: 620941 Comments Sample Receipt Checklist #1 *Temperature of cooler(s)? .1 #2 *Shipping container in good condition? Yes #3 *Samples received on ice? Yes #4 *Custody Seals intact on shipping container/ cooler? N/A #5 Custody Seals intact on sample bottles? N/A #6*Custody Seals Signed and dated? N/A #7 *Chain of Custody present? Yes #8 Any missing/extra samples? No #9 Chain of Custody signed when relinquished/ received? Yes #10 Chain of Custody agrees with sample labels/matrix? Yes #11 Container label(s) legible and intact? Yes #12 Samples in proper container/ bottle? Yes #13 Samples properly preserved? Yes #14 Sample container(s) intact? Yes #15 Sufficient sample amount for indicated test(s)? Yes #16 All samples received within hold time? Yes #17 Subcontract of sample(s)? N/A #18 Water VOC samples have zero headspace? N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by: Bill Tal Brianna Teel Checklist reviewed by: Kalei Stout

Date: 04/12/2019

Kalei Stout

Date: 04/12/2019

Analytical Report 624165

for LT Environmental, Inc.

Project Manager: Ashley Ager

BEU 039

15-MAY-19

Collected By: Client





1211 W. Florida Ave Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122): Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054) Oklahoma (2017-142)

> Xenco-Dallas (EPA Lab Code: TX01468): Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14) Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20) Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18) Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4) Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757) Xenco-Atlanta (LELAP Lab ID #04176) Xenco-Tampa: Florida (E87429), North Carolina (483)



15-MAY-19



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

Reference: XENCO Report No(s): 624165 BEU 039 Project Address: Delaware Basin

Ashley Ager:

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) 624165. 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. 624165 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,

Jession Vramer

Jessica Kramer Project Assistant

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Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America



Sample Cross Reference 624165



LT Environmental, Inc., Arvada, CO

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	05-13-19 09:40	4 ft	624165-001
FS02	S	05-13-19 09:50	4 ft	624165-002
SW01	S	05-13-19 09:30	0 - 4 ft	624165-003
SW02	S	05-13-19 09:55	0 - 4 ft	624165-004
SW03	S	05-13-19 10:40	0 - 4 ft	624165-005



CASE NARRATIVE

Client Name: LT Environmental, Inc. Project Name: BEU 039

Project ID: Work Order Number(s): 624165 Report Date: 15-MAY-19 Date Received: 05/14/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3089030 Inorganic Anions by EPA 300

Lab Sample ID 624167-008 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 624165-003, -004, -005. The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3089051 BTEX by EPA 8021B Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



Project Id:Contact:Ashley AgerProject Location:Delaware Basin



LT Environmental, Inc., Arvada, CO Project Name: BEU 039



Date Received in Lab:Tue May-14-19 11:30 amReport Date:15-MAY-19Project Manager:Jessica Kramer

	Lab Id:	624165-	001	624165-0	002	624165-	003	624165-	004	624165-0	005	
Analysis Paguested	Field Id:	FS01		FS02		SW0	1	SW02	2	SW03	3	
Analysis Kequesiea	Depth:	4- ft		4- ft		0-4 ft	t	0-4 ft	t	0-4 ft		
	Matrix:	SOIL										
	Sampled:	May-13-19	09:40	May-13-19	09:50	May-13-19	09:30	May-13-19	09:55	May-13-19	10:40	
BTEX by EPA 8021B	Extracted:	May-14-19	11:45									
	Analyzed:	May-14-19	19:00	May-14-19	19:19	May-14-19	19:38	May-14-19	19:57	May-14-19	20:16	
	Units/RL:	mg/kg	RL									
Benzene		< 0.00200	0.00200	< 0.00202	0.00202	< 0.00199	0.00199	< 0.00201	0.00201	< 0.00200	0.00200	
Toluene		< 0.00200	0.00200	< 0.00202	0.00202	< 0.00199	0.00199	< 0.00201	0.00201	< 0.00200	0.00200	
Ethylbenzene		< 0.00200	0.00200	< 0.00202	0.00202	< 0.00199	0.00199	< 0.00201	0.00201	< 0.00200	0.00200	
m,p-Xylenes		< 0.00399	0.00399	< 0.00403	0.00403	< 0.00398	0.00398	< 0.00402	0.00402	< 0.00399	0.00399	
o-Xylene		< 0.00200	0.00200	< 0.00202	0.00202	< 0.00199	0.00199	< 0.00201	0.00201	< 0.00200	0.00200	
Total Xylenes		< 0.00200	0.00200	< 0.00202	0.00202	< 0.00199	0.00199	< 0.00201	0.00201	< 0.00200	0.00200	
Total BTEX		< 0.00200	0.00200	< 0.00202	0.00202	< 0.00199	0.00199	< 0.00201	0.00201	< 0.00200	0.00200	
Chloride by EPA 300	Extracted:	May-14-19	15:45	May-14-19	15:45	May-14-19	16:15	May-14-19	16:15	May-14-19	16:15	
	Analyzed:	May-14-19	19:37	May-14-19	19:44	May-14-19	18:38	May-14-19	19:00	May-14-19	19:07	
	Units/RL:	mg/kg	RL									
Chloride		180	5.05	742	5.00	1560	25.0	446	4.96	1150	5.00	
TPH by SW8015 Mod	Extracted:	May-14-19	17:00									
	Analyzed:	May-15-19	03:51	May-15-19	04:11	May-15-19	04:31	May-15-19	04:50	May-15-19	05:10	
	Units/RL:	mg/kg	RL									
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	
Diesel Range Organics (DRO)		17.8	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	134	15.0	
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	18.3	15.0	
Total TPH		17.8	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	152	15.0	
Total GRO-DRO		17.8	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	134	15.0	

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.%

fession kenner

Jessica Kramer Project Assistant





LT Environmental, Inc., Arvada, CO

Sample Id: Lab Sample Id	FS01 : 624165-001		Matrix: Date Collec	Soil ted: 05.13.19 09.40		Date Received:	05.14.19 11.30 4 ft)
Analytical Me Tech: Analyst: Seq Number:	thod: Chloride by EPA CHE CHE 3089023	300	Date Prep:	05.14.19 15.45		Prep Method: 2 % Moisture: Basis:	E300P Wet Weight	
Parameter		Cas Number	Result	RL	Units	Analysis Dat	te Flag	Dil
Chloride		16887-00-6	180	5.05	mg/kg	05.14.19 19.3	7	1
Analytical Me	thod: TPH by SW8015	Mod				Prep Method: '	TX1005P	
Tech: Analyst: Seq Number:	ARM ARM 3089071		Date Prep:	05.14.19 17.00		% Moisture: Basis:	Wet Weight	
Parameter		Cas Number	Result	RL	Units	Analysis Dat	te Flag	Dil

1								
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	05.15.19 03.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	17.8	15.0		mg/kg	05.15.19 03.51		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0		mg/kg	05.15.19 03.51	U	1
Total TPH	PHC635	17.8	15.0		mg/kg	05.15.19 03.51		1
Total GRO-DRO	PHC628	17.8	15.0		mg/kg	05.15.19 03.51		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	100	%	70-135	05.15.19 03.51		
o-Terphenyl		84-15-1	100	%	70-135	05.15.19 03.51		





LT Environmental, Inc., Arvada, CO

Sample Id:	FS01	Matrix:	Soil	Date Received	:05.14.19 11.30
Lab Sample Id	: 624165-001	Date Collected	: 05.13.19 09.40	Sample Depth	:4 ft
Analytical Me Tech: Analyst: Seq Number:	thod: BTEX by EPA 8021B SCM SCM 3089051	Date Prep:	05.14.19 11.45	Prep Method: % Moisture: Basis:	SW5030B Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	05.14.19 19.00	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	05.14.19 19.00	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	05.14.19 19.00	U	1
m,p-Xylenes	179601-23-1	< 0.00399	0.00399		mg/kg	05.14.19 19.00	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	05.14.19 19.00	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	05.14.19 19.00	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	05.14.19 19.00	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	104	%	70-130	05.14.19 19.00		
1,4-Difluorobenzene		540-36-3	102	%	70-130	05.14.19 19.00		



o-Terphenyl

Certificate of Analytical Results 624165



LT Environmental, Inc., Arvada, CO

BEU 039

Chloride		16887-00-6	742	5.00	mg/kg	05.14.19 19.44		1
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Seq Number:	3089023							
Analyst:	CHE		Date Prep:	05.14.19 15.45		Basis: We	et Weight	
Tech:	CHE					% Moisture:		
Analytical Me	ethod: Chloride by EPA	300				Prep Method: E3	00P	
Lab Sample I	d: 624165-002		Date Colle	cted: 05.13.19 09.50		Sample Depth: 4 f	t	
Sample Id:	FS02		Matrix:	Soil		Date Received:05.	14.19 11.3	0

Analytical Method: TPH by SW801	15 Mod				P	Prep Method: TX	1005P	
Tech: ARM					9	6 Moisture:		
Analyst: ARM		Date Prep	o: 05.14	19 17.00	E	Basis: We	t Weight	
Seq Number: 3089071		-						
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	05.15.19 04.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0		mg/kg	05.15.19 04.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0		mg/kg	05.15.19 04.11	U	1
Total TPH	PHC635	<15.0	15.0		mg/kg	05.15.19 04.11	U	1
Total GRO-DRO	PHC628	<15.0	15.0		mg/kg	05.15.19 04.11	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	102	%	70-135	05.15.19 04.11		
o-Terphenyl		84-15-1	101	%	70-135	05.15.19 04.11		





LT Environmental, Inc., Arvada, CO

Sample Id:	FS02	Matrix:	Soil	Date Received	:05.14.19 11.30
Lab Sample Id	: 624165-002	Date Collected	: 05.13.19 09.50	Sample Depth: 4 ft	
Analytical Me Tech: Analyst: Seq Number:	thod: BTEX by EPA 8021B SCM SCM 3089051	Date Prep:	05.14.19 11.45	Prep Method: % Moisture: Basis:	SW5030B Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00202	0.00202		mg/kg	05.14.19 19.19	U	1
Toluene	108-88-3	< 0.00202	0.00202		mg/kg	05.14.19 19.19	U	1
Ethylbenzene	100-41-4	< 0.00202	0.00202		mg/kg	05.14.19 19.19	U	1
m,p-Xylenes	179601-23-1	< 0.00403	0.00403		mg/kg	05.14.19 19.19	U	1
o-Xylene	95-47-6	< 0.00202	0.00202		mg/kg	05.14.19 19.19	U	1
Total Xylenes	1330-20-7	< 0.00202	0.00202		mg/kg	05.14.19 19.19	U	1
Total BTEX		< 0.00202	0.00202		mg/kg	05.14.19 19.19	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	102	%	70-130	05.14.19 19.19		
1,4-Difluorobenzene		540-36-3	103	%	70-130	05.14.19 19.19		





LT Environmental, Inc., Arvada, CO

Sample Id: SW01		Matrix:	Soil		Date Received:05.	14.19 11.3	0
Lab Sample Id: 624165-003		Date Collec	cted: 05.13.19 09.30		Sample Depth: 0 -	4 ft	
Analytical Method: Chloride by EP	A 300				Prep Method: E30)0P	
Tech: CHE					% Moisture:		
Analyst: CHE		Date Prep:	05.14.19 16.15		Basis: We	t Weight	
Seq Number: 3089030		-					
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1560	25.0	mg/kg	05.14.19 18.38		5
Analytical Method: TPH by SW801	5 Mod				Prep Method: TX	1005P	
Tech: ARM					% Moisture:		
Analyst: ARM		Date Prep:	05.14.19 17.00		Basis: We	t Weight	
Seq Number: 3089071							
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.15.19 04.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.15.19 04.31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.15.19 04.31	U	1

					00			
Total TPH	PHC635	<15.0	15.0		mg/kg	05.15.19 04.31	U	1
Total GRO-DRO	PHC628	<15.0	15.0		mg/kg	05.15.19 04.31	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	102	%	70-135	05.15.19 04.31		
o-Terphenyl		84-15-1	102	%	70-135	05.15.19 04.31		





LT Environmental, Inc., Arvada, CO

Sample Id:	SW01	Matrix:	Soil	Date Received	:05.14.19 11.30	
Lab Sample Id	: 624165-003	Date Collected	: 05.13.19 09.30	Sample Depth: 0 - 4 ft		
Analytical Met Tech: Analyst: Seq Number:	thod: BTEX by EPA 8021B SCM SCM 3089051	Date Prep:	05.14.19 11.45	Prep Method: % Moisture: Basis:	SW5030B Wet Weight	

