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District I State 1625 N. French Dr., Hobbs, NM 88240 District II Energy Mine		New Mex and Natura				Form C-14 Revised August 8, 20
811 S. First St., Artesia, NM 88210				Sul	hmit 1 Cons	15. T
1000 Rio Brazos Road Aztec NM 87410		vation Div St. Franc		.50	ac	to appropriate District Office cordance with 19.15.29 NMA
1220 F. St. Francis Dr. Brate Fr. NB4 07505		e, NM 875				
Release Notifica	_		Non-	ctio	n 🚕	
JMW1341127699		OPERA			🛛 Initi	al Report 📋 Final Rep
Name of Company: BOPCO, L.P. 260737 Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220		Contact: To	ny Savoie No. 575-887-732	20		
Facility Name: James Ranch Unit #17 Tank Battery			e: Exploration a		oduction	1217 Occ
Tank Battery is on the same pad as the Well #17					. 11. de . 197. et	····· · · ·
Surface Owner: Federal Mineral Ow	ner:	Federal			API No	0.30-015-27784
LOCAT	IOI	N OF REI	LEASE			
	North/ North	South Line	Feet from the 1980	East/ West	West Line	County: Eddy
	NORTH		1980	west		- 35.
Latitude <u>N 32.33</u>	35180	Longitud	e W 103.81928	0		
NATU	RE	OF RELI	EASE			
Type of Release: Crude oil and produced water			Release: 5 Bbls. s. produced water		Volume F	Recovered: 5 Bbls. oil
Source of Release: 2" circulating line	31	Date and H	our of Occurrenc			Hour of Discovery: 4/26/13 at
Was Immediate Notice Given?		4/26/13 Tir If YES, To	ne unknown Whom?		10:00 a.m	l
Yes No Not Requ	uired					
By Whom? Was a Watercourse Reached?		Date and H	our lume Impacting t	ha Wat	0100UE00	0.5
		II 1E5, VO	iume impacting t	ne wat		C C C C C C C C C C C C C C C C C C C
If a Watercourse was Impacted, Describe Fully.*		·	A.	_		ECEIVED -
		· · · · · · · · · · · · · · · · · · ·	in the second			MAY 17 2013
THE E						ADD ADTERIA
Describe Cause of Problem and Remedial Action Taken.*					:	OCD ARTESIA
The circulating line on the 500 Bbl. oil production tank failed due to	corros	sion. The line	and the tank wer	e repla	ced.	2
Describe Area Affected and Cleanup Action Taken.* The entire surfa						
release. The area measures approximately 3000 sq. ft. No remediation containment area. The affected area will be remediated in accordance						
inside impervious containment:		1				
I hereby certify that the information given above is true and complete regulations all operators are required to report and/or file certain relea	ase no	tifications an	d perform correct	ive acti	ions for rele	ases which may endanger
public health or the environment. The acceptance of a C-141 report b should their operations have failed to adequately investigate and reme						
or the environment. In addition, NMOCD acceptance of a C-141 repo						
federal, state, or local laws and/or regulations.			OIL CONS	FDV	ATION	DIVISION
		<i>Ш</i>	<u>OIL CONS</u>	DERV	AHON	DIVISION
Signature: () Ory Dania		nnroved by F	Environmental Sp	ecialist		allik
Printed Name: Tony Savoie		MA'	Y 2 1 2013	Sig	gned By	MI19 DRAMulion
Title: Waste Management and Remediation Specialist	A	pproval Date		E	Expiration D	Date:
E-mail Address: tasavoie@basspet.com	C	onditions of a	Approval:			Attenhed
Date: 5/16/13 Phone: 432-556-8730		Remed	iation per OC			Attached
Attach Additional Sheets If Necessary	-		SUBMIT REP			28P-1657
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State of New Mexico Energy Minerals and Natural **Resources Department**

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

Form C-141 Revised August 24, 2018 Submit to appropriate OCD District office

Page 2 of 303

Incident ID	nJMW1314127699
District RP	2RP-1657
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party XTO Energy	OGRID 5380	
Contact Name Garrett Green	Contact Telephone 575-200-0729	
Contact email garrett.green@exxonmobil.com	Incident # (assigned by OCD)	
Contact mailing address 3104 E. Greene Street, Carlsbad, New Mexico, 88220		

Location of Release Source

Latitude		32.335180		Longitude			
	(NAD 83 in decimal degrees to 5 decimal places)						
Site Name: James Ranch Unit #17 Tank BatterySite Typ				Site Type Exploration and Production			
Date Release Discovered: 4/26/2013				API# (if applicable) 30-015-27784			
Unit Letter	Section	Township	Range	County			
F	6	238	31E	Eddy			

Surface Owner:	State	🛛 Federal	🗌 Tribal	Private (<i>Name</i> :	

Nature and Volume of Release

🔀 Crude Oil	Volume Released (bbls) 5	Volume Recovered (bbls) 5
Produced Water	Volume Released (bbls) 15	Volume Recovered (bbls) 0
	Is the concentration of dissolved chloride 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:

The circulating line on the 500 bbl oil production tank failed due to corrosion. The line and tank were replaced. The entire surface area of the earthen containment around the production tanks was affected by the release. The area measures approx. 3000 sq. ft. No remediation activities have taken place, new gravel was placed over the spill area inside the containment area. The affected area will be remediated in accordance to NMOCD guidelines, the tank battery will be evaluated for reconstruction inside the impervious containment.

Daga	^
Page	4

Oil Conservation Division

Incident ID	nJMW1314127699
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Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC?	If YES, for what reason(s) does the responsible party consider this a major release?
🗌 Yes 🔀 X No	
If YES, was immediate no	otice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?

Initial Response

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

 \square 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 \underline{not} 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: <u>Garrett Green</u>	Title: <u>SSHE Coordinator</u>
Signature: Satt Suam	Date: 6 <u>-27-2023</u>
email: <u>garrett.green@exxonmobil.com</u>	Telephone:575- <u>200-0729</u>
OCD Only	
Received by:	Date:

Received by DCD: 6/27/2023 12:54:22 PMate of New Mexico

Oil Conservation Division

Incident ID	nJMW1314127699
District RP	2RP-1657
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>>100</u> (ft bgs)
Did this release impact groundwater or surface water?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	🗌 Yes 🛛 No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	🗌 Yes 🛛 No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	🗌 Yes 🛛 No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	🗌 Yes 🛛 No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of a wetland?	🗌 Yes 🛛 No
Are the lateral extents of the release overlying a subsurface mine?	🗌 Yes 🛛 No
Are the lateral extents of the release overlying an unstable area such as karst geology?	🗌 Yes 🛛 No
Are the lateral extents of the release within a 100-year floodplain?	🗌 Yes 🛛 No
Did the release impact areas 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

Page 3

Data table of soil contaminant concentration data

Depth to water determination

Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release

Boring or excavation logs

Photographs including date and GIS information

- Topographic/Aerial maps
- Laboratory data including chain of custody

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

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Form C-141			Incident ID	nJMW1314127699
Page 4	Oil Conservation Di	vision	District RP	2RP-1657
			Facility ID	
			Application ID	
regulations all operators are rec public health or the environmen failed to adequately investigate	the Suar	elease notifications and perform co rt by the OCD does not relieve the bose a threat to groundwater, surfa	prrective actions for rele e operator of liability sho ce water, human health liance with any other feo inator	eases which may endanger ould their operations have or the environment. In
OCD Only Received by: Shelly Wells		Date: 6/27/2	0023	
Sherry Wens			.023	

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Oil Conservation Division

Incident ID	nJMW1314127699
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Remediation Plan

Remediation Plan Checklist: Each of the following items must be included in the plan. Detailed description of proposed remediation technique Scaled sitemap with GPS coordinates showing delineation points Estimated volume of material to be remediated Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required) Deferral Requests Only: Each of the following items must be confirmed as part of any request for deferral of remediation. Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction. Extents of contamination must be fully delineated. Contamination does not cause an imminent risk to human health, the environment, or groundwater. 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: Garrett Green Title: SSHE Coordinator Sullen Date: 6-27-2023 Signature: Telephone: _____575-<u>200-0729____</u> email: garrett.green@exxonmobil.com **OCD Only** Received by: <u>Shelly Wells</u> Date: <u>6/27/2023</u> Approved Approved with Attached Conditions of Approval Denied Deferral Approved 07/03/2023 Ashley Maxwell Date: Signature:

The Deferral Request and C-141 will be accepted for record and marked accordingly. The release will remain open in OCD database files and reflect an open environmental issue.

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ENSOLUM

June 27, 2023

New Mexico Oil Conservation Division 1220 South St. Francis Drive Santa Fe, New Mexico 87505

Re: Deferral Request Addendum James Ranch Unit 17 Battery Incident Numbers nJMW1314127699 and nAB1506430295 Eddy County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of XTO Energy, Inc. (XTO), has prepared the following addendum to the original *Deferral Request* dated February 11, 2019. This addendum provides an update to the depth to groundwater determination activities at the James Ranch Unit 17 Battery (Site) in response to the New Mexico Oil Conservation Division (NMOCD) denial of the February 11, 2019, *Deferral Request*. In the denial, NMOCD indicated that the depth to groundwater assessment was not sufficient. Based on the additional depth to groundwater determination activities described below, XTO is submitting this *Deferral Request Addendum* and requesting deferral of final remediation for Incident Numbers nJMW1314127699 and nAB1506430295.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit F, Section 6, Township 23 South, Range 31 East, in Eddy County, New Mexico (32.335180°, -103.819280°) and is associated with oil and gas exploration and production operations on Federal land managed by the Bureau of Land Management (BLM).

On April 26, 2013, a 2-inch circulating line on a 500-barrel (bbl) oil production tank failed due to corrosion and resulted in 5 barrels (bbls) of crude oil and 15 bbls of produced water to be released within an unlined earthen containment berm. The 2-inch circulating line and the 500-bbl tank were both replaced. Approximately 5 bbls of crude oil were recovered. The former operator reported the release to the NMOCD on a Release Notification and Corrective Action Form C-141 (Form C-141) on May 16, 2013. The release was assigned Remediation Permit (RP) Number 2RP-1657 and Incident Number nJMW1314127699.