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00199	0.00199		mg/kg	05.14.19 19.38	U	1
Toluene	108-88-3	< 0.00199	0.00199		mg/kg	05.14.19 19.38	U	1
Ethylbenzene	100-41-4	< 0.00199	0.00199		mg/kg	05.14.19 19.38	U	1
m,p-Xylenes	179601-23-1	< 0.00398	0.00398		mg/kg	05.14.19 19.38	U	1
o-Xylene	95-47-6	< 0.00199	0.00199		mg/kg	05.14.19 19.38	U	1
Total Xylenes	1330-20-7	< 0.00199	0.00199		mg/kg	05.14.19 19.38	U	1
Total BTEX		< 0.00199	0.00199		mg/kg	05.14.19 19.38	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	101	%	70-130	05.14.19 19.38		
1,4-Difluorobenzene		540-36-3	102	%	70-130	05.14.19 19.38		



Surrogate

o-Terphenyl

1-Chlorooctane

Certificate of Analytical Results 624165



LT Environmental, Inc., Arvada, CO

BEU 039

Sample Id: SW02		Matrix:	Soil		Date Received:05.1	14.19 11.3	0
ab Sample Id: 624165-004 Analytical Method: Chloride by EPA 300 Yech: CHE		Date Collec	cted: 05.13.19 09.55		Sample Depth: 0 - 4	4 ft	
Analytical Method: Chloride by EP	PA 300				Prep Method: E30	0P	
Tech: CHE					% Moisture:		
Analyst: CHE		Date Prep:	05.14.19 16.15		Basis: Wet	t Weight	
Seq Number: 3089030		1					
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	446	4.96	mg/kg	05.14.19 19.00		1
Analytical Method:TPH by SW80Tech:ARMAnalyst:ARMSeq Number:3089071	15 Mod	Date Prep:	05.14.19 17.00		Prep Method: TX % Moisture: Basis: Wet	1005P t Weight	
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	05.15.19 04.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	05.15.19 04.50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	05.15.19 04.50	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	05.15.19 04.50	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	05.15.19 04.50	U	1
			%				

Units

%

%

Recovery

102

101

Limits

70-135

70-135

Cas Number

111-85-3

84-15-1

Analysis Date

05.15.19 04.50

05.15.19 04.50

Flag





LT Environmental, Inc., Arvada, CO

Sample Id:	SW02	Matrix:	Soil	Date Received	:05.14.19 11.30
Lab Sample Id	: 624165-004	Date Collected	: 05.13.19 09.55	Sample Depth: 0 - 4 ft	
Analytical Me Tech: Analyst: Seq Number:	thod: BTEX by EPA 8021B SCM SCM 3089051	Date Prep:	05.14.19 11.45	Prep Method: % Moisture: Basis:	SW5030B Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00201	0.00201		mg/kg	05.14.19 19.57	U	1
Toluene	108-88-3	< 0.00201	0.00201		mg/kg	05.14.19 19.57	U	1
Ethylbenzene	100-41-4	< 0.00201	0.00201		mg/kg	05.14.19 19.57	U	1
m,p-Xylenes	179601-23-1	< 0.00402	0.00402		mg/kg	05.14.19 19.57	U	1
o-Xylene	95-47-6	< 0.00201	0.00201		mg/kg	05.14.19 19.57	U	1
Total Xylenes	1330-20-7	< 0.00201	0.00201		mg/kg	05.14.19 19.57	U	1
Total BTEX		< 0.00201	0.00201		mg/kg	05.14.19 19.57	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	103	%	70-130	05.14.19 19.57		
4-Bromofluorobenzene		460-00-4	102	%	70-130	05.14.19 19.57		





LT Environmental, Inc., Arvada, CO

Sample Id: Lab Sample Id	SW03 : 624165-005		Matrix: Date Collec	Soil cted: 05.13.19 10.40		Date Received:05. Sample Depth: 0 - 4	4.19 11.3 4 ft	0
Analytical Met Tech: Analyst: Seq Number:	thod: Chloride by EPA CHE CHE 3089030	300	Date Prep:	Date Prep: 05.14.19 16.15		Prep Method: E300P % Moisture: Basis: Wet We		
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride		16887-00-6	1150	5.00	mg/kg	05.14.19 19.07		1
Analytical Met Tech: Analyst: Seq Number:	thod: TPH by SW8015 ARM ARM 3089071	Mod	Date Prep:	05.14.19 17.00		Prep Method: TX % Moisture: Basis: Wet	1005P : Weight	
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range H	Iydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.15.19 05.10	U	1
Diesel Range Or	ganics (DRO)	C10C28DRO	134	15.0	mg/kg	05.15.19 05.10		1
Motor Oil Range H	Iydrocarbons (MRO)	PHCG2835	18.3	15.0	mg/kg	05.15.19 05.10		1
Total TPH		PHC635	152	15.0	mg/kg	05.15.19 05.10		1
Total GRO-DRO)	PHC628	134	15.0	mg/kg	05.15.19 05.10		1

	,	1110020	134 15.0		mg/ ng	05.15.17 05.10		
Surrogate		Cas N	umber Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooc	tane	111-85-	3 104	4 %	70-135	05.15.19 05.10		
o-Terpheny	1	84-15-1	104	4 %	70-135	05.15.19 05.10		
0-replieny	1	04-15-1	10-	+ /0	70-155	05.15.19 05.1	0	0





LT Environmental, Inc., Arvada, CO

Sample Id:	SW03	Matrix:	Soil	Date Received	:05.14.19 11.30
Lab Sample Id	: 624165-005	Date Collected	: 05.13.19 10.40	Sample Depth	:0 - 4 ft
Analytical Mer Tech: Analyst: Seq Number:	thod: BTEX by EPA 8021B SCM SCM 3089051	Date Prep:	05.14.19 11.45	Prep Method: % Moisture: Basis:	SW5030B Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	05.14.19 20.16	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	05.14.19 20.16	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	05.14.19 20.16	U	1
m,p-Xylenes	179601-23-1	< 0.00399	0.00399		mg/kg	05.14.19 20.16	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	05.14.19 20.16	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	05.14.19 20.16	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	05.14.19 20.16	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	101	%	70-130	05.14.19 20.16		
1,4-Difluorobenzene		540-36-3	100	%	70-130	05.14.19 20.16		



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.
- RL Reporting Limit
- MDL Method Detection LimitSDLSample Detection LimitLOD Limit of Detection
- PQL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation
- DL Method Detection Limit
- NC Non-Calculable

SMP Clier	nt Sample	BLK	Method Blank	
BKS/LCS	Blank Spike/Laboratory Control Sample	BKSD/LCSD	Blank Spike Duplicate/Labor	atory 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



Parameter

Chloride

QC Summary 624165

LT Environmental, Inc.

BEU 039

Analytical Method:	Chloride by EPA 3	00						Р	rep Meth	od: E30	0P	
Seq Number:	3089023			Matrix:	Solid				Date Pr	ep: 05.1	4.19	
MB Sample Id:	7677847-1-BLK		LCS Sat	mple Id:	7677847-	1-BKS		LCS	D Sampl	e Id: 7677	7847-1-BSD	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Lin	nit Units	Analysis Date	Flag
Chloride	<5.00	250	247	99	244	98	90-110	1	20	mg/kg	05.14.19 16:08	
Analytical Method:	Chloride by EPA 3	00						Р	rep Meth	od: E30	0P	
Seq Number:	3089030			Matrix:	Solid				Date Pr	ep: 05.1	4.19	
MB Sample Id:	7677848-1-BLK		LCS Sat	mple Id:	7677848-	1-BKS		LCS	D Sampl	e Id: 767	7848-1-BSD	
Parameter	MB	Spike	LCS		LCSD	LCSD	Limits	%RPD	RPD Lin	it Units	Analysis	Flag

Result

255

%Rec

102 90-110

0

20

mg/kg

Analytical Method:	Chloride by EPA	300						Pı	rep Metho	od: E30	0P	
Seq Number:	3089023			Matrix:	Soil				Date Pr	ep: 05.1	4.19	
Parent Sample Id:	624132-001		MS Sar	nple Id:	624132-00	01 S		MS	D Sample	e Id: 624	132-001 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Lim	it Units	Analysis Date	Flag
Chloride	17.3	3 251	277	103	275	103	90-110	1	20	mg/kg	05.14.19 16:29	

Result

256

Result

< 5.00

Amount

250

%Rec

102

Analytical Method:	Chloride by E	PA 30	0						Pi	rep Metho	od: E30	00P	
Seq Number:	3089023				Matrix:	Soil				Date Pre	ep: 05.1	14.19	
Parent Sample Id:	624177-001			MS San	nple Id:	624177-00	01 S		MS	D Sample	e Id: 624	177-001 SD	
Parameter	Pa Re	rent esult	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Lim	it Units	Analysis Date	Flag
Chloride		2.93	252	357	141	350	138	90-110	2	20	mg/kg	05.14.19 18:14	Х

Analytical Method:	Chloride by EPA 30	0						P	rep Metho	od: E30)0P	
Seq Number:	3089030			Matrix:	Soil				Date Pro	ep: 05.	14.19	
Parent Sample Id:	624165-003		MS San	nple Id:	624165-00)3 S		MS	D Sample	e Id: 624	165-003 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Lim	it Units	Analysis Date	Flag
Chloride	1560	250	2870	524	2840	512	90-110	1	20	mg/kg	05.14.19 18:46	Х

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

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

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

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

Date

05.14.19 18:24



LT Environmental, Inc.

BEU 039

Analytical Method:	Chloride by EPA 30)0						P	rep Meth	od: E30	0P	
Seq Number:	3089030			Matrix:	Soil				Date Pr	ep: 05.1	4.19	
Parent Sample Id:	624167-008		MS San	nple Id:	624167-00)8 S		MS	D Sample	e Id: 624	167-008 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Lim	it Units	Analysis Date	Flag
Chloride	2110	253	3100	391	3090	387	90-110	0	20	mg/kg	05.14.19 20:28	х

Analytical Method: Seq Number: MB Sample Id:	TPH by SV 3089071 7677881-1-	V8015 M BLK	od	LCS San	Matrix:	Solid 7677881-3	I-BKS		F LCS	Prep Method Date Prep SD Sample	1: TX 5: 05. [d: 767	1005P 14.19 7881-1-BSD	
Parameter	10110011	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbo	ns (GRO)	<8.00	1000	1080	108	1110	111	70-135	3	20	mg/kg	05.14.19 22:11	
Diesel Range Organics (I	DRO)	<8.13	1000	1040	104	1080	108	70-135	4	20	mg/kg	05.14.19 22:11	
Surrogate		MB %Rec	MB Flag	L %]	CS Rec	LCS Flag	LCSE %Rec) LCSI 2 Flag	D I g	Limits	Units	Analysis Date	
1-Chlorooctane		102		1	26		127		7	0-135	%	05.14.19 22:11	
o-Terphenyl		103		1	06		115		7	0-135	%	05.14.19 22:11	

TPH by SV	W8015 M	od			a .1			F	Prep Method	l: TX	1005P	
3089071				Matrix:	Soil				Date Prep	D: 05.1	4.19	
624024-00	1		MS Sar	nple Id:	624024-00	01 S		MS	SD Sample l	ld: 624	024-001 SD	
	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
ons (GRO)	13.6	999	1000	99	996	98	70-135	0	20	mg/kg	05.14.19 23:11	
(DRO)	263	999	1150	89	1140	88	70-135	1	20	mg/kg	05.14.19 23:11	
			N %	AS Rec	MS Flag	MSD %Rec	MSI Flag) I g	limits	Units	Analysis Date	
			1	20		120		7	0-135	%	05.14.19 23:11	
			1	05		97		7	0-135	%	05.14.19 23:11	
	TPH by SV 3089071 624024-00 ons (GRO) (DRO)	TPH by SW8015 M 3089071 624024-001 Parent Result ons (GRO) 13.6 (DRO) 263	TPH by SW8015 Mod 3089071 3089071 624024-001 Parent Result Ons (GRO) 13.6 999 (DRO) 263 999	TPH by SW8015 Mod 3089071 624024-001 MS Sar Parent Spike MS Result Amount Result ons (GRO) 13.6 999 1000 (DRO) 263 999 1150	TPH by SW8015 Mod 3089071 Matrix: 624024-001 MS Sample Id: Parent Result Spike Amount MS Result %Rec 0ns (GRO) 13.6 999 1000 99 (DRO) 263 999 1150 89 MS MS %Rec 120 105	TPH by SW8015 Mod 3089071 Matrix: Soil 624024-001 MS Sample Id: 624024-00 Parent Result Spike Amount MS MS MSD Result 0ns (GRO) 13.6 999 1000 99 996 (DRO) 263 999 1150 89 1140 MS MS MS MS MS 120 105 105 120	TPH by SW8015 Mod 3089071 Matrix: Soil 624024-001 MS Sample Id: 624024-001 S Parent Result Spike Amount MS MS MSD MSD 0ns (GRO) 13.6 999 1000 99 996 98 (DRO) 263 999 1150 89 1140 88 MS MS MS MSD MSD %Rec 120 120 120 105 97 97	TPH by SW8015 Mod 3089071 Matrix: Soil 624024-001 MS Sample Id: 624024-001 S Parent Result Spike Amount MS MS MSD MSD Limits 0ns (GRO) 13.6 999 1000 99 996 98 70-135 (DRO) 263 999 1150 89 1140 88 70-135 Links MS MS MS MS MS MSI Flag MSI 120 120 120 97 120 97 120	TPH by SW8015 Mod In the second of the secon	TPH by SW8015 Mod Prep Method 3089071 Matrix: Soil Date Prep 624024-001 MS Sample Ici 624024-001 S MSD MSD Sample Ici Parent Result Spike Amount MS Result MSD MSC Result MSD MSD Mode MSD MSD MOD MSD MSD MOD	TPH by SW8015 Mod Prep Method: TAX 3089071 Matrix: Soil Date Prep: 05.1 624024-001 MS Sample Id 624024-001 S MSD Sample Id 024024-001 S MSD Sample Id 024024-001 S MSD Sample Id 024024-001 S 0 <td< td=""><td>TPH by SW8015 Mod Prep Method: IS TALLOS PL 3089071 Matrix Soil Date Prep: $05.14.19$ $624024-001$ MS Sample Id $624024-021$ $MSS = MSS$ $MSS = MSS = MSS = MSS$ $MSS = MSS = MS$</td></td<>	TPH by SW8015 Mod Prep Method: IS TALLOS PL 3089071 Matrix Soil Date Prep: $05.14.19$ $624024-001$ MS Sample Id $624024-021$ $MSS = MSS$ $MSS = MSS = MSS = MSS$ $MSS = MSS = MS$