A second release occurred on February 20, 2015, when the well was being serviced by a pulling unit and the E-Pot was removed. The E-Pot is designed to shut the well down in the event of a stuffing box packing failure. During the E-Pot removal, the packing failed and 12 bbls of crude oil and 40 bbls of produced water were released onto the well pad and surrounding pasture area. The packing was replaced and approximately 5 bbls of crude oil and 10 bbls of produced water were recovered by a vacuum truck. The spill impacted approximately 2,300 square feet of caliche well pad and approximately 1,500 square feet of pasture. The former operator reported the release to the NMOCD on a Form C-141 on March 3, 2015. The release was assigned RP Number 2RP-2850 and Incident Number nAB1506430295. XTO Energy, Inc. Deferral Request Addendum James Ranch Unit 17 Battery

The releases were included in the Compliance Agreement for Remediation for Historical Releases (Compliance Agreement) between XTO and the NMOCD effective November 13, 2018. The purpose of the Compliance Agreement was to ensure that reportable releases that occurred prior to August 14, 2018, where XTO is responsible for the corrective action, comply with Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC) as amended on August 14, 2018.

Both releases occurred at the same production facility; therefore, the sampling and excavation activities were completed to address both releases simultaneously.

BACKGROUND

The February 11, 2019, *Deferral Request* detailed site characterization according to Table I, Closure Criteria for Soils Impacted by a Release, of 19.15.29 NMAC. Results from the site characterization are presented on page 3 of the Form C-141s, Site Assessment/Characterization. Potential site receptors are identified on Figure 1. Based on the results of the Site Characterization, the following NMOCD Table I Closure Criteria (Closure Criteria) were applied:

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

During October and December 2018, delineation and excavation activities were conducted at the Site to address impacted soil resulting from the two historical releases of crude oil and produced water. Impacted soil was excavated to the extent possible; however, an estimated 68 cubic yards of impacted soil were left in place beneath the tanks (Incident Number nJMW1314127699) and 33 cubic yards of impacted soil were left in place next to the pumpjack (Incident Number nAB1506430295) for compliance with XTO safety policy regarding earth-moving activities within 2-feet of active production equipment and 10-feet of active wellheads/pumpjacks. The impacted soil left in-place was laterally and vertically delineated to below the Site Closure Criteria. Additional details regarding the delineation and excavation activities can be referenced in the original *Deferral Request*, submitted to NMOCD on February 11, 2019.

On March 23, 2023, NMOCD denied the *Deferral Request* for Incident Numbers nJMW1314127699 and nAB1506430295 for the following reason:

• The depth to groundwater has not been adequately determined. When nearby wells are used to determine depth to groundwater, the wells should be no further than ½ mile away from the site, and data should be no more than 25 years old, and well construction information should be provided in the submission. The responsible party may choose to remediate to the most stringent levels listed in Table 1 of 19.15.29 NMAC in lieu of drilling to determine the depth to groundwater.

The NMOCD *preference* for wells used for depth to groundwater determination to be no further than 0.5 miles away from the site with data less than 25 years old was not in place at the time of the original remediation and reporting activities. The original *Deferral Request* was submitted on February 11, 2019, prior to the September 6, 2019, publication of the *Procedures for Implementation of the Spill Rule* guidance document that clarified the depth to groundwater determination preferences (Section IX.a.).



XTO Energy, Inc. Deferral Request Addendum James Ranch Unit 17 Battery

ADDITIONAL DEPTH TO GROUNDWATER DETERMINATION

New depth to groundwater data became available since the submittal of the February 11, 2019, *Deferral Request*. A borehole was drilled approximately 0.48 miles west of the Site during May 2019. The borehole was advanced to a depth of 150 feet below ground surface (bgs) via sonic drilling rig and was permitted as New Mexico Office of the State Engineer (NMOSE) well C-04325. The location of the borehole is presented on Figure 1. A field geologist logged and described soils continuously. The borehole lithologic/soil sampling log is included in Appendix A. The borehole was left open for over 72 hours to allow for potential slow infill of groundwater. After the 72-hour waiting period without observing groundwater, it was confirmed that groundwater was greater than 150 feet bgs. The borehole was properly abandoned using drill cuttings and hydrated bentonite chips. All wells used for depth to groundwater determination are depicted on Figure 1.

Based on confirmed depth to groundwater greater than 100 feet bgs within 0.5 miles of the Site, the Table I Closure Criteria identified in the original *Deferral Request* are applicable and appropriate for protection of groundwater at this Site.

ADDITIONAL SOIL SAMPLING ACTIVITIES

Horizontal delineation of a release was not enforced, nor practiced, until it became more frequently required by NMOCD through denial language throughout 2021. Therefore, in order to ensure NMOCD approval of this *Deferral Request Addendum*, additional soil sampling activities were completed at the Site. On May 30, 2023, Ensolum personnel collected assessment soil samples SS01 through SS04 from a depth of 0.5 feet bgs around the release extents, to confirm the horizontal extent of the releases. Additionally, on June 6, 2023, four boreholes (BH01 through BH04) were advanced via hand auger in the pasture area south of the well pad to confirm the absence of impacted soil associated with Incident Number nAB1506430295. The boreholes were advanced until hand auger refusal, encountered at depths ranging from 1-foot to 3 feet bgs. Two discrete delineation soil samples were collected from each borehole at depths ranging from 0.5 feet to 3 feet bgs. The assessment and delineation soil sample locations are presented on Figure 2.

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

Laboratory analytical results for assessment samples SS01 through SS04 and the delineation samples collected from boreholes BH01 through BH04 indicated all COC concentrations were compliant with the most stringent Table 1 Closure Criteria.

DEFERRAL REQUEST

Approximately 130 cubic yards of impacted soil were excavated from the Site; however, residual impacted soil was left in place for compliance with XTO safety policy regarding earth-moving activities within 2-feet of active production equipment and 10-feet of active wellheads/pumpjacks. The impacted soil remaining in-place is delineated vertically and laterally to below the Site Closure Criteria. XTO does not believe deferment will result in imminent risk to human health, the environment, or groundwater.

Based on confirmed depth to groundwater greater than 100 feet bgs within 0.5 miles of the Site, the additional soil sampling activities presented in this addendum, and the excavation and delineation data



XTO Energy, Inc. Deferral Request Addendum James Ranch Unit 17 Battery

presented in the February 11, 2019, *Deferral Request*, (included as Appendix E), XTO respectfully requests deferral of final remediation for Incident Numbers nJMW1314127699 and nAB1506430295 until major well pad construction/alteration or final plugging and abandonment, whichever occurs first.

If you have any questions or comments, please contact Ms. Tacoma Morrissey at (337) 257-8307 or tmorrissey@ensolum.com.

Sincerely, Ensolum, LLC

Aimee Cole Senior Managing Scientist

Ashley L. ager

Ashley Ager, P.G. Program Director

cc: Garrett Green, XTO Shelby Pennington, XTO Bureau of Land Management

Appendices:

- Figure 1 Site Receptor Map
- Figure 2 Soil Sample Locations (2023)
- Table 1
 Soil Sample Analytical Results (2023)
- Appendix A Referenced Well Records
- Appendix B Photographic Log (2023)
- Appendix C Laboratory Analytical Reports & Chain-of-Custody Documentation (2023)
- Appendix D NMOCD Notifications
- Appendix E February 11, 2019, Deferral Request





FIGURES

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TABLES

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E N S O L U M

TABLE 1SOIL SAMPLE ANALYTICAL RESULTS (2023)James Ranch Unit 17 BatteryXTO Energy, Inc.Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I CI	osure Criteria (I	NMAC 19.15.29)	10	50	NE	NE	NE	1,000	2,500	20,000
				Assessr	nent Soil Samp	les	•	•		
SS01	05/30/2023	0.5	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	144
SS02	05/30/2023	0.5	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	49.7
SS03	05/30/2023	0.5	<0.00199	<0.00398	<50.0	68.0	<50.0	68.0	68.0	300
SS04	05/30/2023	0.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	123
				Delinea	tion Soil Sampl	es				
BH01	06/02/2023	0.5	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	56.9
BH01A	06/02/2023	1	<0.00202	<0.00403	<49.9	<49.9	<49.9	<49.9	<49.9	46.2
BH02	06/02/2023	0.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	45.1
BH02A	06/02/2023	1	<0.00198	<0.00396	<50.0	<50.0	<50.0	<50.0	<50.0	57.6
BH03	06/02/2023	1	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	<50.0	46.1
BH03A	06/02/2023	3	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	51.4
BH04	06/02/2023	1	<0.00202	<0.00404	<49.9	<49.9	<49.9	<49.9	<49.9	61.9
BH04A	06/02/2023	2	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	47.6

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

Concentrations in **bold** exceed the NMOCD Table I Closure Criteria or reclamation requirement where applicable.

GRO: Gasoline Range Organics DRO: Diesel Range Organics ORO: Oil Range Organics TPH: Total Petroleum Hydrocarbon NMAC: New Mexico Administrative Code

Ensolum



APPENDIX A

Referenced Well Records

			Ca	508 West Infsbad, N	r onmenta t Stevens lew Mexic ngineering	Street		Identifier MWOI Date 5/22/19 Project Name: RP Number: 2RP-3404, 2RP-3464 2RP-3179
1.447.44.44]	LITHO	LOGI		SAMP			PH, BTEX. Hole Diameter Total Depth
		34 -1 -3		697	GRO, DRC			PH, BTEX. Hole Diameter: 6.15" Total Depth: 150'
Comment	All Chio	ride test in	clude a 6	50% error fa	actor			
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	(11 Z	0.5	N	Awal			SP-SM	Silty SAND, dry, brained, poorly graded, tm., some vegeterion
D	2112	0.4	۲	ทพวเ.4	2	2'		
٨	(uZ	١. ٢	Ч	Airi (S	3	3'		
D	612	0.3	٨	MUDI C	*	9-	CMICHE	CALICHE w/ Sund, day, 1+ bn/ that ton, pily carled, some a red sound, rooder
P	Ku2	0.1	Ŋ	AUID	5	5'		
0	4.2	0.5	۲	MWEIE	6	- - -		
0	6.12	0,4	μ	MUDI F	7	7'		
0	لار	0.3	٢	MURIG	8	5		V
0	423	0.[٢	WAS! H		G	SP	SAND W/ Calithe, dry, It bra/bin, fm, porry graded, no olor
D	345	0.g	N	Mici I	10	12		SATA
D	345	3.1	N	ma is	11		SP-SM,	Sind Stor, dry, bin/ sed, making Silty shull, sinty priz graded, fm., no odel