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

LCS = Laboratory Control Sample A = Parent Result C = MS/LCS Result E = MSD/LCSD Result MS = Matrix Spike B = Spike Added D = MSD/LCSD % Rec



LT Environmental, Inc.

BEU 039

Analytical Method: BTEX

Analytical Method:	BTEX by EPA 8021	В]	Prep Method	l: SW	/5030B					
Seq Number:	3089051]	Matrix:	Solid			Date Prep: 05.14.19								
MB Sample Id:	7677859-1-BLK		LCS San	nple Id:	7677859-	1-BKS		LCSD Sample Id: 7677859-1-BSD								
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPE	RPD Limit	Units	Analysis Date	Flag				
Benzene	< 0.000388	0.101	0.106	105	0.111	111	70-130	5	35	mg/kg	05.14.19 23:35					
Toluene	< 0.000459	0.101	0.0988	98	0.103	103	70-130	4	35	mg/kg	05.14.19 23:35					
Ethylbenzene	< 0.000569	0.101	0.105	104	0.109	109	70-130	4 35		mg/kg	05.14.19 23:35					
m,p-Xylenes	< 0.00102	0.202	0.217 107		0.226	113	113 70-130		35	mg/kg	05.14.19 23:35					
o-Xylene	< 0.000347	0.101	0.105 10		0.109	109	70-130	4	35	mg/kg	05.14.19 23:35					
Surrogate	MB %Rec	MB Flag	L0 %]	CS Rec	LCS Flag	LCSE %Rec	D LCSI E Flag	D 1 g	Limits	Units	Analysis Date					
1,4-Difluorobenzene	92		1	02		104		7	70-130	%	05.14.19 23:35					
4-Bromofluorobenzene	84		9	99		102		7	70-130	%	05.14.19 23:35					

Analytical Method:	BTEX by EPA 802	1B]	Prep Metho	d: SW	5030B							
Seq Number:	3089051		I	Matrix:	Soil			Date Prep: 05.14.19										
Parent Sample Id:	623519-001		MS San	ple Id:	623519-00	01 S		M	MSD Sample Id: 623519-001 SD									
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPE	RPD Limi	t Units	Analysis Date	Flag						
Benzene	0.00120	0.0998	0.105	104	0.110	108	70-130	5	35	mg/kg	05.14.19 12:13							
Toluene	0.00286	0.0998	0.0903	88	0.0992	95	70-130	9	35	mg/kg	05.14.19 12:13							
Ethylbenzene	0.00254	0.0998	0.0874	85	0.0989	95	70-130	12	35	mg/kg	05.14.19 12:13							
m,p-Xylenes	0.00644	0.200	0.178	86	0.203	98	70-130	13	35	mg/kg	05.14.19 12:13							
o-Xylene	0.00299	0.0998	0.0862	83	0.0984	94	70-130	13	35	mg/kg	05.14.19 12:13							
Surrogate			M %1	IS Rec	MS Flag	MSD %Rec	MSD Flag]	Limits	Units	Analysis Date							
1,4-Difluorobenzene			10	02		102		7	70-130	%	05.14.19 12:13							
4-Bromofluorobenzene			10	01		101		7	70-130	%	05.14.19 12:13							

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

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

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

MS = Matrix Spike B = Spike AddedD = MSD/LCSD % Rec

	5	1 Palub /2	Relinquished by:	Notice: Signature of this do of service. Xenco will be lia of Xenco. A minimum char	Circle Method(s)	T-1-1 000 T 100			SW03	ZOMS	IOUS	FSOZ	1501	Sample Identi	Sample Custody Seals	Cooler Custody Seals:	Received Intact:	Temperature (°C):	SAMPLE RECEI	Sampler's Name: F	P.O. Number:	Project Number:	Project Name:	Phone: 4	City, State ZIP: N	Address: 3	Company Name: L	Project Manager:			
			(Signature)	cument and relinquishment ible only for the cost of sam <u>j</u> ge of \$75.00 will be applied t	and Metal(s) to be a				4				s	fication Matrix		Yes No (NA	Yes No	3.113.0	>T Tęmp Blank	Robert McAfee	2RP-529		BEV 039	32.704.5178	Aidland, TX 79705	300 North A Street	T Environmental, Inc.	shley Ager			
		(WAR	Received by: (Sig	of samples constitutes a v oles and shall not assume o each project and a charg	alyzed TCLP				ahol A	095	693	1 095	1/15/19 694	Date Tim Sampled Samp	J Total Contai	Correction Fa		Thermor	: Yes (No) We		2			Ē	-		, Permian office		Hobbs,NM (57	H	
		At a	anature)	alid purchase order from any responsibility for any ge of \$5 for each sample s	13PPM Texas 11 / SPLP 6010: 8RCI				0-41	5 0-41	0-4/	0 4'	, h .	e Depth	ners:			neter ID	t Ice: Yes No	Due Date: 05/14/19	Rush: 24 hr	Routine	Turn Around	mail: aager@ltenv.c	City, State ZIP:	Address:	Company Name	Bill to: (if different)	violand, IX (452-704-544 5-392-7550) Phoenix,A	uston, TX (281) 240-420	
		04:11 11/12/13	Date/Time	client company to Xenco, its losses or expenses incurre ubmitted to Xenco, but not	Al Sb As Ba Be RA Sb As Ba Be					XXXX	x X X		X X V	Numi TPH (E BTEX Chlori	EPA 8 (EPA de (E	6 Co 015) 0=80 PA 3	ntai 021) 00.0)	ners 					-	om rmcafee@ltenv.c	Carlsbad, NM		2: XTO-Energy	Kyle Littrel	iu) EL Paso, i x (915)585 Z (480-355-0900) Atlanta	0 Dallas,TX (214) 902-03	Chain of C
	6	4 N	Relinquished by	s affillates and subcontract ed by the client if such loss analyzed. These terms will	B Cd Ca Cr Co (Cd Cr Co Cu Pb I		acces																ANALYS	Som					-3443 Lubbock, IX (806), ,GA (770-449-8800) Tam	00 San Antonio, TX (210)	ustody
			y: (Signature)	ors. It assigns standard t es are due to circumstanc be enforced unless previo	Su Fe Pb Mg Mn Mn Mo Ni Se Ag			3															S REQUEST	Deliverab	Reporting	State	Program		794-1296 Ipa,FL (813-6 <u>20-2000)</u>	509-3334	
CULL		MARIA.	Received by/(Si	arms and conditions as beyond the control usly negotiated.	Mo Ni K Se Ag Si Ti U															*****				es: EDD	Level II Devel III [of Project:	UST/PST	Work Or	www.xenco.		Work Orde
MAT 1 PA		S	gnature)		iO2 Na Sr Ti Sn 1631 / 245.1 / 74				<				Compa	Sample	lab, if rece	TAT starts the							Work C	ADaPT Othe	ST/UST RRP		rownfields RC	der Comments	com Page		er No: (02,
Sed Date 051418 Rev. 2018.1		1419 1130	Date/Time		U V Zn 170 / 7471 : Hg								site	Comments	sived by 4:30pm	dav recevied by the		-)rder Notes	۶r:		!		· · · · · · · · · · · · · · · · · · ·	()		2014

Final 1.000



After printing this label:

1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.

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XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc. Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient Date/ Time Received: 05/14/2019 11:30:00 AM Temperature Measuring device used : R8 Work Order #: 624165 Comments Sample Receipt Checklist 3 #1 *Temperature of cooler(s)? #2 *Shipping container in good condition? Yes #3 *Samples received on ice? Yes #4 *Custody Seals intact on shipping container/ cooler? N/A #5 Custody Seals intact on sample bottles? N/A #6*Custody Seals Signed and dated? N/A #7 *Chain of Custody present? Yes #8 Any missing/extra samples? No #9 Chain of Custody signed when relinquished/ received? Yes #10 Chain of Custody agrees with sample labels/matrix? Yes #11 Container label(s) legible and intact? Yes #12 Samples in proper container/ bottle? Yes #13 Samples properly preserved? Yes #14 Sample container(s) intact? Yes #15 Sufficient sample amount for indicated test(s)? Yes #16 All samples received within hold time? Yes #17 Subcontract of sample(s)? No #18 Water VOC samples have zero headspace? N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Katie Lowe

Date: 05/14/2019

Checklist reviewed by:

fession kramer

Jessica Kramer

Date: 05/14/2019

Analytical Report 624776

for

LT Environmental, Inc.

Project Manager: Ashley Ager

BEU 039

20-MAY-19

Collected By: Client





1211 W. Florida Ave Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122): Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054) Oklahoma (2017-142)

> Xenco-Dallas (EPA Lab Code: TX01468): Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14) Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20) Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18) Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4) Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757) Xenco-Atlanta (LELAP Lab ID #04176) Xenco-Tampa: Florida (E87429), North Carolina (483)



20-MAY-19



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

Reference: XENCO Report No(s): 624776 BEU 039 Project Address: ---

Ashley Ager:

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) 624776. 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. 624776 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,

Kalei Stout Midland Laboratory Director

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Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America



Sample Cross Reference 624776



LT Environmental, Inc., Arvada, CO

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS03	S	05-17-19 12:10	5 ft	624776-001
FS04	S	05-17-19 12:15	5 ft	624776-002
SW04	S	05-17-19 12:40	0 - 5 ft	624776-003
SW05	S	05-17-19 12:35	0 - 5 ft	624776-004



CASE NARRATIVE

Client Name: LT Environmental, Inc. Project Name: BEU 039

Project ID: ---Work Order Number(s): 624776 Report Date: 20-MAY-19 Date Received: 05/18/2019

Sample receipt non conformances and comments:

05/20/19: revised report to correct sample ID names per client request.

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3089496 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030. Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected. Samples affected are: 624776-004.


Project Id:---Contact:Ashley AgerProject Location:---

Certificate of Analysis Summary 624776

LT Environmental, Inc., Arvada, CO Project Name: BEU 039



Date Received in Lab:Sat May-18-19 08:00 amReport Date:20-MAY-19Project Manager:Jessica Kramer

	Lab Id:	624776-0	001	624776-0	002	624776-	003	624776-	004	
Anglusia Deguested	Field Id:	FS03		FS04		SW04		SW05	i	
Analysis Kequesiea	Depth:	5- ft		5- ft		0-5 ft	:	0-5 ft	t	
	Matrix:	SOIL		SOIL		SOIL	,	SOIL		
	Sampled:	May-17-19	12:10	May-17-19	12:15	May-17-19	12:40	May-17-19	12:35	
BTEX by EPA 8021B	Extracted:	May-19-19	20:15	May-19-19	20:15	May-19-19	20:15	May-19-19	20:15	
	Analyzed:	May-19-19	23:44	May-20-19	00:03	May-20-19	00:22	May-20-19	00:41	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	
Benzene		< 0.00202	0.00202	< 0.00200	0.00200	< 0.00198	0.00198	< 0.00201	0.00201	
Toluene		< 0.00202	0.00202	< 0.00200	0.00200	< 0.00198	0.00198	< 0.00201	0.00201	
Ethylbenzene		< 0.00202	0.00202	< 0.00200	0.00200	< 0.00198	0.00198	< 0.00201	0.00201	
m,p-Xylenes		< 0.00403	0.00403	< 0.00401	0.00401	< 0.00397	0.00397	< 0.00402	0.00402	
o-Xylene		< 0.00202	0.00202	< 0.00200	0.00200	< 0.00198	0.00198	< 0.00201	0.00201	
Total Xylenes		< 0.00202	0.00202	< 0.00200	0.00200	< 0.00198	0.00198	< 0.00201	0.00201	
Total BTEX		< 0.00202	0.00202	< 0.00200	0.00200	< 0.00198	0.00198	< 0.00201	0.00201	
Chloride by EPA 300	Extracted:	May-18-19	08:05	May-18-19	08:05	May-18-19	08:05	May-18-19	08:05	
	Analyzed:	May-18-19	15:13	May-18-19	15:18	May-18-19	15:23	May-18-19	15:29	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	
Chloride		265	25.0	422	25.1	238	4.99	483	4.96	
TPH by SW8015 Mod	Extracted:	May-18-19	08:00	May-18-19	08:00	May-18-19	08:00	May-18-19	08:00	
	Analyzed:	May-18-19	17:58	May-18-19	18:19	May-18-19	18:39	May-18-19	18:59	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	
Diesel Range Organics (DRO)		<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	
Total TPH		<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	
Total GRO-DRO		<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	

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

Kalei Stout Midland Laboratory Director





LT Environmental, Inc., Arvada, CO

Sample Id:	FS03		Matrix:	Soil		Date Received	:05.18.19 08.0)
Lab Sample Id	: 624776-001		Date Collect	ed: 05.17.19 12.10		Sample Depth:	:5 ft	
Analytical Met	thod: Chloride by EPA 30	00				Prep Method:	E300P	
Analyst:	CHE		Date Prep:	05.18.19 08.05		Basis:	Wet Weight	
Seq Number:	3089467							
Parameter		Cas Number	Result	RL	Units	Analysis Da	nte Flag	Dil

Chloride	16887-00-6	265	25.0	mg/kg	05.18.19 15.13	5

Analytical Method: TPH by SW801	5 Mod				P	Prep Method: TX	1005P	
Tech: ARM					9	6 Moisture:		
Analyst: ARM		Date Pre	p: 05.18	.19 08.00	E	Basis: We	t Weight	
Seq Number: 3089546								
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	05.18.19 17.58	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0		mg/kg	05.18.19 17.58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0		mg/kg	05.18.19 17.58	U	1
Total TPH	PHC635	<15.0	15.0		mg/kg	05.18.19 17.58	U	1
Total GRO-DRO	PHC628	<15.0	15.0		mg/kg	05.18.19 17.58	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	107	%	70-135	05.18.19 17.58		
o-Terphenyl		84-15-1	109	%	70-135	05.18.19 17.58		





LT Environmental, Inc., Arvada, CO

Sample Id:	FS03	Matrix:	Soil	Date Received	:05.18.19 08.00
Lab Sample Id	: 624776-001	Date Collected	: 05.17.19 12.10	Sample Depth:	:5 ft
Analytical Met Tech: Analyst: Seq Number:	thod: BTEX by EPA 8021B SCM SCM 3089496	Date Prep:	05.19.19 20.15	Prep Method: % Moisture: Basis:	SW5030B Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00202	0.00202		mg/kg	05.19.19 23.44	U	1
Toluene	108-88-3	< 0.00202	0.00202		mg/kg	05.19.19 23.44	U	1
Ethylbenzene	100-41-4	< 0.00202	0.00202		mg/kg	05.19.19 23.44	U	1
m,p-Xylenes	179601-23-1	< 0.00403	0.00403		mg/kg	05.19.19 23.44	U	1
o-Xylene	95-47-6	< 0.00202	0.00202		mg/kg	05.19.19 23.44	U	1
Total Xylenes	1330-20-7	< 0.00202	0.00202		mg/kg	05.19.19 23.44	U	1
Total BTEX		< 0.00202	0.00202		mg/kg	05.19.19 23.44	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	99	%	70-130	05.19.19 23.44		
4-Bromofluorobenzene		460-00-4	121	%	70-130	05.19.19 23.44		





5

LT Environmental, Inc., Arvada, CO

BEU 039

Sample Id:	FS04		Matrix:	Soil		Date Received	1:05.18.19 08.00)
Lab Sample Id	: 624776-002		Date Collect	ed: 05.17.19 12.15		Sample Depth	:5 ft	
Analytical Met	thod: Chloride by EPA 30	00				Prep Method:	E300P	
Tech:	SPC					% Moisture:		
Analyst:	CHE		Date Prep:	05.18.19 08.05		Basis:	Wet Weight	
Seq Number:	3089467							
Parameter		Cas Number	Result	RL	Units	Analysis Da	ate Flag	Dil

 Chloride
 16887-00-6
 422
 25.1
 mg/kg
 05.18.19
 15.18

Analytical Method: TPH by SW801	5 Mod			I	Prep Method: TX	K1005P	
Tech: ARM				ç	% Moisture:		
Analyst: ARM		Date Prep:	05.18.19 08.00	I	Basis: W	et Weight	
Seq Number: 3089546							
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	05.18.19 18.19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	05.18.19 18.19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	05.18.19 18.19	U	1

Total TPH	PHC635	<14.9	14.9		mg/kg	05.18.19 18.19	U	1
Total GRO-DRO	PHC628	<14.9	14.9		mg/kg	05.18.19 18.19	U	1
S		Cas Namban	%	Limita	T ::4-	Analysis Data	Elsa	
Surrogate		Cas Number	Recovery	Units	Limits	Analysis Date	riag	
1-Chlorooctane		111-85-3	Recovery 104	%	70-135	05.18.19 18.19	Flag	





LT Environmental, Inc., Arvada, CO

Sample Id: FS04	Matrix:	Soil	Date Received	:05.18.19 08.00
Lab Sample Id: 624776-002	Date Collected	: 05.17.19 12.15	Sample Depth	:5 ft
Analytical Method: BTEX by EPA 8021B Tech: SCM			Prep Method: % Moisture:	SW5030B
Analyst: SCM Seq Number: 3089496	Date Prep:	05.19.19 20.15	Basis:	Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	05.20.19 00.03	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	05.20.19 00.03	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	05.20.19 00.03	U	1
m,p-Xylenes	179601-23-1	< 0.00401	0.00401		mg/kg	05.20.19 00.03	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	05.20.19 00.03	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	05.20.19 00.03	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	05.20.19 00.03	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	128	%	70-130	05.20.19 00.03		
1,4-Difluorobenzene		540-36-3	98	%	70-130	05.20.19 00.03		



1-Chlorooctane

o-Terphenyl

Certificate of Analytical Results 624776



1

LT Environmental, Inc., Arvada, CO

BEU 039

Sample Id:	SW04		Matrix:	Soil		Date Received	:05.18.19 08.	00
Lab Sample Id	: 624776-003		Date Collec	ed: 05.17.19 12.40		Sample Depth	:0 - 5 ft	
Analytical Met	thod: Chloride by EPA 30	00				Prep Method:	E300P	
Tech:	SPC					% Moisture:		
Analyst:	CHE		Date Prep:	05.18.19 08.05		Basis:	Wet Weight	
Seq Number:	3089467							
Parameter		Cas Number	Result	RL	Units	Analysis Da	ate Flag	Dil

 Chloride
 16887-00-6
 238
 4.99
 mg/kg
 05.18.19
 15.23

111-85-3

84-15-1

Analytical Method: TPH by SW80	15 Mod				Prep Method: TX	1005P	
Tech: ARM					% Moisture:		
Analyst: ARM		Date Prep	p: 05.18.19 08.	00	Basis: We	t Weight	
Seq Number: 3089546							
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.18.19 18.39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.18.19 18.39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.18.19 18.39	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.18.19 18.39	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.18.19 18.39	U	1
Surrogate		Cas Number	% Recovery Unit	s Limits	Analysis Date	Flag	

106

105

%

%

05.18.19 18.39

05.18.19 18.39

70-135

70-135





LT Environmental, Inc., Arvada, CO

Sample Id:	SW04	Matrix:	Soil	Date Received	:05.18.19 08.00			
Lab Sample Id:	624776-003	Date Collected	: 05.17.19 12.40	Sample Depth: 0 - 5 ft				
Analytical Meth Tech: S Analyst: Seq Number: 3	hod: BTEX by EPA 8021B SCM SCM 3089496	Date Prep:	05.19.19 20.15	Prep Method: % Moisture: Basis:	SW5030B Wet Weight			

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00198	0.00198		mg/kg	05.20.19 00.22	U	1
Toluene	108-88-3	< 0.00198	0.00198		mg/kg	05.20.19 00.22	U	1
Ethylbenzene	100-41-4	< 0.00198	0.00198		mg/kg	05.20.19 00.22	U	1
m,p-Xylenes	179601-23-1	< 0.00397	0.00397		mg/kg	05.20.19 00.22	U	1
o-Xylene	95-47-6	< 0.00198	0.00198		mg/kg	05.20.19 00.22	U	1
Total Xylenes	1330-20-7	< 0.00198	0.00198		mg/kg	05.20.19 00.22	U	1
Total BTEX		< 0.00198	0.00198		mg/kg	05.20.19 00.22	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	129	%	70-130	05.20.19 00.22		
1,4-Difluorobenzene		540-36-3	97	%	70-130	05.20.19 00.22		





LT Environmental, Inc., Arvada, CO

Sample Id:	SW05		Matrix:	Soil		Date Received:05	5.18.19 08.0	0
Lab Sample Io	d: 624776-004		Date Colle	cted: 05.17.19 12.35				
Analytical Me	ethod: Chloride by EPA	300				Prep Method: E3	300P	
Tech:	SPC					% Moisture:		
Analyst:	CHE		Date Prep:	05.18.19 08.05		Basis: W	et Weight	
Seq Number:	3089467							
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride		16887-00-6	483	4.96	mg/kg	05.18.19 15.29		1

Analytical Method: TPH by SW801	5 Mod	Prep Method: TX1005P						
Tech: ARM					%	Moisture:		
Analyst: ARM		Date Prep	o: 05.18	19 08.00	В	asis: We	t Weight	
Seq Number: 3089546		-						
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	05.18.19 18.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0		mg/kg	05.18.19 18.59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0		mg/kg	05.18.19 18.59	U	1
Total TPH	PHC635	<15.0	15.0		mg/kg	05.18.19 18.59	U	1
Total GRO-DRO	PHC628	<15.0	15.0		mg/kg	05.18.19 18.59	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	105	%	70-135	05.18.19 18.59		
o-Terphenyl		84-15-1	105	%	70-135	05.18.19 18.59		





LT Environmental, Inc., Arvada, CO

Sample Id:	SW05	Matrix:	Soil	Date Received	:05.18.19 08.00			
Lab Sample Id	: 624776-004	Date Collected	: 05.17.19 12.35	Sample Depth: 0 - 5 ft				
Analytical Met Tech: Analyst: Seq Number:	thod: BTEX by EPA 8021B SCM SCM 3089496	Date Prep:	05.19.19 20.15	Prep Method: % Moisture: Basis:	SW5030B Wet Weight			

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00201	0.00201		mg/kg	05.20.19 00.41	U	1
Toluene	108-88-3	< 0.00201	0.00201		mg/kg	05.20.19 00.41	U	1
Ethylbenzene	100-41-4	< 0.00201	0.00201		mg/kg	05.20.19 00.41	U	1
m,p-Xylenes	179601-23-1	< 0.00402	0.00402		mg/kg	05.20.19 00.41	U	1
o-Xylene	95-47-6	< 0.00201	0.00201		mg/kg	05.20.19 00.41	U	1
Total Xylenes	1330-20-7	< 0.00201	0.00201		mg/kg	05.20.19 00.41	U	1
Total BTEX		< 0.00201	0.00201		mg/kg	05.20.19 00.41	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	131	%	70-130	05.20.19 00.41	**	
1,4-Difluorobenzene		540-36-3	98	%	70-130	05.20.19 00.41		



Flagging Criteria



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

SMP Clier	nt Sample	BLK	Method Blank	
BKS/LCS	Blank Spike/Laboratory Control Sample	BKSD/LCSD	Blank Spike Duplicate/Labor	atory 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 624776

LT Environmental, Inc.