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LT Environ	Contraction in the local division in the loc		Ca	LT Envi 508 Wes rlsbad, N	ronmenta t Stevens lew Mexi	al, Inc. S Street co 88220	0	Identifier Project Na	MWOI	Date 5/22/19 RP Number 2RP-3464, 2RP-3
Z	5		Comp	liance · E	ngineering	g · Remed	iation	JRU 10		2RP-3243
		LITH	DLOG			ING LO			y: BEN BELILL	Method
Lat/Long	F					ening: CHL	ORIDES, TPH,	BTEX, Hole Dian	neter.	Total Depth:
Commen	t All Chlo	oride test in	clude a 6	0% error fa			-			
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type		Litholog	y/Remarks
D	4112	1,6	N	MWDIK	12	12'	SP-SM)	STA		
Q	2112	3.8	Μ	Mwo(L	13	13'				
D	KIIZ	4,9	N	multin	14	41				
D	C112	4.8	N	MWOIN	15	- 15'				
0	<112	1.1	N	mwoid	16	- 16"				
D	2112	0	N	Muolip	17	- 17'				
P	(In	4,1	N	muoj Q	18	ty'	ML	SILT, dru odor	benlind,	non plastic, no
0	lin	6.5	N	MWOJR	19	1 19'		0 4 2 7		
Ø	c 180	1.3	N	mwois	20	20'				
v	(150	9.2	γ	MWOJT	21	21'				
D	(112	7.4	N	MUGU	22	<i>n'</i>				
0	412	5,1	N	muloiv	23	23'				
				tot	- 24	24_			V	

Page 19 of 303

	ironmental, Inc.		(ronment st Stevens New Mexi	s Street	0		Identifier. MWD Project Name:	Date: 5/22/9 RP Number 2RP-3464, 2RP-317		
	25		Con	npliance · E	ingineering	g · Remed	liation		JRU 10	2RP-3243		
Lat/Lo		LITH	IOLO	GIC / SO		511 CA	G ORIDES, T	PH BTEX	Logged By: BEN BELILL Hole Diameter	Method Total Depth		
			- 1 1	COB/	GRO, MR	O, and DRC			file Brancer	////		
Comm	ent All Chi	oride lest	include a	a 60% error f	actor							
Moisture	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)		Soil/Rock Type		Lithology	Remarks		
D	KIIZ	6.5	N	MWS M	24	24	ML	541				
Ð	Cur	4.6	N	Mwoi X	25	251						
p	sin	5.1	N	wrol A	26	26'						
D	Lin	9.4	N	MWOI Z	27	27'						
0	e li Z	0.8	N	onue 1 AA	28	er						
D	6112	i.Z	N	muoj AB	29	29						
٥	5112	39	N	mwo lAc	30	70						
D	<112	0.6	N	MUDIAD	31	31						
Þ	<112	30	N	MUSI, AE	32	32						
P	411Z	5.3	Ņ	MWOIAF	33	33						
D	(112 m	0.0	N	MW0145	34	34						
	1120	.0	~	mwoi Att	35	35						
					36	1			1			

LT Environ	Properties, Inc.		Ca	508 Wes rlsbad, N	r onmenta t Stevens lew Mexic ingineering		Identifier: MWD Project Name: JRU 10	Date: 5/2/4 - 5/23/ RP Number: 2RP-3464, 2RP-317 2RP-3243	
		LITH	OLOG	IC / SO	IL BORI			Logged By: BEN BELILL	Method.
Lat/Long	2				Field Scree GRO, MRC			Hole Diameter: 6.15"	Total Depth:
Commen	t All Chlo	oride test in	iclude a 6	50% error f	actor.				
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology	/Remarks
0	(172	1.0	N	Muel A	F 36	36	CL Silty	CLAY, dry, red	1 bra, low plasticity
0	2112	0.0	N	Muoi A	J ^{* 37}	37	10	odor.	1 bra, low plasticity
Ø	112	1.5	N	MWOI A	¢ K 38	38			
D	6/12	6.0	N	mwol A	LL 39	38			
D	LINZ	0.0	N	MWOIA	fm"40	40			
a	KIIZ	0-0	N	Mwold	₩41	41			
ø	2112	1.4	N	mwol /	40 42	42			
0	(IIZ	2.8	V	MWDI A	¢ 43	43			
۵	K112	1.8	N	Musi	AQ 44	44			
p	4112	2.5	N	Mub()	4R 45	43			
ø	e] 2	1.9	N	MUNLY	9 5 46	46			
0	5112	2.0	N	muel +	T 47	47			

			Ca	508 Wes Irlsbad, N	ronmenta st Stevens New Mexic Engineering	Identifier MW9 Project Name. JRU 10	Date: 5/23/14 RP Number, 2RP-3464, 2RP-3 2RP-3243		
-		LITHO	DLOG	IC / SO	IL BORI	NG LOO	3	Logged By: BEN BELILL	Method:
Lat/Long	ţ				A State Street		ORIDES, TPH, BI	EX, Hole Diameter	Total Depth:
Commen	t All Chlo	ride test in	clude a 6	50% error f	GRO, MRC	, and DRO		6.15"	
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Litholo	gy/Remarks
0	Linz	0.3	N	MW01 A	48 1	148	LL SI	They CLAY, dry, 1	ed / brag low plasticit
D	(11Z	1.3	Ν	MWOI A	√ 49 _	44	5.	Ity CLAY W/ Cal	ime, dry, red/bray la
9	<112	1.2	N	Mus LA	₩ 50	50	53	grand, is alor ity CLAY day, 1	prly consid ton callebe and /bro, low plastic.t
0	lin	1.2	N	MUDIA	× 51	51		no odor	
P					× 52	11			
P	LIIZ	1.5	۲	musli	4 2 53	53			
					SA 54				
Q	lin	0.3	~	Muol	0 55	55			
					BC 56				
þ	kur	2.9	Ņ	mwoll	5 57	51			
Q	-112	38	N	mwa I (SE 58	58			
Q	4112	2.3	N	m.47](F 59	54			
					60	ŧ,			

	U Environ	P mental, inc.		Ca	508 Wes rlsbad, N	ronmenta It Stevens New Mexic Engineering	Street to 88220		Identifier: My O Project Name: JRU 10	Date: 5/23/19 RP Number: 2RP-3179, 2RP-3464, 2RP-5243 Method: Total Depth:		
	Lat/Long		LITHO	DLOG	IC / SO	Field Screet	ning: CHLC	ORIDES, TPH, BTEX,	Logged By: BEN BELILL Hole Diameter:			
	Comment	All Chlo	ride test in	clude a 6	60% error f	actor.						
	Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology	/Remarks		
1	P	4112	28	N	mwo li	G 60]	60	CL sil	ty CLAY, day, b astricty, ro ad	inland, low		
	0	<112	2.9	٢	(nwo) (H 61 _	61		esticity, road	of.		
145	P	KIIZ	2.8	٨	mvæl (1 62	62					
	D	2112	3.4	N	mmol (563	63					
	D	LUZ	1.6	N	WM01 1	SK64	- 					
	p	LIIZ	4.7	N	mwal G	L 65	65					
	P	2112	4.5	Ν	mwol (A 66	66					
0	P	KIIZ	3.7	Ч	mus) i	× 67	1.7					
	P	< 112	1.9	N	MHOIG	2 68	65					
	ø	Zuz	1.)	N	purelo	P 69	69					
	0	cuz	2.3	λ	mubliB	 ▲ 66 ▲ 66 ▲ 67 ▲ 67 ▲ 68 ▲ 68 ▲ 68 ▲ 68 ▲ 68 ▲ 69 ▲ 69 ▲ 70 ▲ 70 ▲ 71 	70					
	0	< 1.2	1.7	٨	multip	g 71	71					
						72	-	1 J	\checkmark			

			Ca	508 Wes Insbad, N	ronmenta It Stevens New Mexic	Street		Pr	oject Name U 10	21	Date 5/23/19 RP Number 2RP-3179, 2RP-3464, 2RP-52
		LITH	OLOG	IC / SO	IL BORI	NG LOO	Le	ogged By. BEN BI	ELILL	Method	
Lat/Long					Field Scree GRO, MRC		BTEX, H	ole Diameter		Total Depth	
Commen	All Chlo	oride test in	clude a 6	50% error f							
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type		L	ithology/Re	marks
₽	2112	3.(ч	inno) (5 72	172	LL	Suht			
þ	KIIZ	1.0	N	muoj 1	773	- 73					
D	KIIZ	Id	~	prwo1 6	v 74	74					
D	112	6.0	N	mwolf	₩75	75					
D	<112	5.6	N	wmo 1 i	W 76	76					
0	2112	3.4	٨	mboll	¥ 77						
9	5112	1.1	٨	murol (3 Y 78	8					
Ρ	243	1,2	N	mwolf	5Z 79	74					
D	6112	2.4	N	muol C	A 80	80					
8	L112	4.7	N	mwa1 C	6 81	81					
					C 82						
P	く112	37	Ņ	muar (C	0 83	\$3					
					84	Ţ	.,		9 . –		

r

			Ca	508 Wes rlsbad, N	ronmenta t Stevens lew Mexic ngineering	Street		Identifier: MW 0 \ Project Name: JRU 10	Date: 5/23/14 RP Number 2RP-3179, 2RP-3464, 2RP-5243	
		LITHO	DLOG	IC / SO	IL BORI				Logged By: BEN BELILL	Method
at/Long.				- 1	Field Scree GRO, MRO		I, BTEX,	Hole Diameter:	Total Depth.	
omment.	All Chlo	ride test in	clude a 6	0% error f		-,				
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type		Lithology	/Remarks
0	6112	4.9	N	MWO 1 C	E 🛤 84]	84	LL	SAV	ł	
D	202	1.5	N	MUOI L	ғ р в <u>.</u>	85			p'_{i}	
D	<112	5.3	N	Mwol C	G 🖻 81	84				
ŋ	112	7.4	N	MWOLD	H 6 97	87				
9	C112	1,6	N	NW010	1 🗨 84	88				
Ø	6112	t .1	N	muo Ic	J 🖷 85	51				
					K 🖝 10] 1	H				
b	<11Z	7.6	N	MUDIC	Ł⊕ni	- fi			Filty SLAY, dry, tizity, no odor	
P	4112	3.8	N	MUICIC	M €92	42		plas	Ticity, the order.	
р	<112	1.4	N	mwsic	M 🗬 93	17				
	1.00	1.1			0 844	Ľ				
P	2112	0.8	N	Wmo) C	P 🛋 95	95			1	
						-	4		V	