BEU 039

Analytical Method:	Chloride by EPA 30	0						Pı	ep Meth	od: E30	0P	
Seq Number:	3089467			Matrix:	Solid				Date Pr	ep: 05.1	7.19	
MB Sample Id:	7678113-1-BLK		LCS San	nple Id:	7678113-1	I-BKS		LCS	D Sample	e Id: 767	8113-1-BSD	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Lim	it Units	Analysis Date	Flag
Chloride	< 0.858	250	252	101	252	101	90-110	0	20	mg/kg	05.18.19 13:04	

Analytical Method:	Chloride by	EPA 30	0						Pı	ep Metho	od: E30	0P	
Seq Number:	3089467				Matrix:	Soil				Date Pre	ep: 05.1	7.19	
Parent Sample Id:	624749-004			MS San	nple Id:	624749-00)4 S		MS	D Sample	e Id: 624	749-004 SD	
Parameter		Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Lim	it Units	Analysis Date	Flag
Chloride		11.7	252	272	103	264	100	90-110	3	20	mg/kg	05.18.19 13:20	

Analytical Method:	Chloride by EPA 30	00						P	rep Meth	od: E30	00P	
Seq Number:	3089467			Matrix:	Soil				Date Pr	ep: 05.	17.19	
Parent Sample Id:	624750-006		MS Sar	nple Id:	624750-00)6 S		MS	D Sample	e Id: 624	750-006 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Lim	it Units	Analysis Date	Flag
Chloride	110	250	362	101	362	101	90-110	0	20	mg/kg	05.18.19 14:32	

Analytical Method:	TPH by S	W8015 M	od						I	Prep Method	l: TX	1005P		
Seq Number:	3089546			Matrix: Solid					Date Prep: 05.18.19					
MB Sample Id:	7678171-1-BLK			LCS Sample Id: 7678171-1-BKS			LCSD Sample Id: 7678171-1-BSD							
Parameter		MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag	
Gasoline Range Hydrocarb	ons (GRO)	<8.00	1000	1070	107	1080	108	70-135	1	20	mg/kg	05.18.19 11:53		
Diesel Range Organics	(DRO)	<8.13	1000	1040	104	1030	103	70-135	1	20	mg/kg	05.18.19 11:53		
Surrogate		MB %Rec	MB Flag	L %	CS Rec	LCS Flag	LCSI %Re) LCS c Flag	D l g	Limits	Units	Analysis Date		
1-Chlorooctane		108		1	26		123		7	70-135	%	05.18.19 11:53		
o-Terphenyl		109		1	12		110		7	70-135	%	05.18.19 11:53		

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

LCS = Laboratory Control Sample A = Parent Result C = MS/LCS Result E = MSD/LCSD Result MS = Matrix Spike B = Spike Added D = MSD/LCSD % Rec



QC Summary 624776

LT Environmental, Inc.

BEU 039

Analytical Method:	TPH by SW8015 Mod
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Analytical Method:	TPH by SW	8015 M	od						F	Prep Method	l: TX	1005P	
Seq Number:	3089546]	Matrix:	Soil				Date Prep	p: 05.	18.19	
Parent Sample Id:	624740-001			MS San	nple Id:	624740-00	01 S		MS	SD Sample	ld: 624	740-001 SD	
Parameter		Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbo	ons (GRO)	<7.99	999	1070	107	1070	107	70-135	0	20	mg/kg	05.18.19 12:54	
Diesel Range Organics (DRO)	16.7	999	1010	99	1010	100	70-135	0	20	mg/kg	05.18.19 12:54	
Surrogate				N %]	1S Rec	MS Flag	MSD %Rec	MSD c Flag	I	limits	Units	Analysis Date	
1-Chlorooctane				1	24		129		7	0-135	%	05.18.19 12:54	
o-Terphenyl				1	11		113		7	0-135	%	05.18.19 12:54	

Analytical Method:	BTEX by EPA 8021	B]	Prep Metho	d: SW	5030B	
Seq Number:	3089496			Matrix:	Solid				Date Prep	p: 05.1	19.19	
MB Sample Id:	7678141-1-BLK		LCS Sar	nple Id:	7678141-	1-BKS		LC	SD Sample	Id: 767	8141-1-BSD	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPI) RPD Limit	Units	Analysis Date	Flag
Benzene	< 0.00201	0.100	0.0962	96	0.0971	98	70-130	1	35	mg/kg	05.19.19 21:52	
Toluene	< 0.00201	0.100	0.0994	99	0.0998	100	70-130	0	35	mg/kg	05.19.19 21:52	
Ethylbenzene	< 0.00201	0.100	0.109	109	0.110	111	70-130	1	35	mg/kg	05.19.19 21:52	
m,p-Xylenes	< 0.00402	0.201	0.233	116	0.233	117	70-130	0	35	mg/kg	05.19.19 21:52	
o-Xylene	< 0.00201	0.100	0.114	114	0.114	115	70-130	0	35	mg/kg	05.19.19 21:52	
Surrogate	MB %Rec	MB Flag	L %	CS Rec	LCS Flag	LCSD %Rec	LCSI Flag)]	Limits	Units	Analysis Date	
1,4-Difluorobenzene	102		ç	94		93		-	70-130	%	05.19.19 21:52	
4-Bromofluorobenzene	107		1	10		111		-	70-130	%	05.19.19 21:52	

Analytical Method: Seq Number: Parent Sample Id:	BTEX by EPA 802 3089496 624776-001	lB	MS Sam	Matrix: ple Id:	Soil 624776-00	01 S		H MS	Prep Metho Date Prej SD Sample	d: SW p: 05.1 Id: 624	5030B 19.19 776-001 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	< 0.00199	0.0996	0.0848	85	0.0701	70	70-130	19	35	mg/kg	05.19.19 22:30	
Toluene	< 0.00199	0.0996	0.0856	86	0.0710	71	70-130	19	35	mg/kg	05.19.19 22:30	
Ethylbenzene	< 0.00199	0.0996	0.0926	93	0.0755	76	70-130	20	35	mg/kg	05.19.19 22:30	
m,p-Xylenes	< 0.00398	0.199	0.196	98	0.160	80	70-130	20	35	mg/kg	05.19.19 22:30	
o-Xylene	< 0.00199	0.0996	0.0960	96	0.0784	79	70-130	20	35	mg/kg	05.19.19 22:30	
Surrogate			M %I	IS Rec	MS Flag	MSD %Rec	MSI Flag) I ;	Limits	Units	Analysis Date	
1,4-Difluorobenzene			9	5		96		7	0-130	%	05.19.19 22:30	
4-Bromofluorobenzene			11	12		113		7	0-130	%	05.19.19 22:30	

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

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

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

MS = Matrix Spike B = Spike AddedD = MSD/LCSD % Rec

	5	3	1 Rales ?	Relinquished by:	of service. Xenco will be of Xenco. A minimum cha	Total 200.7 / 60 Circle Method(: Notice: Stanature of this d				Swoz	IOMS .	Fsoz	i Sol	Sample Iden	Sample Custody Sea	Cooler Custody Seals	Received Intact:	Temperature (°C):	SAMPLE RECE	Sampler's Name:	P.O. Number:	Project Number:	Project Name:	Phone:	City, State ZIP:	Address:	Company Name:	Project Manager:	santation	LA	
			Edle Co	(Signature)	lable only for the cost of irge of \$75.00 will be appl	110 200.8 / 6020 s) and Metal(s) to b								lification Ma	ls: Yes No I	Yes No I	Yes No		IPT Temp B	Robert McAfee	2RP - 529		BEU O:	432.704.5178	Midland, TX 79705	3300 North A Stree	LT Environmental,	Ashley Ager			
			en tra	Received by: (S	samples and shall not assum ied to each project and a cha	e analyzed TCLP				 123 	124	120	S 05/17/19 12	trix Date Tir Sampled Sam	V/A Total Conta	N/A Correction F		Thermo	lank: Yes No W		4		39			¥	Inc., Permian office		Hobbs,NM (5		
\subset		$\overline{\langle}$		ign _f ature)	reary porchase order from te any responsibility for any rge of \$5 for each sample s	13PPM Texas 1 1 SPLP 6010: 8RC				5 0-51	0 0-5	5	0 5'	ne Depth	ainers:	actor:		ometer ID	et Ice: Yes No	Due Date:	Rush: 24hr	Routine	Turn Around	Email: ager@ltenv.	City, State ZIP:	Address:	Company Nam	Bill to: (if different)	575-392-7550) Phoenix,A	Houston, TX (281) 240-420 Midland, TX (432-704-54	-
		-	5/18/19 8:00	Date/Time	ubmitted to Xenco, but not a	Al Sb As Ba Be RA Sb As Ba Be							x X X 1	Numbe TPH (EI BTEX (I Chlorid	er of PA 80 EPA 0 e (EF	Co ()15) ()=80 ()A 30	ntai (21) (00.0)	ners	•					com rmcafee@ltenv.c	Carlsbad, NM		e: XTO-Energy) Kyle Littrel	VZ (480-355-0900) Atlanta	00 Dallas,TX (214) 902-03 40) EL Paso,TX (915)585	Chain of C
-	0	4	Ν	Relinquished by: (Signatur	is amiliates and subcontractors. It assigns ed by the client if such losses are due to cl analyzed. These terms will be enforced un	B Cd Ca Cr Co Cu Fe Pb Cd Cr Co Cu Pb Mn Mo Ni		Calue to a	*														ANALYSIS REQUES	com					a,GA (770-449-8800) Tampa,FL (813-6;	300 San Antonio,TX (210) 509-3334 5-3443 Lubbock,TX (806)794-1296	Sustody
				e) Received by: (Signat	standard terms and conditions ircumstances beyond the control less previously negotiated.	Mg Mn Mo Ni K Se Ag SiO2 Se Ag Ti U 1																	ST	Deliverables: EDD ADa	Reporting:Level II evel III S	State of Project:	Program: UST/PST PRP Brow	Work Order	20-2000) www.xenco.con		Work Order h
Revised Date 051418 Rev. 2018.1				ure) Date/Time		Na Sr Tl Sn U V Zn 631 / 245.1 / 7470 / 7471 : Hg							Composite	Sample Comments	lab, if received by 4:30pm	TAT starts the device produced by the							Work Order Notes	PT Other:			nfields RC uperfund	Comments	1 Page / of		10: しっしんしん

-	cted	Ollec	日期代	Date Collected	
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		- പം സംബാദ്യായ് എന്നും തുടങ്ങള്ള്ള്ള്ള്	- ୍ରେମ୍ବର୍ମ୍ବରି ଅଭିନ୍ତି - ବ୍ୟାନ୍ତରେ ଅଭିନ୍ତି ସାହିନ୍ତି		
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XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc. Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient Date/ Time Received: 05/18/2019 08:00:00 AM **Temperature Measuring device used :** Work Order #: 624776 Comments Sample Receipt Checklist 2.6 #1 *Temperature of cooler(s)? #2 *Shipping container in good condition? Yes #3 *Samples received on ice? Yes #4 *Custody Seals intact on shipping container/ cooler? Yes #5 Custody Seals intact on sample bottles? Yes #6*Custody Seals Signed and dated? Yes #7 *Chain of Custody present? Yes #8 Any missing/extra samples? Yes #9 Chain of Custody signed when relinquished/ received? Yes #10 Chain of Custody agrees with sample labels/matrix? Yes #11 Container label(s) legible and intact? Yes #12 Samples in proper container/ bottle? Yes #13 Samples properly preserved? Yes #14 Sample container(s) intact? Yes #15 Sufficient sample amount for indicated test(s)? Yes #16 All samples received within hold time? Yes #17 Subcontract of sample(s)? No #18 Water VOC samples have zero headspace? N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by: Connie Hernandez

Date: 05/18/2019

Checklist reviewed by: fession KRAMER

Jessica Kramer

Date: 05/19/2019

Analytical Report 627211

for LT Environmental, Inc.