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LT Enviro	Primental, Inc.			508 Wes	ronment st Stevens New Mexi	s Street	0		Identifier. MVb	Date: 5/23/19
2	51				Engineering				Project Name: JRU 10	RP Number. 2RP-3179, 2RP-3464, 2RP-5
		1.1711								
at/Long	8	LITHO	JLUG	ac / su	Field Scree			I, BTEX,	Logged By: BEN BELILL Hole Diameter:	Method. Total Depth:
Comme	nt All Chlo	ride test in	clude a	60% error t	GRO, MR	O, and DRO				Total D Spin
				1	1	_				
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type		Lithology	//Remarks
P	Luz	1-4	Ν	MWOL C	Q 🏚 96]	96	CL	silty	CLAY Bralm	ed, low plastich;
D	Luz	4.2	N	MWOIC	R 19	47'		7.5	aur.	
0	2112	2.2	J	MWOIC	5 #48	18			1	
۵	Luz	1.8	N	mwalc	1012	ร่า				
D	Luz	1,1	N	unwol (U 🌰 100	100'				
0	<112	1,5	N	mwold	J 🌒 10	101				
D	¢1°7	0.4	N	MWDLO	w ® 100	107				
Ø	112	t,ų	N	MWOlc	¥ 0103	123				
D	<112	1.6	N	MWELC	Y • 104	134				
ρ	4112	7,0	N	Mroic	Z@105	105				
	<112	1.3	N	MwolD	A \$106	106				
	6112	0.6	٢	mula 10	56107	107				
					00108	-				

	100		Ca	508 Wes Insbad, N	ronmenta st Stevens New Mexic Engineering	Street		Identifier Project Name: JRU 10	Date: 5/23/9/5/ RP Number 2RP-3179, 2RP-3464, 2RP-524		
	-	LITHO	DLOG	IC / SO	IL BOR	ING LOO	3		Logged By: BEN BELILL	Method:	
Lat/Long:					1.	ning: CHLC O, and DRC	DRIDES, TP	PH, BTEX,	Hole Diameter.	Total Depth:	
Comment	All Chlo	oride test in	clude a 6	60% error f	a second s	o, und Dire		8	1		
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type		Lithology	/Remarks	
D	2112	1.3	N	Muto (D	C 72108	168	11	SAA			
D	くいて	D.3	Ν	muel0	ђ 73 _{(Л}	101		1			
D	5112	0.6	~	mwali	€74 lio	110	5				
D	<112	0.6	N	muoli) F 75 II	- ni					
D	LIN	0.5	N	muci ()6 76 ki	112					
Ø	KIIZ	1 - 1	N		1 77 (1	+					
P	KIIZ	5.3	N	muoic	J 78 114	- 114					
D	K112	1.3	N	mwel (0 5 79	115					
D	<112	3.3	N	mwoif	€ 80	116					
D	<112	2.9	N	mwe(D	0 (81	117					
D	(1) Z	3,3	N	MV01 (0*1 82	118					
Ŋ	Luc	4,8	N	MULL D	N 83	119		. 1			
					84	+	1				

LT Environ	P mental, Inc.			508 Wes	ronmenta t Stevens New Mexic	Street	1		MW0 \	Date 5/29/19 - 6/3/1
251					ingineering				Project Name JRU 10	RP Number 2RP-3404, 2RP-3- 2RP-3179
LITHOLOGIC / SOIL SAMPLING LOG								Log	ged By BEN BELILL	Method
.at/Long	E .				Field Scree GRO, DRO		DRIDES, TPH	BTEX, Ho 6.1	e Diameter 5"	Total Depth
Commen	1 All Chlo	ride test in	iclude a (50% error f						
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type		Litholog	g/Remarks
D	Luz	3.8	Ν	MWD1 DO	120	120	41	SAA		
P	<112	3.1	N	MANDI OF	121	121				
D	5112	12	~	Amoj DO	122	222				
Ø	<112	0.4	N	Mws101	123					
0	KIIS	0.5	N	MW0 105	124	124				
- 0	5.2	0.6	Ν	pruol 1	T125	125				
D	<112	0.8	Ν	MWOI D	V 126	126				
D	5112	07	Ч	MWU) i	√127	177	,			
D	<112	1.0	N	mwoi D	₩128	128				
9	くいて	0.4	N	MUO C	x 129	125				
					Y130	4				
D	5112	L.	N	Musid	₹ 131	131				
					132	+				

	Maste	P mental, Inc.	- (508 Wes	ronmenta It Stevens New Mexic			Identifier MVDL Project Name	Date: 6/3/19 - 6/4/19 RP Number: 2RP-3404, 2RP-340
	4	51		Comp	oliance · E	ngineering	r Remedi	ation	JRU 10	2RP-3179
			LITHO	LOGI	C / SOI	LSAMP	Logged By: BEN BELILL	Method:		
	Lat/Long		oride test in	clude a l	50% error f	Field Scree GRO, DRC	K, Hole Diameter. 6.15"	Total Depth:		
	Commen				T	I				
	Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithole	ogy/Remarks
	0	(112	0.4	N	MHDI E	A 132	132	4.	SVAVA	
	Ø	4112	0.7	N	WWOI E	§133	133			
	0	れに	0,4	N	MWOIE	C134	134			
	D	luc	0.9	Ŋ	MWO I E	0135	135			
	9	112	0.6	N	WADIE	Ę136	136			
	0	5112	0.7	μ	MUDIE	F 137	1,37			
,	D	6112	1.D	N	MUO)E	6138	138		AY w/ gravel, o esticity, no od	lry, It bra fred, low
	D	5112	0.1	N	MWOIE	H139	134			
	D	<112	3.8	N	wrole	T140	140		BO silty CLAY	brown /red, low odo-
	D	112	3.5	N	MWOLE	J141	141			
Ш	D	LIIZ	3.1	N	MWDI E	¥ 142	142			
	•					-	H			
	2	5112	1.8	N	MUDIE	L143	143			

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	LT Environmental, Inc.				508 Wes arlsbad, l	ironment st Stevens New Mexi	s Street co 88220	Identifier: MWDL Project Name: JRU 10	Date 6 / / 9 RP Number 2RP-3404, 2RP-346 2RP-3179	
						Engineering				Method
	LITHOLOGIC / SOIL SAMPLING LOG Lat/Long: Field Screening: CHLORIDES, TPH,								Logged By: BEN BELILL Hole Diameter:	Total Depth:
- 11		t All Chlo		aluda a (60% orror 1	GRO, DRO			6.15"	
	Comment	t All Chio	oride test in	iciude a c	50% enor 1	lactor.				
	Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology	//Remarks
0	9	2112	3.5	λ	WANE	M I	144	CL S	NA	
;	þ	<112	3,2	λ	mudoi E	N • _	145			
	D	<112	2.7	N	mwo1-6		146			
	D	<1122	3.1	N	WWOI E	R 🛛 🗌	ראו -			
	D	(112	3.0	Ν	WNOIE	Q • _	ાપજ			
	P	<11Z	1.8	μ	WAOI E	R • _	149			
	D	<\1Z	1.5	λ	MNOIE	50	150		1	
						7	-		FORC	e150
						8	-			
						9	-			
	- 19					10	- - -			
						11 -	-			
						12				



APPENDIX B

Photographic Log

Photographic Log XTO Energy, Inc James Ranch Unit 17 Battery Incident Numbers nJMW1314127699 & nAB1506430295





 Photograph 1
 Date:
 6/2/2023
 Photograph 2
 Date:
 6/2/2023

 Description View of well pad & historical release area.
 View: North
 Description: View of well pad & historical release area.
 View: South





APPENDIX C

Laboratory Analytical Reports & Chain of Custody Documentation



Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Tacoma Morrissey Ensolum 601 N. Marienfeld St. Suite 400 Midland, Texas 79701 Generated 6/6/2023 2:11:33 PM Revision 1

JOB DESCRIPTION

JRU 17 Battery SDG NUMBER 03C1558226

JOB NUMBER

890-4753-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

See page two for job notos and contact information



Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization

AMER

Generated 6/6/2023 2:11:33 PM Revision 1

Authorized for release by Jessica Kramer, Project Manager Jessica.Kramer@et.eurofinsus.com (432)704-5440

Eurofins Carlsbad is a laboratory within Eurofins Environment Testing South Central, LLC, a company within Eurofins Environment Testing Group of Companies

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Table of Contents	3
Definitions/Glossary	4
Case Narrative	5
Client Sample Results	6
Surrogate Summary	10
QC Sample Results	11
QC Association Summary	17
Lab Chronicle	20
Certification Summary	22
Method Summary	23
Sample Summary	24
Chain of Custody	25
Receipt Checklists	27

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	Definitions/Glossary	
Client: Ensolu Project/Site:	um JRU 17 Battery	Job ID: 890-4753-1 SDG: 03C1558226
Qualifiers		
GC VOA Qualifier	Qualifier Description	
*+	LCS and/or LCSD is outside acceptance limits, high biased.	
S1-	Surrogate recovery exceeds control limits, low biased.	
U	Indicates the analyte was analyzed for but not detected.	
GC Semi VO		
Qualifier	Qualifier Description	
S1+	Surrogate recovery exceeds control limits, high biased.	
U	Indicates the analyte was analyzed for but not detected.	
	indicates the analyte was analyzed for but not detected.	
HPLC/IC		
Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	
Glossary		
Abbreviation	These commonly used abbreviations may or may not be present in this report.	
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis	
%R	Percent Recovery	
CFL	Contains Free Liquid	
CFU	Colony Forming Unit	
CNF	Contains No Free Liquid	
DER	Duplicate Error Ratio (normalized absolute difference)	
Dil Fac	Dilution Factor	
DL	Detection Limit (DoD/DOE)	
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample	
DLC	Decision Level Concentration (Radiochemistry)	
EDL	Estimated Detection Limit (Dioxin)	
LOD	Limit of Detection (DoD/DOE)	
LOQ	Limit of Quantitation (DoD/DOE)	
MCL	EPA recommended "Maximum Contaminant Level"	
MDA	Minimum Detectable Activity (Radiochemistry)	
MDC	Minimum Detectable Concentration (Radiochemistry)	
MDL	Method Detection Limit	
ML	Minimum Level (Dioxin)	
MPN	Most Probable Number	
MQL	Method Quantitation Limit	
NC	Not Calculated	
ND	Not Detected at the reporting limit (or MDL or EDL if shown)	
NEG	Negative / Absent	
POS	Positive / Present	
PQL	Practical Quantitation Limit	
PRES	Presumptive	
QC	Quality Control	
RER	Relative Error Ratio (Radiochemistry)	
RL	Reporting Limit or Requested Limit (Radiochemistry)	
RPD	Relative Percent Difference, a measure of the relative difference between two points	
TEF	Toxicity Equivalent Factor (Dioxin)	
TEQ	Toxicity Equivalent Quotient (Dioxin)	
TNITO	Teo Numerous Te Count	

TNTC Too Numerous To Count
Case Narrative

Client: Ensolum Project/Site: JRU 17 Battery

Job ID: 890-4753-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-4753-1

REVISION

The report being provided is a revision of the original report sent on 6/5/2023. The report (revision 1) is being revised due to Per client, requesting TPH re run on sample SS01.

Receipt

The samples were received on 5/30/2023 2:00 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.8°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: SS01 (890-4753-1), SS02 (890-4753-2), SS03 (890-4753-3) and SS04 (890-4753-4).

GC VOA

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-54618 recovered above the upper control limit for Benzene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: (CCV 880-54618/2), (CCV 880-54618/20), (CCV 880-54618/51) and (CCV 880-54618/64).

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-54500 and 880-54501 and analytical batch 880-54618 was outside the control limits.

Method 8021B: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 880-54501 and analytical batch 880-54618 recovered outside control limits for the following analytes: Benzene. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC Semi VOA

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-54621 and analytical batch 880-54612 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: SS01 (890-4753-1), SS02 (890-4753-2), SS03 (890-4753-3), SS04 (890-4753-4), (890-4753-A-1-I MS) and (890-4753-A-1-J MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Job ID: 890-4753-1 SDG: 03C1558226

Client Sample Results

Client: Ensolum Project/Site: JRU 17 Battery

Client Sample ID: SS01 Date Collected: 05/30/23 12:20 Date Received: 05/30/23 14:00

	latile Organic	Compound	ds (GC)					
Analyte	-	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U *+	0.00201	mg/Kg		05/31/23 13:35	06/03/23 11:03	1
Toluene	<0.00201	U	0.00201	mg/Kg		05/31/23 13:35	06/03/23 11:03	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		05/31/23 13:35	06/03/23 11:03	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		05/31/23 13:35	06/03/23 11:03	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		05/31/23 13:35	06/03/23 11:03	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		05/31/23 13:35	06/03/23 11:03	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130			05/31/23 13:35	06/03/23 11:03	1
1,4-Difluorobenzene (Surr)	93		70 - 130			05/31/23 13:35	06/03/23 11:03	1
	EX - Total BTE	X Calculat	ion					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			06/05/23 12:45	1
	Diesel Range (Organics (DRO) (GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			06/05/23 11:22	1

Method: SW846 8015B NM - I	Diesel Range	• Organics	(DRO) (GC)					
Analyte	-	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		06/06/23 09:42	06/06/23 13:09	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		06/06/23 09:42	06/06/23 13:09	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		06/06/23 09:42	06/06/23 13:09	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	105		70 - 130			06/06/23 09:42	06/06/23 13:09	1
o-Terphenyl	105		70 - 130			06/06/23 09:42	06/06/23 13:09	1

Method: EPA 300.0 - Anions, lo	on Chromat	ography - S	oluble					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	144		4.96	mg/Kg			06/02/23 10:32	1

Client Sample ID: SS02 Date Collected: 05/30/23 12:25 Date Received: 05/30/23 14:00 Sample Depth: 0.5

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U *+	0.00198	mg/Kg		05/31/23 13:35	06/03/23 11:29	1
Toluene	<0.00198	U	0.00198	mg/Kg		05/31/23 13:35	06/03/23 11:29	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		05/31/23 13:35	06/03/23 11:29	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		05/31/23 13:35	06/03/23 11:29	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		05/31/23 13:35	06/03/23 11:29	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		05/31/23 13:35	06/03/23 11:29	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130			05/31/23 13:35	06/03/23 11:29	1

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Lab Sample ID: 890-4753-2

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Job ID: 890-4753-1 SDG: 03C1558226

Lab Sample ID: 890-4753-1

Matrix: Solid

5

Matrix: Solid

Job ID: 890-4753-1 SDG: 03C1558226

Client Sample ID: SS02 Date Collected: 05/30/23 12:25

Project/Site: JRU 17 Battery

Lab Sample ID: 890-4753-2 Matrix: Solid

5

Date Received: 05/30/23 14:00

Client: Ensolum

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1,4-Difluorobenzene (Surr)	100		70 - 130			05/31/23 13:35	06/03/23 11:29	
Method: TAL SOP Total BTE	X - Total BTE	X Calculat	ion					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00396	U	0.00396	mg/Kg			06/05/23 12:45	
Method: SW846 8015 NM - D	iesel Range	Organics (DRO) (GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	<49.9	U	49.9	mg/Kg			06/05/23 11:22	
Method: SW846 8015B NM -	Diocol Bango	Organica						
Analyte		Qualifier		Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics			49.9	mg/Kg		06/02/23 09:01	06/02/23 12:15	
(GRO)-C6-C10	~+3.5	0	45.5	iiig/itg		00/02/23 09.01	00/02/23 12.15	
Diesel Range Organics (Over	<49.9	U	49.9	mg/Kg		06/02/23 09:01	06/02/23 12:15	
C10-C28)				0 0				
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		06/02/23 09:01	06/02/23 12:15	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil F
1-Chlorooctane	140	S1+	70 - 130			06/02/23 09:01	06/02/23 12:15	
	105		70 - 130			06/02/23 09:01	06/02/23 12:15	
o-Terphenyl			Soluble					
	Ion Chroma	tography -				_ .	Analyzed	Dil Fa
o-Terphenyl Method: EPA 300.0 - Anions, Analyte		t <mark>ography</mark> - Qualifier	RL	Unit	D	Prepared	Analyzeu	
Method: EPA 300.0 - Anions,				Unit mg/Kg	<u>D</u>	Prepared	06/02/23 10:48	

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *+	0.00199	mg/Kg		05/31/23 13:35	06/03/23 11:56	1
Toluene	<0.00199	U	0.00199	mg/Kg		05/31/23 13:35	06/03/23 11:56	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		05/31/23 13:35	06/03/23 11:56	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		05/31/23 13:35	06/03/23 11:56	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		05/31/23 13:35	06/03/23 11:56	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/31/23 13:35	06/03/23 11:56	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130			05/31/23 13:35	06/03/23 11:56	1
1,4-Difluorobenzene (Surr)	99		70 - 130			05/31/23 13:35	06/03/23 11:56	1
Method: TAL SOP Total BT	EX - Total BTE	X Calculat	ion					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			06/05/23 12:45	1
Method: SW846 8015 NM -	Diesel Range (Organics (DRO) (GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	68.0		50.0	mg/Kg			06/05/23 11:22	1