Project Manager: Dan Moir

BEU 39

2RP-5294

26-JUN-19

Collected By: Client





1211 W. Florida Ave Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122): Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054) Oklahoma (2017-142)

> Xenco-Dallas (EPA Lab Code: TX01468): Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14) Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20) Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18) Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4) Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757) Xenco-Atlanta (LELAP Lab ID #04176) Xenco-Tampa: Florida (E87429), North Carolina (483)



26-JUN-19

TNI FROMATORY

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

Reference: XENCO Report No(s): 627211 BEU 39 Project Address: Delaware Basin

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) 627211. 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. 627211 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,

Jession KRAMER

Jessica Kramer Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994. Certified and approved by numerous States and Agencies. A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America



Sample Cross Reference 627211



LT Environmental, Inc., Arvada, CO

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
WS01	W	06-07-19 12:55	21 ft	627211-001



CASE NARRATIVE

Client Name: LT Environmental, Inc. Project Name: BEU 39

Project ID: 2*RP-5294* Work Order Number(s): 627211 Report Date: 26-JUN-19 Date Received: 06/11/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None



Project Id:2RP-5294Contact:Dan MoirProject Location:Delaware Basin

Certificate of Analysis Summary 627211

LT Environmental, Inc., Arvada, CO Project Name: BEU 39



Date Received in Lab:Tue Jun-11-19 11:20 amReport Date:26-JUN-19Project Manager:Jessica Kramer

	Lab Id:	627211-0	01			
Analysis Peanested	Field Id:	WS01				
Analysis Kequesieu	Depth:	21 ft				
	Matrix:	WATEI	ર			
	Sampled:	Jun-07-19 1	2:55			
BTEX by EPA 8021B	Extracted:	Jun-12-19 1	0:30	1		
	Analyzed:	Jun-12-19 1	4:38			
	Units/RL:	mg/L	RL			
Benzene		< 0.00200	0.00200			
Toluene		< 0.00200	0.00200			
Ethylbenzene		< 0.00200	0.00200			
m,p-Xylenes		< 0.00400	0.00400			
o-Xylene		< 0.00200	0.00200			
Total Xylenes		< 0.00200	0.00200			
Total BTEX		< 0.00200	0.00200			
Chloride by EPA 300	Extracted:	Jun-12-19 (9:30			
	Analyzed:	Jun-12-19 1	8:22			
	Units/RL:	mg/L	RL			
Chloride		295	5.00			
TDS by SM2540C	Extracted			ĺ		
	Extractea.					
	Analyzed:	Jun-14-19 1	1:34			
	Analyzed: Units/RL:	Jun-14-19 1 mg/L	1:34 RL			
Total Dissolved Solids	Analyzed: Units/RL:	Jun-14-19 1 mg/L 2940	1:34 RL 5.00			
Total Dissolved Solids TPH by SW8015 Mod	Extracted: Analyzed: Units/RL: Extracted:	Jun-14-19 1 mg/L 2940 Jun-21-19 1	1:34 RL 5.00			
Total Dissolved Solids TPH by SW8015 Mod SUB: T104704215-19-29	Extracted: Analyzed: Units/RL: Extracted: Analyzed:	Jun-14-19 1 mg/L 2940 Jun-21-19 1 Jun-26-19 0	1:34 RL 5.00 7:09 02:24			
Total Dissolved Solids TPH by SW8015 Mod SUB: T104704215-19-29	Extracted: Analyzed: Units/RL: Extracted: Analyzed: Units/RL:	Jun-14-19 1 mg/L 2940 Jun-21-19 1 Jun-26-19 (mg/L	1:34 RL 5.00 7:09 02:24 RL			
Total Dissolved Solids TPH by SW8015 Mod SUB: T104704215-19-29 Gasoline Range Hydrocarbons (GRO)	Extracted: Analyzed: Units/RL: Extracted: Analyzed: Units/RL:	Jun-14-19 J mg/L 2940 Jun-21-19 J Jun-26-19 (mg/L <1.28	1:34 <u>RL</u> 5.00 7:09 02:24 <u>RL</u> 1.28			
Total Dissolved Solids TPH by SW8015 Mod SUB: T104704215-19-29 Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO)	Extracted: Analyzed: Units/RL: Extracted: Analyzed: Units/RL:	Jun-14-19 J mg/L 2940 Jun-21-19 J Jun-26-19 (mg/L <1.28 <1.28	1:34 <u>RL</u> 5.00 7:09 02:24 <u>RL</u> 1.28 1.28			
Total Dissolved Solids TPH by SW8015 Mod SUB: T104704215-19-29 Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) Total TPH	Extracted: Analyzed: Units/RL: Extracted: Analyzed: Units/RL:	Jun-14-19 1 mg/L 2940 Jun-21-19 1 Jun-26-19 0 mg/L <1.28 <1.28 <1.28	1:34 <u>RL</u> 5.00 7:09 2:24 <u>RL</u> 1.28 1.28 1.28			

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.%

fession Vramer

Jessica Kramer Project Assistant





LT Environmental, Inc., Arvada, CO

Sample Id:WS01Lab Sample Id:627211-001		Matrix: Date Coll	Water lected: 06.07.	19 12.55	I S	Date Received:06.1 Sample Depth: 21 f	1.19 11.2 t	0
Analytical Method: Chloride	by EPA 300				F	Prep Method: E30	0P	
Tech: CHE					9	6 Moisture:		
Analyst: CHE		Date Prep	p: 06.12.	19 09.30				
Seq Number: 3092094								
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	295	5.00		mg/L	06.12.19 18.22		10
Analytical Method: TDS by S	M2540C							
Tech: SPC					9	6 Moisture:		
Analyst: SPC								
Seq Number: 3092539								
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Total Dissolved Solids	1642222	2940	5.00		mg/L	06.14.19 11.34		1
Analytical Method: TPH by S	W8015 Mod				F	Prep Method: TX	1005P	
Tech: ISU					9	6 Moisture:		
Analyst: ISU		Date Prep	p: 06.21.	19 17.09				
Seq Number: 3093487					S	SUB: T104704215	-19-29	
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<1.28	1.28		mg/L	06.26.19 02.24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<1.28	1.28		mg/L	06.26.19 02.24	U	1
Total TPH	PHC635	<1.28	1.28		mg/L	06.26.19 02.24	U	1
Total GRO-DRO	PHC628	<1.28	1.28		mg/L	06.26.19 02.24	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	96	%	70-135	06.26.19 02.24		
o-Terphenyl		84-15-1	97	%	70-135	06.26.19 02.24		





LT Environmental, Inc., Arvada, CO

Sample Id:	WS01	Matrix:	Water	Date Received:06.11.19 11.20
Lab Sample Id	: 627211-001	Date Collected	06.07.19 12.55	Sample Depth: 21 ft
Analytical Me	thod: BTEX by EPA 8021B			Prep Method: SW5030B
Tech:	DVM			% Moisture:
Analyst:	DVM	Date Prep:	06.12.19 10.30	
Seq Number:	3092188			

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/L	06.12.19 14.38	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/L	06.12.19 14.38	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/L	06.12.19 14.38	U	1
m,p-Xylenes	179601-23-1	< 0.00400	0.00400		mg/L	06.12.19 14.38	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/L	06.12.19 14.38	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/L	06.12.19 14.38	U	1
Total BTEX		< 0.00200	0.00200		mg/L	06.12.19 14.38	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	87	%	70-130	06.12.19 14.38		
4-Bromofluorobenzene		460-00-4	82	%	70-130	06.12.19 14.38		



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.
- RL Reporting Limit
- MDL Method Detection LimitSDLSample Detection LimitLOD Limit of Detection
- PQL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation
- DL Method Detection Limit
- NC Non-Calculable

SMP Clie	nt Sample	BLK	Method Blank	
BKS/LCS	Blank Spike/Laboratory Control Sample	BKSD/LCSD	Blank Spike Duplicate/Laboration	atory 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 627211

LT Environmental, Inc.

BEU 39

Analytical Method:	Chloride by EPA 30	0						P	rep Metho	od: E30	OP	
Seq Number:	3092094]	Matrix:	Water				Date Pre	ep: 06.	12.19	
MB Sample Id:	7679729-1-BLK		LCS San	nple Id:	7679729-1	-BKS		LCS	D Sample	e Id: 767	9729-1-BSD	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Lim	it Units	Analysis Date	Flag
Ch1-1-1-	0.500		22.0	0.5	22.7	0.5	00 110	0	20	/*	06 12 10 12:40	

Analytical Method:	Chloride by	EPA 30	0						Pı	ep Metho	d: E3	90P	
Seq Number:	3092094			Ν	Matrix:	Water				Date Pre	p: 06.	12.19	
Parent Sample Id:	627241-001			MS Sam	ple Id:	627241-00	1 S		MS	D Sample	Id: 627	7241-001 SD	
Parameter		Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limi	t Units	Analysis Date	Flag
Chloride		< 0.500	25.0	24.8	99	24.2	97	90-110	2	20	mg/L	06.12.19 15:21	

Analytical Method:	TDS by SM2540C											
Seq Number:	3092539]	Matrix:	Water							
MB Sample Id:	3092539-1-BLK		LCS San	ple Id:	3092539-1	-BKS		LCS	D Sample	Id: 309	2539-1-BSD	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Lim	it Units	Analysis Date	Flag
Total Dissolved Solids	13.0	1000	987	99	999	100	80-120	1	10	mg/L	06.14.19 11:34	

Analytical Method:	TDS by SM2540C							
Seq Number:	3092539	Matrix:	Water					
Parent Sample Id:	627211-001	MD Sample Id:	627211-001 D					
Parameter	Parent Result	MD Result		%RPD	RPD Limit	Units	Analysis Date	Flag
Total Dissolved Solids	2940	2870		2	10	mg/L	06.14.19 11:34	

Analytical Method: Seq Number:	TPH by S 3093487	W8015 Mo	bd]	Matrix:	Water			Р	rep Methoc Date Prer	l: TX 5: 06.2	1005P 21.19	
MB Sample Id:	7680497-1	-BLK		LCS San	nple Id:	7680497-	1-BKS		LCS	D Sample l	ld: 768	0497-1-BSD	
Parameter		MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbo	ns (GRO)	<1.50	100	107	107	111	111	70-135	4	35	mg/L	06.25.19 15:45	
Diesel Range Organics (I	DRO)	<1.50	100	96.8	97	101	101	70-135	4	35	mg/L	06.25.19 15:45	
Surrogate		MB %Rec	MB Flag	L %	CS Rec	LCS Flag	LCS %Re	D LCS c Flag	D L g	imits	Units	Analysis Date	
1-Chlorooctane		80		9	03		95		7	0-135	%	06.25.19 15:45	
o-Terphenyl		80		8	32		84		7	0-135	%	06.25.19 15:45	

MS/MSD Percent Recovery Relative Percent Difference LCS/LCSD Recovery Log Difference [D] = 100*(C-A) / B RPD = 200* | (C-E) / (C+E) | [D] = 100 * (C) / [B] Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample A = Parent Result C = MS/LCS Result E = MSD/LCSD Result MS = Matrix Spike B = Spike Added D = MSD/LCSD % Rec



QC Summary 627211

LT Environmental, Inc.

BEU 39

Analytical Method:	BTEX by EPA	8021B
i inter generation and an		

BTEX by EPA 8021	B						I	Prep Meth	od: SW:	5030B	
3092188		I	Matrix:	Water				Date Pr	rep: 06.1	2.19	
7679842-1-BLK		LCS Sam	ple Id:	7679842-1	I-BKS		LCS	SD Sampl	e Id: 7679	9842-1-BSD	
MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Lin	nit Units	Analysis Date	Flag
< 0.000408	0.100	0.0923	92	0.104	104	70-130	12	25	mg/L	06.12.19 22:25	
< 0.000367	0.100	0.0880	88	0.0999	100	70-130	13	25	mg/L	06.12.19 22:25	
< 0.000657	0.100	0.0957	96	0.109	109	70-130	13	25	mg/L	06.12.19 22:25	
< 0.000630	0.200	0.199	100	0.225	113	70-130	12	25	mg/L	06.12.19 22:25	
< 0.000642	0.100	0.0975	98	0.110	110	70-130	12	25	mg/L	06.12.19 22:25	
MB %Rec	MB Flag	L0 %1	CS Rec	LCS Flag	LCSI %Re) LCS c Fla	D I g	Limits	Units	Analysis Date	
88		10	01		102		7	0-130	%	06.12.19 22:25	
72		9	0		90		7	0-130	%	06.12.19 22:25	
	BTEX by EPA 8021 3092188 7679842-1-BLK 60.000408 <0.000367 <0.000657 <0.000657 <0.000642 MB %Rec 88 72	BTEX by EPA 8021B 3092188 7679842-1-BLK MB Spike <0.000408	BTEX by EPA 8021B 3092188 LCS Sam 7679842-1-BLK LCS Sam MB Spike LCS <0.000408	BTEX by EPA 8021B 3092188 Katrix: 7679842-1-BLK LCS S=U MB Spike LCS LCS <0.000408	BTEX by EPA 8021B 3092188 Matrix Water 7679842-1-BLK LCS Sample Id 7679842-1 MB Spike LCS LCS	BTEX by EPA 8021B 3092188 Matrix: Water: 7679842-1-BLK LCS Samper Id: 7679842-1-BKS MB Spike LCS LCS	BTEX by EPA 8021B 3092188 Matrix: Water 7679842-1-BLK LCS Sample Id 7679842-1-BKS MB Result Spike Amount LCS Result LCS %Res LCSD Result LCSD %Res LCSD %Result LCSD 	BTEX by EPA 8021B In Matrix: Water 3092188 Katrix: Water: 7679842-1-BLK LCS Sample Id: 7679842-1-BKS LCS 100 MB Spike LCS LCS MCS LCSD LCSD LCSD LCSD Matrix: Matrix: <th< td=""><td>BTEX by EPA 8021B Prep Meth 3092188 Matrix: Water Date Pa 7679842-1-BLK LCS Sample Ic 7679842-1-BKS LCS Sample Ic LCSD Sample \wedge MB Result Spike Amount LCS LCS LCSD Result LCSD Result LCSD Result LCSD Result LCSD Result Result \wedge Result \wedge Result \wedge Result LCSD Result LCSD Result \wedge Result \wedge Result \wedge Result LCSD Result LCSD Result \wedge Result \wedge Result \wedge Result \wedge Result \wedge Result LCSD Result \wedge Res</td><td>Prep Method: Prep Method: SPR: SPR: Prep Method: SPR: SPR: SPR: Date Prep: 0.00 7679842-1-BLK LCS S LCS LCS LCS LCS LCS LCS LCSD LCSD Result %Rep Result LCSD Ms %Rep Result %Rep Rep Result %Rep Result %Rep Result %Rep Result %Rep Result %Rep Rep Rep Rep Rep Rep Rep Rep Rep Rep</td><td>BTEX by EPA 8021B Pre Method: SW30B 3092188 Matrix: Water Date Prep: $0.1 \ J_{12}$ 7679842-1-BLK LCS Sample: Analysis Date $\sqrt{2000408}$ 2</td></th<>	BTEX by EPA 8021B Prep Meth 3092188 Matrix: Water Date Pa 7679842-1-BLK LCS Sample Ic 7679842-1-BKS LCS Sample Ic LCSD Sample \wedge MB Result Spike Amount LCS LCS LCSD Result LCSD Result LCSD Result LCSD Result LCSD Result Result \wedge Result \wedge Result \wedge Result LCSD Result LCSD Result \wedge Result \wedge Result \wedge Result LCSD Result LCSD Result \wedge Result \wedge Result \wedge Result \wedge Result \wedge Result LCSD Result \wedge Res	Prep Method: Prep Method: SPR: SPR: Prep Method: SPR: SPR: SPR: Date Prep: 0.00 7679842-1-BLK LCS S LCS LCS LCS LCS LCS LCS LCSD LCSD Result %Rep Result LCSD Ms %Rep Result %Rep Rep Result %Rep Result %Rep Result %Rep Result %Rep Result %Rep Rep Rep Rep Rep Rep Rep Rep Rep Rep	BTEX by EPA 8021B Pre Method: SW30B 3092188 Matrix: Water Date Prep: $0.1 \ J_{12}$ 7679842-1-BLK LCS Sample: Analysis Date $\sqrt{2000408}$ 2