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Client Sample Results

Client: Ensolum Project/Site: JRU 17 Battery

Client Sample ID: SS03

Date Collected: 05/30/23 12:30 Date Received: 05/30/23 14:00 Sample Depth: 0.5

1-Chlorooctane 136 S1+ 70.130 06/02/23 09.01 06/02/23 12:37 0-Terphenyl 101 70.130 06/02/23 09.01 06/02/23 12:37 Method: EPA 300.0 - Anions, ion Chromatography - Soluble Result Qualifier RL Unit D Prepared Analyzed Dil Chloroide 300 5.02 mg/Kg D Prepared Analyzed Dil Chloroide 300 5.02 mg/Kg D Prepared Analyzed Dil Obi02/23 10:35 06/02/23 10:53 Matrix: Sc Date Collected: 05/30/23 14:00 Sample Depth: 0.5 Lab Sample ID: 890-4755 Method: SW846 8021B - Volatile Organic Compounds (GC) Matrix: Sc Analyze Result Qualifier RL Unit D Prepared Analyzed Dil Benzene <0.00199 U ** 0.00199 mg/Kg 05/31/23 13:35 06/03/23 12:22 Dil Toluene <0.00199 U 0.00199 mg/Kg 05/31/23 13:35 06/03/23 12:22 Dil M-Xylene & p-Xylene <0.00398 U 0.003	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
C10-C28) Oli Range Organics (Over C28-C36) <50.0 U 50.0 mg/Kg 06/02/23 09:01 06/02/23 12:37 Surragate %Recovery Qualifier Limits Prepared Analyzed Dil 1-Chiorooctane 136 51+ 70-130 06/02/23 09:01 06/02/23 12:37 06/02/23 09:01 06/02/23 12:37 06/02/23 09:01 06/02/23 12:37 06/02/23 09:01 06/02/23 12:37 06/02/23 10:35 06/02/23 10:22 06/02/23 10:21		<50.0	U	50.0	mg/Kg		06/02/23 09:01	06/02/23 12:37	
Surrogate %Recovery 136 Qualifier 136 Limits 70.130 Prepared 06/02/23 09:01 Analyzed 06/02/23 12:37 Dil 0-Terphenyl 101 70.130 06/02/23 09:01 06/02/23 12:37 Dil Method: EPA 300.0 - Anions, Ion Chromatography - Soluble Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Chioride 300 5.02 mg/Kg D Prepared Analyzed Dil Chioride 300 5.02 mg/Kg D Prepared Analyzed Dil Ilient Sample ID: SSO4 ate Collected: 05/30/23 12:35 Lab Sample ID: 890-4753 Matrix: Sc Stereceived: 05/30/23 12:35 Result Qualifier RL Unit D Prepared Analyzed Dil Senzene <0.00199		68.0		50.0	mg/Kg		06/02/23 09:01	06/02/23 12:37	
I-Chorosoctane 136 S1+ 70.130 06/02/23 09.01 06/02/23 10.23 Dill Itend Sample ID: SS04 Result Qualifier RL Unit D Prepared Analyzed Dill Sanzene <0.00199	Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		06/02/23 09:01	06/02/23 12:37	
bo-Terphenyl 101 70.130 06/02/23 09:01 06/02/23 12:37 Method: EPA 300.0 - Anions, Ion Chromatography - Soluble Analyte Result Qualifier RL 300 Unit D Prepared Method: SW346 Analyzed 06/02/23 10:53 Dill 06/02/23 10:53 Chloride 300 5.02 mg/Kg D Prepared 06/02/23 10:53 Analyzed 06/02/23 10:53 Dill 06/02/23 10:53 Chloride SS04 Lab Sample ID: 890-4755 Matrix: Sc ate Collected: 05/30/23 12:35 Result Qualifier RL 05/31/23 13:35 Analyzed 06/03/23 12:22 Dill 06/03/23 12:22 Method: SW846 8021B - Volatile Organic Compounds (GC) Analyte Nesult Qualifier RL 00.00199 Unit D Prepared 05/31/23 13:35 Analyzed 06/03/23 12:22 Dill 06/03/23 12:22 Toluene <0.00199 mg/Kg 05/31/23 13:35 06/03/23 12:22 Dill 06/03/23 12:22 Ethylbenzene <0.00199 mg/Kg 05/31/23 13:35 06/03/23 12:22 Dill 06/03/23 12:22 Surrogate <0.00398 U 0.00398 mg/Kg 05/31/23 13:35 06/03/23 12:22 Surrogate Resu	Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
Method: EPA 300.0 - Anions, Ion Chromatography - Soluble Analyte Result Qualifier RL Strong Unit D Prepared Marky Analyzed O6/02/23 10:53 Dil O Chloride 300 5.02 mg/Kg D Prepared O6/02/23 10:53 Analyzed O6/02/23 10:53 Dil O6/02/23 10:53 Illient Sample ID: SS04 ate Collected: 05/30/23 12:35 ate Received: 05/30/23 14:00 ample Depth: 0.5 Result Qualifier RL Natrix: Sc Method: SW846 8021B - Volatile Organic Compounds (GC) Analyte Result Qualifier RL No.00199 Unit D Prepared O5/31/23 13:35 Analyzed O6/03/23 12:22 Dil O6/03/23 12:22 Method: SW846 8021B - Volatile Organic Compounds (GC) Analyte Result Qualifier RL No.00199 Unit D Prepared O5/31/23 13:35 Analyzed O6/03/23 12:22 Dil O6/03/23 12:22 Ethylbenzene <0.00199	1-Chlorooctane	136	S1+	70 - 130			06/02/23 09:01	06/02/23 12:37	
AnalyteResultQualifierRLUnitDPreparedAnalyzedDilChloride3005.02mg/KgDLab Sample ID: 890.4753Stlient Sample ID: SS04Lab Sample ID: 890.4755Matrix: Scate Collected:05/30/23 12:35Matrix: Scate Collected:05/30/23 14:00ample Depth:0.5Method:SW846 8021B - Volatile Organic Compounds (GC)AnalyteResultQualifierResultQualifierVintence<0.00199	o-Terphenyl	101		70 - 130			06/02/23 09:01	06/02/23 12:37	
Chloride 300 5.02 mg/Kg 06/02/23 10:53 Hient Sample ID: SS04 ate Collected: 05/30/23 12:35 ate Received: 05/30/23 14:00 ample Depth: 0.5 Lab Sample ID: 890-4753 Matrix: Sc Method: SW846 8021B - Volatile Organic Compounds (GC) Analyte Result Qualifier RL Unit D Prepared 05/31/23 13:35 Analyzed 06/03/23 12:22 Dil Benzene <0.00199	Method: EPA 300.0 - Anions,		- · ·	- Soluble					
Chilent Sample ID: SS04 Lab Sample ID: 890-4753 ate Collected: 05/30/23 12:35 Matrix: Sc ate Received: 05/30/23 14:00 Matrix: Sc ample Depth: 0.5 Method: SW846 8021B - Volatile Organic Compounds (GC) Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Benzene <0.00199	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Matrix: Sc Matri	Chloride	300		5.02	mg/Kg			06/02/23 10:53	
ate Received: 05/30/23 14:00 ample Depth: 0.5 Method: SW846 8021B - Volatile Organic Compounds (GC) Analyte Vinit D Prepared 05/31/23 13:35 Analyzed 06/03/23 12:22 Dil Benzene <0.00199	lient Sample ID: SS04						Lab Samp	le ID: 890-4	753-
Mample Depth: 0.5 Method: SW846 8021B - Volatile Organic Compounds (GC) Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Benzene <0.00199	ate Collected: 05/30/23 12:35							Matrix	: Soli
Method: SW846 8021B - Volatile Organic Compounds (GC) Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Benzene <0.00199									
Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Benzene <0.00199	ample Depth: 0.5								
Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Benzene <0.00199	Method: SW846 8021B - Volat	tile Organic	Compour	uds (GC)					
Toluene <0.00199					Unit	D	Prepared	Analyzed	Dil Fa
Toluene <0.00199 U 0.00199 mg/Kg 05/31/23 05/31/23 13:35 06/03/23 12:22 Ethylbenzene <0.00199	Benzene	< 0.00199	U *+	0.00199	mg/Kg		05/31/23 13:35	06/03/23 12:22	
Ethylbenzene <0.00199 U 0.00199 mg/Kg 05/31/23 13:35 06/03/23 12:22 m-Xylene & p-Xylene <0.00398	Toluene	<0.00199	U	0.00199			05/31/23 13:35	06/03/23 12:22	
o-Xylene <0.00199	Ethylbenzene	<0.00199	U	0.00199			05/31/23 13:35	06/03/23 12:22	
o-Xylene <0.00199	m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		05/31/23 13:35	06/03/23 12:22	
Xylenes, Total<0.00398U0.00398mg/Kg05/31/23 13:3506/03/23 12:22Surrogate%RecoveryQualifierLimitsPreparedAnalyzedDil4-Bromofluorobenzene (Surr)10670 - 13005/31/23 13:3506/03/23 12:22Dil1,4-Difluorobenzene (Surr)9970 - 13005/31/23 13:3506/03/23 12:22DilMethod: TAL SOP Total BTEX - Total BTEX CalculationResultQualifierRLUnitDPreparedAnalyzedDilTotal BTEX0.00398U0.00398mg/KgDO6/05/23 12:45DilMethod: SW846 8015 NM - Diesel Range Organics (DRO) (GC)ResultQualifierRLUnitDPreparedAnalyzedDilAnalyteResultQualifierRLUnitDPreparedAnalyzedDil	• • •	<0.00199	U	0.00199			05/31/23 13:35	06/03/23 12:22	
4-Bromofluorobenzene (Surr) 106 70 - 130 05/31/23 13:35 06/03/23 12:22 1,4-Difluorobenzene (Surr) 99 70 - 130 05/31/23 13:35 06/03/23 12:22 Method: TAL SOP Total BTEX - Total BTEX Calculation Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Total BTEX <0.00398	Xylenes, Total	<0.00398	U	0.00398			05/31/23 13:35	06/03/23 12:22	
4-Bromofluorobenzene (Surr) 106 70 - 130 05/31/23 13:35 06/03/23 12:22 1,4-Difluorobenzene (Surr) 99 70 - 130 05/31/23 13:35 06/03/23 12:22 Method: TAL SOP Total BTEX - Total BTEX Calculation Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Total BTEX <0.00398	Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
Method: TAL SOP Total BTEX - Total BTEX Calculation Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Total BTEX <0.00398	4-Bromofluorobenzene (Surr)			70 - 130			05/31/23 13:35	06/03/23 12:22	
AnalyteResultQualifierRLUnitDPreparedAnalyzedDilTotal BTEX<0.00398	1,4-Difluorobenzene (Surr)	99		70 - 130			05/31/23 13:35	06/03/23 12:22	
Total BTEX <0.00398	Method: TAL SOP Total BTEX	(- Total BTE	X Calcula	tion					
Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC) Analyte Result Qualifier RL Unit D Prepared Analyzed Dil	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Analyte Result Qualifier RL Unit D Prepared Analyzed Dil	Total BTEX	<0.00398	U	0.00398	mg/Kg			06/05/23 12:45	
Analyte Result Qualifier RL Unit D Prepared Analyzed Dil	Method: SW846 8015 NM - Di	esel Range	Organics	(DRO) (GC)					
.			-		Unit	D	Prepared	Analyzed	Dil Fa
				<u>_</u>	malka				
	Total TPH : Method: SW846 8015B NM - E				ing/Kg			00/05/23 11.22	

Result Qualifier RL Unit D Analyzed Dil Fac Analyte Prepared <50.0 U 06/02/23 09:01 06/02/23 12:59 Gasoline Range Organics 50.0 mg/Kg 1 (GRO)-C6-C10 <50.0 U 50.0 06/02/23 09:01 06/02/23 12:59 **Diesel Range Organics (Over** mg/Kg 1 C10-C28) <50.0 U 06/02/23 09:01 06/02/23 12:59 Oll Range Organics (Over C28-C36) 50.0 mg/Kg 1 Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 70 - 130 1-Chlorooctane 138 S1+ 06/02/23 09:01 06/02/23 12:59 1 o-Terphenyl 104 70 - 130 06/02/23 09:01 06/02/23 12:59 1

Job ID: 890-4753-1 SDG: 03C1558226

Lab Sample ID: 890-4753-3

Matrix: Solid

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		Client	Sample Re	sults					1
Client: Ensolum Project/Site: JRU 17 Battery			-				Job ID: 890- SDG: 03C1		2
Client Sample ID: SS04 Date Collected: 05/30/23 12:35						Lab Samp	ole ID: 890-4 Matrix	753-4 : Solid	3
Date Received: 05/30/23 14:00 Sample Depth: 0.5									4
Method: EPA 300.0 - Anions, Ior					_				5
Analyte Chloride	Result 123	Qualifier	RL 5.03	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 06/02/23 10:59	Dil Fac	6
									7
									8
									9
									10
									11
									13
									14

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Surrogate Summary

Client: Ensolum Project/Site: JRU 17 Battery

Method: 8021B - Volatile Organic Compounds (GC) Matrix: Solid

			Percent Surrogate Recovery (Acceptance L	inits)
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	70-130)	
890-4740-A-21-D MS	Matrix Spike	98	107	
890-4740-A-21-E MSD	Matrix Spike Duplicate	103	93	
890-4753-1	SS01	109	93	
890-4753-2	SS02	109	100	
890-4753-3	SS03	104	99	
890-4753-4	SS04	106	99	
LCS 880-54501/1-A	Lab Control Sample	86	91	
LCSD 880-54501/2-A	Lab Control Sample Dup	86	106	
MB 880-54500/5-A	Method Blank	67 S1-	93	
MB 880-54501/5-A	Method Blank	65 S1-	87	

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC) Matrix: Solid

			Per	rcent Sur
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-29073-A-1-C MS	Matrix Spike		105	
880-29073-A-1-D MSD	Matrix Spike Duplicate	113	104	
890-4753-1	SS01	105	105	
890-4753-2	SS02	140 S1+	105	
890-4753-3	SS03	136 S1+	101	
890-4753-4	SS04	138 S1+	104	
890-4753-A-1-I MS	890-4753-A-1-I MS	137 S1+	96	
890-4753-A-1-J MSD	890-4753-A-1-J MSD	138 S1+	97	
LCS 880-54621/2-A	Lab Control Sample	111	86	
LCS 880-54840/2-A	Lab Control Sample	105	99	
LCSD 880-54621/3-A	Lab Control Sample Dup	121	93	
LCSD 880-54840/3-A	Lab Control Sample Dup	103	97	
MB 880-54621/1-A	Method Blank	158 S1+	125	
MB 880-54840/1-A	Method Blank	115	118	