Analytical Method:	BTEX by EPA	8021B							F	rep Method	l: SW	5030B	
Seq Number:	3092188			I	Matrix:	Ground W	ater			Date Prep	p: 06.1	2.19	
Parent Sample Id:	626647-001			MS Sam	ple Id:	626647-00	01 S		MS	D Sample	ld: 626	647-001 SD	
Parameter	Par Res	ent sult A	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	0.09	921	0.100	0.190	98	0.205	113	70-130	8	25	mg/L	06.12.19 23:03	
Toluene	0.1	140	0.100	0.247	107	0.253	113	70-130	2	25	mg/L	06.12.19 23:03	
Ethylbenzene	0.04	441	0.100	0.144	100	0.158	114	70-130	9	25	mg/L	06.12.19 23:03	
m,p-Xylenes	0.03	355	0.200	0.227	96	0.262	113	70-130	14	25	mg/L	06.12.19 23:03	
o-Xylene	0.02	241	0.100	0.121	97	0.135	111	70-130	11	25	mg/L	06.12.19 23:03	
Surrogate				M %1	IS Rec	MS Flag	MSD %Rec	MSD c Flag	Ι	Limits	Units	Analysis Date	
1,4-Difluorobenzene				10)5		105		7	0-130	%	06.12.19 23:03	
4-Bromofluorobenzene				9	2		93		7	0-130	%	06.12.19 23:03	

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

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

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

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Chain of Custody

Jject Manager: Dan Moir Hobb mpany Name: LT Environmental, Inc., Permian of dress: 3300 North A Street y, State ZIP: Midland, TX 79705 one: 432.236.3849 BEU 39	Houston, TX (281) 240-420 Midland, TX (432-704-54 s, NM (575-392-7550) Phoenix, A Bill to: (If different) fice Company Name fice Company N	Chain of CL 00 Dallas, TX (214) 902-0300 40) EL Paso, TX (915)585-34 Z (480-355-0900) Atlanta, G/ Z (48	JStody San Antonio, TX (210) 509-333 H43 Lubbock, TX (806)794-1296 A (770-449-8800) Tampa, FL (8 A (770-449-8800) Tampa, FL	Work Order No:	s of ///////////////////////////////////
ect Name: BEU 39	Turn Around		ANALYSIS REQ	QUEST Wo	ork Order Notes
ject Number: 2RP-5294	Routine K				Ĩ
mpler's Name: Benjamin Belill	Due Date:				
AMPLE RECEIPT Temp Blank: Yes (No)	Wet Ice: Ces No		DS)		
mperature (°C): O·U(U/Y -	Thermomete m	ainers) 0)	lids (T		
oler Custody Seals: Yes No N/A Corre	ction Factor:	Con (15) (15) (15) (15) (15) (15) (15) (15)	ved S		
mple Custody Seals: Yes Wo N/A Tota	I Containers:	PA 80 PA 80 EPA 0 de (EP	Dissolv		its the day received by the if received by 4:30pm
Sample Identification Matrix Sampled	Time Depth Sampled	Numb TPH (E BTEX (Chloric	Total D	Sar	mple Comments
WS01 W 6/7/2019	12:55 21'	7 3 2 1	_		
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	<u> </u>	AIX AVY			
		X			
Total 200.7 / 6010200.8 / 6020:8Circle Method(s) and Metal(s) to be analyzed	RCRA 13PPM Texas 1 ⁻ TCLP / SPLP 6010: 8RC	Al Sb As Ba Be B RA Sb As Ba Be Cc	d Cd Ca Cr Co Cu Fe Cr Co Cu Pb Mn Mo	Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti) Ni Se Ag Ti U 1631/245.1	Sn U V Zn 1 / 7470 / 7471 : Hg
ice: Signature of this document and relinquishment of samples cons service. Xenco will be liable only for the cost of samples and shall nc fenco. A minimum charge of \$75.00 will be applied to each project ar	titutes a valid purchase order from t assume any responsibility for any nd a charge of \$5 for each sample s	client company to Xenco, its at / losses or expenses incurred t ubmitted to Xenco, but not ana	filiates and subcontractors. It as by the client if such losses are du alyzed. These terms will be enforc	signs standard terms and conditions ie to circumstances beyond the control zed unless previously negotiated.	
Relinquished by: (Signature)	by: (Signature)	Date/Time	Relinquished by: (Sign	nature) A Beceived by: (Signature)	Date/Time
Cent 21.00		04:51 21/1/1/		(X)/X	Willing

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Revised Date 051418 Rev. 2018.1

Final 1.000

Inter-Office Shipment

${\rm IOS}\ {\rm Number}: 41217$

Date/Time:	06.1	2.2019 08:35	Created by:	Jessica Kram	er	Please se	end report to:	Jessica Kran	ner		
Lab# From	: Mid	land	Delivery Pri-	ority:		Address	:	1211 W. Flo	orida Ave	;	
Lab# To:	Hou	iston	Air Bill No.:	77545904548	34	E-Mail:		jessica.kram	er@xend	co.com	
Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab	Due H	T Due	РМ	Analytes	Sign
627211-001	W	WS01	06.07.2019 12:55	SW8015MOD_NM	TPH by SW8015 Mod	06.17	7.2019 00	6.21.2019	JKR	GRO-DRO PHCC10C28	
Inter Office	Shipm	ent or Sample (Comments:								

Relinquished By:

fession Kramer

Jessica Kramer

Date Relinquished: 06.12.2019

Received By:

uaug Jinmon

Travis Simmons

Date Received: 06.13.2019 09:50

Cooler Temperature: 0.6



XENCO Laboratories



Inter Office Report- Sample Receipt Checklist

Sent To: Houston IOS #: 41217

Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient Temperature Measuring device used : HOU-068

Sent By:	Jessica Kramer	Date Sent:	06.12.2019 08.35 AM
Received By:	Travis Simmons	Date Received:	06.13.2019 09.50 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	.6
#2 *Shipping container in good condition?	Yes
#3 *Samples received with appropriate temperature?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 *Custody Seals Signed and dated for Containers/coolers	Yes
#6 *IOS present?	Yes
#7 Any missing/extra samples?	No
#8 IOS agrees with sample label(s)/matrix?	Yes
#9 Sample matrix/ properties agree with IOS?	Yes
#10 Samples in proper container/ bottle?	Yes
#11 Samples properly preserved?	Yes
#12 Sample container(s) intact?	Yes
#13 Sufficient sample amount for indicated test(s)?	Yes
#14 All samples received within hold time?	Yes

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

NonConformance:

Corrective Action Taken:

Contact:

Nonconformance Documentation

Contacted by :

Date:

Checklist reviewed by:

uaujo

Travis Simmons

Date: 06.13.2019



XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc. Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient Date/ Time Received: 06/11/2019 11:20:00 AM Temperature Measuring device used : R8 Work Order #: 627211 Comments Sample Receipt Checklist #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 container/ cooler? N/A #5 Custody Seals intact on sample bottles? N/A #6*Custody Seals Signed and dated? N/A #7 *Chain of Custody present? Yes #8 Any missing/extra samples? No #9 Chain of Custody signed when relinquished/ received? Yes #10 Chain of Custody agrees with sample labels/matrix? Yes #11 Container label(s) legible and intact? Yes #12 Samples in proper container/ bottle? Yes #13 Samples properly preserved? Yes #14 Sample container(s) intact? Yes #15 Sufficient sample amount for indicated test(s)? Yes #16 All samples received within hold time? Yes #17 Subcontract of sample(s)? N/A #18 Water VOC samples have zero headspace? Yes

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

Analyst: BT

PH Device/Lot#: A032690

Checklist completed by:

Date: 06/11/2019

Checklist reviewed by:

Jession Vermer

Jessica Kramer

Date: 06/11/2019

Analytical Report 638536

for LT Environmental, Inc.

Project Manager: Dan Moir

BEU 039

012919036

02-OCT-19

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 (2017-142), North Carolina (681)

> 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-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)



02-OCT-19

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

Reference: XENCO Report No(s): 638536 BEU 039 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) 638536. 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. 638536 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,

Jession KRAMER

Jessica Kramer Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994. Certified and approved by numerous States and Agencies. A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America



Sample Cross Reference 638536

LT Environmental, Inc., Arvada, CO

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS05	S	09-30-19 16:05	5 ft	638536-001



CASE NARRATIVE

Client Name: LT Environmental, Inc. Project Name: BEU 039

 Project ID:
 012919036

 Work Order Number(s):
 638536

 Report Date:
 02-OCT-19

 Date Received:
 10/01/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments: Batch: LBA-3103024 BTEX by EPA 8021B Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



Project Id:01291903Contact:Dan Moir

Project Location:

Certificate of Analysis Summary 638536

LT Environmental, Inc., Arvada, CO

Project Name: BEU 039

Date Received in Lab:Tue Oct-01-19 08:30 amReport Date:02-OCT-19Project Manager:Jessica Kramer

	Lab Id:	638536-001				
Analysis Requested	Field Id:	FS05				
	Depth:	5- ft				
	Matrix:	SOIL				
	Sampled:	Sep-30-19 16:05				
BTEX by EPA 8021B	Extracted:	Oct-01-19 09:30	1	Í.	Í	
	Analyzed:	Oct-01-19 13:16				
	Units/RL:	mg/kg RL				
Benzene		<0.00101 0.00101				
Toluene		<0.00101 0.00101				
Ethylbenzene		<0.00101 0.00101				
m,p-Xylenes		<0.00202 0.00202				
o-Xylene		<0.00101 0.00101				
Total Xylenes		<0.00101 0.00101				
Total BTEX		<0.00101 0.00101				
Chloride by EPA 300	Extracted:	Oct-01-19 13:10				
	Analyzed:	Oct-01-19 16:32				
	Units/RL:	mg/kg RL				
Chloride		179 49.4				
TPH by SW8015 Mod	Extracted:	Oct-01-19 10:30				
	Analyzed:	Oct-01-19 13:34				
	Units/RL:	mg/kg RL				
Gasoline Range Hydrocarbons (GRO)		<49.8 49.8				
Diesel Range Organics (DRO)		<49.8 49.8				
Motor Oil Range Hydrocarbons (MRO)		<49.8 49.8				
Total GRO-DRO		<49.8 49.8				
Total TPH		<49.8 49.8				