Surrogate Legend

1CO = 1-Chlorooctane OTPH = o-Terphenyl 5

6

Prep Type: Total/NA

Prep Type: Total/NA

Job ID: 890-4753-1 SDG: 03C1558226

Client: Ensolum Project/Site: JRU 17 Battery

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-54	500/5-A						Chefit		le ID: Method	
Matrix: Solid									Prep Type: To	
Analysis Batch: 54618	MB	мв							Prep Batch	. 5450
Analyte		Qualifier	RL		Unit	D	Prepa	red	Analyzed	Dil Fa
Benzene	<0.00200	-	0.00200		mg/Kg				06/02/23 12:21	
Toluene	< 0.00200		0.00200		mg/K	-			06/02/23 12:21	
Ethylbenzene	< 0.00200		0.00200		mg/K	-			06/02/23 12:21	
m-Xylene & p-Xylene	< 0.00400	U	0.00400		mg/K				06/02/23 12:21	
o-Xylene	<0.00200		0.00200		mg/K	0			06/02/23 12:21	
Xylenes, Total	<0.00400		0.00400		mg/K	0			06/02/23 12:21	
	МР	МВ			-	-				
Surrogate	%Recovery		Limits				Prepa	red	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)		S1-	70 - 130						06/02/23 12:21	
1,4-Difluorobenzene (Surr)	93		70 - 130						06/02/23 12:21	
		MB				_	_			
Analyte	Result	Qualifier	RL		Unit	D	Prepa	red	Analyzed	Dil Fa
Benzene	<0.00200	U	0.00200		mg/K	g	05/31/23	13:35	06/03/23 02:06	
Toluene	<0.00200	U	0.00200		mg/K	g	05/31/23	13:35	06/03/23 02:06	
Ethylbenzene	<0.00200	U	0.00200		mg/K	g	05/31/23	13:35	06/03/23 02:06	
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/K	g	05/31/23	13:35	06/03/23 02:06	
o-Xylene	<0.00200	U	0.00200		mg/K	g	05/31/23	13:35	06/03/23 02:06	
Xylenes, Total	<0.00400	U	0.00400		mg/K	g	05/31/23	13:35	06/03/23 02:06	
	МВ	МВ								
Surrogate	%Recovery	Qualifier	Limits				Prepa	red	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	65	S1-	70 - 130				05/31/23	13:35	06/03/23 02:06	
1,4-Difluorobenzene (Surr)	87		70 - 130				05/31/23	13:35	06/03/23 02:06	
Lab Sample ID: LCS 880-54	4501/1-0					Clion	t Sample	יחו	Lab Control	Sampl
Matrix: Solid						onen	t Oampi		Prep Type: T	
Analysis Batch: 54618									Prep Batch	
			Spike	LCS	LCS				%Rec	
Analyte			Added	Result	Qualifier	Unit	D %R	ec	Limits	
Benzene			0.100	0.1236		mg/Kg		24	70 - 130	

A 01

Prepared	Analyzed	Dil Fac
05/31/23 13:35	06/03/23 02:06	1
05/31/23 13:35	06/03/23 02:06	1

ole NA 01

Spike	LCS	1.00					
•	LUG	LCS				%Rec	
Added	Result	Qualifier	Unit	D	%Rec	Limits	
0.100	0.1236		mg/Kg		124	70 - 130	
0.100	0.1049		mg/Kg		105	70 - 130	
0.100	0.09867		mg/Kg		99	70 - 130	
0.200	0.1913		mg/Kg		96	70 - 130	
0.100	0.09239		mg/Kg		92	70 - 130	
-	0.100 0.100 0.100 0.200	0.100 0.1236 0.100 0.1049 0.100 0.09867 0.200 0.1913	0.100 0.1236 0.100 0.1236 0.100 0.1049 0.100 0.09867 0.200 0.1913	0.100 0.1236 mg/Kg 0.100 0.1049 mg/Kg 0.100 0.09867 mg/Kg 0.200 0.1913 mg/Kg	0.100 0.1236 mg/Kg 0.100 0.1049 mg/Kg 0.100 0.09867 mg/Kg 0.200 0.1913 mg/Kg	0.100 0.1236 mg/Kg 124 0.100 0.1049 mg/Kg 105 0.100 0.09867 mg/Kg 99 0.200 0.1913 mg/Kg 96	0.100 0.1236 mg/Kg 124 70 - 130 0.100 0.1049 mg/Kg 105 70 - 130 0.100 0.09867 mg/Kg 99 70 - 130 0.200 0.1913 mg/Kg 96 70 - 130

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	86		70 - 130
1,4-Difluorobenzene (Surr)	91		70 - 130

Lab Sample ID: LCSD 880-54501/2-A Matrix: Solid		C	Client Sa	mple	ID: Lat	Control S Prep Ty			
Analysis Batch: 54618	• "	Prep Bate							
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.1425	*+	mg/Kg		142	70 - 130	14	35

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Client: Ensolum Project/Site: JRU 17 Battery

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCSD 880-54501/2-A Matrix: Solid Analysis Batch: 54618			C	Client Sa	mple	ID: Lat	Control Prep Ty Prep E	pe: Tot	al/NA
-	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Toluene	0.100	0.1167		mg/Kg		117	70 - 130	11	35
Ethylbenzene	0.100	0.1125		mg/Kg		113	70 - 130	13	35
m-Xylene & p-Xylene	0.200	0.2190		mg/Kg		109	70 - 130	13	35
o-Xylene	0.100	0.1079		mg/Kg		108	70 - 130	15	35
LCSD LC	SD								

	LUSD	LUSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	86		70 - 130
1,4-Difluorobenzene (Surr)	106		70 - 130

Lab Sample ID: 890-4740-A-21-D MS Matrix: Solid Analysis Batch: 54618

Analysis Batch: 54618									Prep Batch: 54501
	Sample	Sample	Spike	MS	MS				%Rec
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Benzene	<0.00200	U *+	0.0998	0.1168		mg/Kg		117	70 - 130
Toluene	<0.00200	U	0.0998	0.09584		mg/Kg		96	70 - 130
Ethylbenzene	<0.00200	U	0.0998	0.08918		mg/Kg		89	70 - 130
m-Xylene & p-Xylene	<0.00399	U	0.200	0.1714		mg/Kg		86	70 - 130
o-Xylene	<0.00200	U	0.0998	0.08463		mg/Kg		85	70 - 130

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	98		70 - 130
1,4-Difluorobenzene (Surr)	107		70 - 130

Lab Sample ID: 890-4740-A-21-E MSD Matrix: Solid Analysis Batch: 54618

4-Bromofluorobenzene (Surr)

1,4-Difluorobenzene (Surr)

Analysis Daton. 54010									гіер с	battin.	J4301
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00200	U *+	0.101	0.1261		mg/Kg		125	70 - 130	8	35
Toluene	<0.00200	U	0.101	0.1051		mg/Kg		104	70 - 130	9	35
Ethylbenzene	<0.00200	U	0.101	0.1006		mg/Kg		100	70 - 130	12	35
m-Xylene & p-Xylene	<0.00399	U	0.202	0.1944		mg/Kg		96	70 - 130	13	35
o-Xylene	<0.00200	U	0.101	0.09651		mg/Kg		96	70 - 130	13	35
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								

70 - 130

70 - 130

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

103

93

Lab Sample ID: MB 880-54621/1-A Matrix: Solid Analysis Batch: 54612				nple ID: Method Blank Prep Type: Total/NA Prep Batch: 54621					
	MB	MB							
Analyte	Result	Qualifier	RL	U	nit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	m	ng/Kg		06/02/23 08:00	06/02/23 08:29	1

Job ID: 890-4753-1 SDG: 03C1558226

Client Sample ID: Matrix Spike Duplicate Prep Type: Total/NA Prep Batch: 54501

Client Sample ID: Matrix Spike

Prep Type: Total/NA

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Client: Ensolum Project/Site: JRU 17 Battery

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: MB 880-546	621/1-A						C	Clie	ent Sam			
Matrix: Solid										Prep Ty		
Analysis Batch: 54612		МВ МВ								Prep	Batch:	54621
Apolyto		sult Qualifier	RL		Unit		D	Б	roporod	Anab	and	Dil Fac
Analyte Diesel Range Organics (Over			KL 50.0		mg/K				repared 2/23 08:00	Analy 06/02/23		1
C10-C28)		0.0 0	50.0		iiig/N	y	U	0,0	2/23 00.00	00/02/20	00.29	1
Oll Range Organics (Over C28-C36)) <5	50.0 U	50.0		mg/K	a	C)6/0	2/23 08:00	06/02/23	3 08:29	1
5 5 X					0	0						
		MB MB										
Surrogate		very Qualifier					-		repared	Analy		Dil Fac
1-Chlorooctane		158 S1+	70 - 130						2/23 08:00			1
o-Terphenyl		125	70 - 130				C)6/0	2/23 08:00	06/02/23	8 08:29	1
Lab Sample ID: LCS 880-54	621/2-4					Clie	ont 9	Sar	nple ID:	Lah Co	ntrol S	amnlo
Matrix: Solid						One		Jai	inpic ib.	Prep Ty		
Analysis Batch: 54612												54621
Analysis Baton 04012			Spike	LCS	LCS					%Rec	Jucon.	5-021
Analyte			Added	-	Qualifier	Unit		D	%Rec	Limits		
Gasoline Range Organics			1000	924.6		mg/Kg		_	92	70 - 130		
(GRO)-C6-C10				0		5/15						
Diesel Range Organics (Over			1000	938.7		mg/Kg			94	70 - 130		
C10-C28)												
	LCS	LCS										
Surrogate	%Recovery	Qualifier	Limits									
1-Chlorooctane	111		70 - 130									
o-Terphenyl	86		70 - 130									
Lab Sample ID: LCSD 880-4 Matrix: Solid Analysis Batch: 54612	54621/3-A				C	Client Sa	amp	ole	ID: Lab	Prep Ty	/pe: To	
·····, ·····			Spike	LCSD	LCSD					%Rec		RPD
Analyte			Added	Result	Qualifier	Unit		D	%Rec	Limits	RPD	Limit
Gasoline Range Organics			1000	987.6		mg/Kg		_	99	70 - 130	7	20
(GRO)-C6-C10												
Diesel Range Organics (Over			1000	1030		mg/Kg			103	70 - 130	g	20
C10-C28)												
	LCSD	LCSD										
Surrogate	%Recovery	Qualifier	Limits									
1-Chlorooctane	121		70 - 130									
o-Terphenyl	93		70 - 130									
Lob Comple ID: 000 4750 A	4.1.MC					~	ller	• •	omete l	D. 000 4	752 4	4 1 140
Lab Sample ID: 890-4753-A Matrix: Solid	-1-1 IVI3					C	nen	ι 3	ample II			
Analysis Batch: 54612										Prep Ty	-	54621
Analysis Daton. 34012	Sample	Sample	Spike	МС	MS					%Rec	Jaicii.	J-102 I
Analyte	-	Qualifier	Added		Qualifier	Unit		D	%Rec	Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	<u> </u>	997	1236		mg/Kg		-	122	70 - 130		
Diesel Range Organics (Over C10-C28)	104		997	991.8		mg/Kg			89	70 - 130		
,		МС										
Surrence	MS %Recovery		Limits									
Surrogate	76Recoverv	UNISHTION										
1-Chlorooctane	137		70 - 130									