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

fession kenner

Jessica Kramer Project Assistant



LT Environmental, Inc., Arvada, CO

Sample Id: Lab Sample Id	FS05 1: 638536-001	Matrix: Date Collec	Soil ted: 09.30.19 16.05	Date Received:10.01.19 08.30 Sample Depth: 5 ft				
Analytical Me Tech: Analyst: Seq Number:	ethod: Chloride by EPA MAB MAB 3103013	300	Date Prep:	10.01.19 13.10		Prep Method: % Moisture: Basis:	E300P Wet Weight	
Parameter		Cas Number	Result	RL	Units	Analysis Da	ate Flag	Dil
Chloride		16887-00-6	179	49.4	mg/kg	10.01.19 16.	32	5
Analytical Me Tech:	ethod: TPH by SW8015	Mod				Prep Method: % Moisture:	SW8015P	
Analyst:	DTH		Date Prep:	10.01.19 10.30		Basis:	Wet Weight	

Seq Number: 3103011								
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8		mg/kg	10.01.19 13.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8		mg/kg	10.01.19 13.34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8		mg/kg	10.01.19 13.34	U	1
Total GRO-DRO	PHC628	<49.8	49.8		mg/kg	10.01.19 13.34	U	1
Total TPH	PHC635	<49.8	49.8		mg/kg	10.01.19 13.34	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	113	%	70-135	10.01.19 13.34		
o-Terphenyl		84-15-1	93	%	70-135	10.01.19 13.34		



LT Environmental, Inc., Arvada, CO

Sample Id:FS05Lab Sample Id:638536-001	Matrix:SoilIDate Collected:09.30.19 16.055		Date Received:10.01.19 08.30 Sample Depth: 5 ft		
Analytical Method:BTEX by EPA 8021BTech:DTHAnalyst:DTHSeq Number:3103024	Date Prep:	10.01.19 09.30	Prep Method: % Moisture: Basis:	SW5030B Wet Weight	

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00101	0.00101		mg/kg	10.01.19 13.16	U	1
Toluene	108-88-3	< 0.00101	0.00101		mg/kg	10.01.19 13.16	U	1
Ethylbenzene	100-41-4	< 0.00101	0.00101		mg/kg	10.01.19 13.16	U	1
m,p-Xylenes	179601-23-1	< 0.00202	0.00202		mg/kg	10.01.19 13.16	U	1
o-Xylene	95-47-6	< 0.00101	0.00101		mg/kg	10.01.19 13.16	U	1
Total Xylenes	1330-20-7	< 0.00101	0.00101		mg/kg	10.01.19 13.16	U	1
Total BTEX		< 0.00101	0.00101		mg/kg	10.01.19 13.16	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	99	%	70-130	10.01.19 13.16		
4-Bromofluorobenzene		460-00-4	96	%	70-130	10.01.19 13.16		


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.
- RL Reporting Limit
- MDL Method Detection LimitSDLSample Detection LimitLOD Limit of Detection
- PQL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation
- DL Method Detection Limit
- NC Non-Calculable

SMP Clie	nt Sample	BLK	Method Blank	
BKS/LCS	Blank Spike/Laboratory Control Sample	BKSD/LCSD	Blank Spike Duplicate/Laboration	atory 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 638536

LT Environmental, Inc. BEU 039

Analytical Method:	Chloride by EPA 30	0						Pi	rep Metho	d: E30	OP	
Seq Number:	3103013			Matrix:	Solid				Date Pre	ep: 10.0)1.19	
MB Sample Id:	7687223-1-BLK		LCS Sar	nple Id:	7687223-1	1-BKS		LCS	D Sample	Id: 768	7223-1-BSD	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limi	t Units	Analysis Date	Flag
Chloride	<10.0	250	260	104	263	105	90-110	1	20	mg/kg	10.01.19 13:51	

Analytical Method:	Chloride by	EPA 30	0						Pı	rep Metho	od: E30	00P	
Seq Number:	3103013]	Matrix:	Soil				Date Pre	ep: 10.0	01.19	
Parent Sample Id:	638538-001			MS San	ple Id:	638538-00	01 S		MS	D Sample	Id: 638	538-001 SD	
Parameter		Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limi	t Units	Analysis Date	Flag
Chloride		3550	4030	8400	120	8390	120	90-110	0	20	mg/kg	10.01.19 14:11	Х

Analytical Method:	Chloride by EPA 30	0						Pı	ep Meth	od: E3	00P	
Seq Number:	3103013			Matrix:	Soil				Date Pr	ep: 10	01.19	
Parent Sample Id:	638538-011		MS San	nple Id:	638538-01	1 S		MS	D Sample	e Id: 63	8538-011 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Lim	it Units	Analysis Date	Flag
Chloride	44.8	201	260	107	260	107	90-110	0	20	mg/kg	10.01.19 15:48	

Analytical Method:	TPH by S	W8015 M	od						I	Prep Method	l: SW	/8015P	
Seq Number:	3103011				Matrix:	Solid				Date Prep	p: 10.	01.19	
MB Sample Id:	7687240-1	I-BLK		LCS Sar	nple Id:	7687240-	1-BKS		LCS	SD Sample	Id: 768	37240-1-BSD	
Parameter		MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarb	ons (GRO)	< 50.0	1000	1010	101	1040	104	70-135	3	35	mg/kg	10.01.19 11:51	
Diesel Range Organics	(DRO)	<50.0	1000	1080	108	1100	110	70-135	2	35	mg/kg	10.01.19 11:51	
Surrogate		MB %Rec	MB Flag	L %	CS Rec	LCS Flag	LCSI %Re) LCS c Flag	D I g	Limits	Units	Analysis Date	
1-Chlorooctane		118		1	15		124		7	0-135	%	10.01.19 11:51	
o-Terphenyl		104		1	12		115		7	0-135	%	10.01.19 11:51	

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

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

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



QC Summary 638536

LT Environmental, Inc.

BEU 039

Analytical	Method	TPH by	SW8015	Mod
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Analytical Method:	TPH by SW	/8015 M	od						Р	rep Method	l: SW	8015P	
Seq Number:	3103011]	Matrix:	Soil				Date Prep	p: 10.0)1.19	
Parent Sample Id:	638538-001			MS San	nple Id:	638538-00	01 S		MS	D Sample	ld: 638	538-001 SD	
Parameter		Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbo	ons (GRO)	<49.9	997	1090	109	1230	123	70-135	12	35	mg/kg	10.01.19 12:53	
Diesel Range Organics (DRO)	<49.9	997	1120	112	1340	134	70-135	18	35	mg/kg	10.01.19 12:53	
Surrogate				N %]	IS Rec	MS Flag	MSD %Rec	MSD c Flag	L	imits	Units	Analysis Date	
1-Chlorooctane				1	29		134		7	0-135	%	10.01.19 12:53	
o-Terphenyl				1	17		129		7	0-135	%	10.01.19 12:53	

Analytical Method:	BTEX by EPA 8021	B]	Prep Metho	d: SW:	5030B	
Seq Number:	3103024			Matrix:	Solid				Date Pre	ep: 10.0	1.19	
MB Sample Id:	7687281-1-BLK		LCS San	nple Id:	7687281-	1-BKS		LC	SD Sample	Id: 768	7281-1-BSD	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPI) RPD Limi	t Units	Analysis Date	Flag
Benzene	< 0.00100	0.100	0.0967	97	0.0957	96	70-130	1	35	mg/kg	10.01.19 10:58	
Toluene	< 0.00100	0.100	0.111	111	0.109	109	70-130	2	35	mg/kg	10.01.19 10:58	
Ethylbenzene	< 0.00100	0.100	0.118	118	0.119	119	71-129	1	35	mg/kg	10.01.19 10:58	
m,p-Xylenes	< 0.00200	0.200	0.242	121	0.242	121	70-135	0	35	mg/kg	10.01.19 10:58	
o-Xylene	< 0.00100	0.100	0.115	115	0.116	116	71-133	1	35	mg/kg	10.01.19 10:58	
Surrogate	MB %Rec	MB Flag	L(%)	CS Rec	LCS Flag	LCSD %Rec	LCSI Flag)]	Limits	Units	Analysis Date	
1,4-Difluorobenzene	102		1	02		103		-	70-130	%	10.01.19 10:58	
4-Bromofluorobenzene	97		1	11		110		-	70-130	%	10.01.19 10:58	

Analytical Method: Seq Number: Parent Sample Id:	BTEX by EPA 8021 3103024 638538-001	В	MS San	Matrix: nple Id:	Soil 638538-00)1 S		F MS	Prep Metho Date Pre SD Sample	od: SW: p: 10.0 Id: 638	5030B 11.19 538-001 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limi	t Units	Analysis Date	Flag
Benzene	< 0.000998	0.0998	0.0918	92	0.0932	94	70-130	2	35	mg/kg	10.01.19 12:17	
Toluene	< 0.000998	0.0998	0.105	105	0.104	104	70-130	1	35	mg/kg	10.01.19 12:17	
Ethylbenzene	< 0.000998	0.0998	0.113	113	0.111	111	71-129	2	35	mg/kg	10.01.19 12:17	
m,p-Xylenes	< 0.00200	0.200	0.230	115	0.227	114	70-135	1	35	mg/kg	10.01.19 12:17	
o-Xylene	< 0.000998	0.0998	0.111	111	0.110	110	71-133	1	35	mg/kg	10.01.19 12:17	
Surrogate			N %]	IS Rec	MS Flag	MSD %Rec	MSE Flag) I ;	Limits	Units	Analysis Date	
1,4-Difluorobenzene			1	01		102		7	0-130	%	10.01.19 12:17	
4-Bromofluorobenzene			1	13		108		7	0-130	%	10.01.19 12:17	

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

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

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

MS = Matrix Spike B = Spike AddedD = MSD/LCSD % Rec

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	standard terms and conditions ircumstances beyond the control	affiliates and subcontractors. It assigns by the client if such losses are due to c	nt company to Xenco, its sses or expenses incurred	alid purchase order from clie anv responsibility for any los	samples constitutes a v	ocument and relinquishment of able only for the cost of sample	Notice: Signature of this d
1 Sn U V Zn .1/7470 /7471 : Hg	Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Se Ag Ti U 1631/245	B Cd Ca Cr Co Cu Fe Pb 2d Cr Co Cu Pb Mn Mo Ni	Al Sb As Ba Be E \ Sb As Ba Be C	13PPM Texas 11 , SPLP 6010: 8RCRA	alyzed TCLP /	10 200.8 / 6020:) and Metal(s) to be ana	Total 200.7 / 60 Circle Method(s
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				Routine	7	012919036	Project Number:
fork Order Notes	ST	ANALYSIS REQUE		Turn Around		BEU 039	Project Name:
Other:	Deliverables: EDD ADaPT ADaPT ADaPT	om	n rmcafee@ltenv.cc	nail: dmoir@ltenv.cor	п	432.704.5178	Phone:
	Reporting:Level IIlevel IIIl'ST/UST		Carlsbad, NM	City, State ZIP:	-	Midland, TX 79705	City, State ZIP:
	State of Project:			Address:		3300 North A Street	Address:
RC uperfund	Program: UST/PST PRP Brownfields		XTO-Energy	Company Name:	Permian office	LT Environmental, Inc.,	Company Name:
Its	Work Order Commer		Kyle Littrel	Bill to: (if different)		Dan Moir	Project Manager:
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Final 1.000



XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc. Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient Date/ Time Received: 10/01/2019 08:30:00 AM Temperature Measuring device used : T-NM-007 Work Order #: 638536 Comments Sample Receipt Checklist 4 #1 *Temperature of cooler(s)? #2 *Shipping container in good condition? Yes #3 *Samples received on ice? Yes #4 *Custody Seals intact on shipping container/ cooler? Yes #5 Custody Seals intact on sample bottles? Yes #6*Custody Seals Signed and dated? Yes #7 *Chain of Custody present? Yes #8 Any missing/extra samples? No #9 Chain of Custody signed when relinquished/ received? Yes #10 Chain of Custody agrees with sample labels/matrix? Yes #11 Container label(s) legible and intact? Yes

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

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

Analyst:

PH Device/Lot#:

Checklist completed by: Elizabeth McClellan

Date: 10/01/2019

Checklist reviewed by: Jession Vramer

Jessica Kramer

Date: 10/01/2019



Fastern vie	we of release area south of the tank battery during excavation	<image/>
Project: 012919036	XTO Energy, Inc. Big Eddy Unit 039	11
May 13, 2019	Photographic Log	Advancing Opportunity



Eastern view of the excavation extent on the south side of the tank battery during excavation activities.

Project: 012919036	XTO Energy, Inc. Big Eddy Unit 039	NE
May 17, 2019	Photographic Log	Advancing Opportunity



Eastern view of the final excavation extent from the south side of the tank battery during confirmation soil sampling activities.

Project: 012919036	XTO Energy, Inc. Big Eddy Unit 039	Advancing Opportunity
September 30, 2019	Photographic Log	