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Job ID: 890-4753-1

SDG: 03C1558226

Released to Imaging: 7/3/2023 10:56:35 AM

96

o-Terphenyl

70 - 130

Client: Ensolum Project/Site: JRU 17 Battery

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 890-4753-/	A-1-J MSD							Clie	ent	Sar	nple ID:	890-475	3-A-1-	I MSD	
Matrix: Solid												Prep Ty	pe: To	tal/NA	
Analysis Batch: 54612												Prep I	Batch:	54621	ī
	Sample	San	nple	Spike		MSD	MSD					%Rec		RPD	
Analyte	Result		alifier	Added			Qualifier	Unit		_ <u>D</u>	%Rec	Limits	RPD	Limit	ī
Gasoline Range Organics	<50.0	U		997		1167		mg/Kg			115	70 - 130	6	20	
(GRO)-C6-C10	104			997		994.9		m a // a			89	70 - 130	0	20	ï
Diesel Range Organics (Over C10-C28)	104			997		994.9		mg/Kg			09	70-130	0	20	
0.10 020)			_												ī
	MSD			,											
Surrogate 1-Chlorooctane	%Recovery	Qua S1+		Limits 70 - 130	-										Ē
o-Terphenyl	136 97	31+		70 - 130											
0-Terphenyi	97			70-130											ī
Lab Sample ID: MB 880-54	840/1-A									Clie	ent Samp	ole ID: M	ethod	Blank	
Matrix: Solid												Prep Ty			
Analysis Batch: 54827													Batch:		
		MB	MB												
Analyte	Re	sult	Qualifier		RL		Unit		D	Р	repared	Analy	zed	Dil Fac	
Gasoline Range Organics	<	50.0	U		50.0		mg/ł	٢g	_	06/0	6/23 08:00	06/06/23	08:28	1	i
(GRO)-C6-C10								_				/ /			
Diesel Range Organics (Over	<	50.0	U		50.0		mg/ł	٢g		06/0	6/23 08:00	06/06/23	08:28	1	1
C10-C28) Oll Range Organics (Over C28-C36	6) <	50.0	п		50.0		mg/ł	(a		06/0	6/23 08:00	06/06/23	08.28	1	
	0)	00.0	0		00.0		iiig/i	' 9		00/0	0/20 00.00	00/00/20	00.20		
		MВ													
Surrogate	%Reco	-	Qualifier	Lim							repared	Analy		Dil Fac	
1-Chlorooctane		115			130						6/23 08:00			1	
o-Terphenyl		118		70 -	130					06/0	6/23 08:00	06/06/23	08:28	1	
Lab Sample ID: LCS 880-5	1810/2-1							Cli	ont	Sar	nple ID:		atrol S	amplo	
Matrix: Solid	-0-0/2-4								cint	Juli	inpic ib.	Prep Ty			
Analysis Batch: 54827													Batch:		
				Spike		LCS	LCS					%Rec			
Analyte				Added		Result	Qualifier	Unit		D	%Rec	Limits			
Gasoline Range Organics				1000		940.0		mg/Kg			94	70 - 130			
(GRO)-C6-C10															
Diesel Range Organics (Over				1000		820.3		mg/Kg			82	70 - 130			
C10-C28)															
	LCS	LCS	5												
Surrogate	%Recovery	Qua	alifier	Limits	_										
1-Chlorooctane	105			70 - 130											
o-Terphenyl	99			70 - 130											
Lab Sample ID: LCSD 890	E4940/2 A							Client S			ID: Lab	Control	Somel		
Lab Sample ID: LCSD 880- Matrix: Solid	-34040/3-A							chefit 3	all	ipie	ID. Lau	Prep Ty			
Analysis Batch: 54827													Batch:		
Analysis Batch. 54627				Spike			LCSD					%Rec	Saten.	RPD	
Analyte				Added			Qualifier	Unit		D	%Rec	Limits	RPD	Limit	
Gasoline Range Organics				1000		890.5	quamer	mg/Kg			89	70 - 130	5	20	
(GRO)-C6-C10											20		5		
Diesel Range Organics (Over				1000		788.6		mg/Kg			79	70 - 130	4	20	
C10-C28)															

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Job ID: 890-4753-1

SDG: 03C1558226

Lab Sample ID: LCSD 880-54840/3-A

QC Sample Results

Client: Ensolum Project/Site: JRU 17 Battery

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Client Sample ID: Lab Control Sample Dup

Matrix: Solid Analysis Batch: 54827									Prep Ty Prep E	pe: Tot Batch: {	
	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	103		70 - 130								
o-Terphenyl	97		70 - 130								
Lab Sample ID: 880-29073 Matrix: Solid Analysis Batch: 54827							CI	ient Sa			al/NA
	•	Sample	Spike		MS				%Rec		
Analyte		Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	999	955.4		mg/Kg		96	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.8	U	999	856.4		mg/Kg		84	70 - 130		
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	111		70 - 130								
o-Terphenyl	105		70 - 130								
Lab Sample ID: 880-29073	-A-1-D MSC)				Client S	Samp	le ID: N	latrix Spil	ce Dup	licate
Matrix: Solid									Prep Ty		
Analysis Batch: 54827									Prep E	Batch: 8	54840
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	997	967.3		mg/Kg		97	70 - 130	1	20
Diesel Range Organics (Over	<49.8	U	997	854.8		mg/Kg		84	70 - 130	0	20

C10-C28)			
	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	113		70 - 130
o-Terphenyl	104		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-54520/1-A Matrix: Solid Analysis Batch: 54607								Clie	ent Sam	ple ID: Method Prep Type: \$	
	MB	MB									
Analyte	Result	Qualifier		RL		Unit		D P	repared	Analyzed	Dil Fac
Chloride	<5.00	U		5.00		mg/K	g			06/02/23 10:16	1
Lab Sample ID: LCS 880-54520/2-4 Matrix: Solid	L .						Clie	ent Sai	mple ID	: Lab Control S Prep Type: S	
Analysis Batch: 54607											
			Spike		LCS	LCS				%Rec	
Analyte			Added		Result	Qualifier	Unit	D	%Rec	Limits	
Chloride			250		238.7		mg/Kg		95	90 - 110	

Client: Ensolum Project/Site: JRU 17 Battery

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 54607	-54520/3-A				C	Client Sa	mple	ID: Lat	Control Prep Ty		
-			Spike	LCSD	LCSD				%Rec		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride			250	239.8		mg/Kg		96	90 - 110	0	20
Lab Sample ID: 890-4753- Matrix: Solid Analysis Batch: 54607	1 MS							С	lient Sam Prep Ty	-	
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	144		248	390.7		mg/Kg		100	90 - 110		
Lab Sample ID: 890-4753- Matrix: Solid	1 MSD							С	lient Sam Prep Ty	-	
Analysis Batch: 54607											
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	144		248	391.5		mg/Kg		100	90 - 110	0	20

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QC Association Summary

Client: Ensolum Project/Site: JRU 17 Battery Job ID: 890-4753-1 SDG: 03C1558226

GC VOA

Prep Batch: 54500

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
MB 880-54500/5-A	Method Blank	Total/NA	Solid	5035	
rep Batch: 54501					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4753-1	SS01	Total/NA	Solid	5035	
890-4753-2	SS02	Total/NA	Solid	5035	
890-4753-3	SS03	Total/NA	Solid	5035	
890-4753-4	SS04	Total/NA	Solid	5035	
MB 880-54501/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-54501/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-54501/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4740-A-21-D MS	Matrix Spike	Total/NA	Solid	5035	
890-4740-A-21-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 54618

890-4753-3	5503	Iotal/INA	Solia	5035		
890-4753-4	SS04	Total/NA	Solid	5035		8
MB 880-54501/5-A	Method Blank	Total/NA	Solid	5035		
LCS 880-54501/1-A	Lab Control Sample	Total/NA	Solid	5035		9
LCSD 880-54501/2-A	Lab Control Sample Dup	Total/NA	Solid	5035		
890-4740-A-21-D MS	Matrix Spike	Total/NA	Solid	5035		10
890-4740-A-21-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035		
Analysis Batch: 5461	8					11
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	12
890-4753-1	SS01	Total/NA	Solid	8021B	54501	
890-4753-2	SS02	Total/NA	Solid	8021B	54501	4.9
890-4753-3	SS03	Total/NA	Solid	8021B	54501	15
890-4753-4	SS04	Total/NA	Solid	8021B	54501	
MB 880-54500/5-A	Method Blank	Total/NA	Solid	8021B	54500	14
MB 880-54501/5-A	Method Blank	Total/NA	Solid	8021B	54501	
LCS 880-54501/1-A	Lab Control Sample	Total/NA	Solid	8021B	54501	
LCSD 880-54501/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	54501	
890-4740-A-21-D MS	Matrix Spike	Total/NA	Solid	8021B	54501	
890-4740-A-21-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	54501	

Analysis Batch: 54759

Lab Sample ID 890-4753-1	Client Sample ID SS01	Prep Type Total/NA	Matrix	Method Total BTEX	Prep Batch
890-4753-2	SS02	Total/NA	Solid	Total BTEX	
890-4753-3	SS03	Total/NA	Solid	Total BTEX	
890-4753-4	SS04	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 54612

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4753-2	SS02	Total/NA	Solid	8015B NM	54621
890-4753-3	SS03	Total/NA	Solid	8015B NM	54621
890-4753-4	SS04	Total/NA	Solid	8015B NM	54621
MB 880-54621/1-A	Method Blank	Total/NA	Solid	8015B NM	54621
LCS 880-54621/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	54621
LCSD 880-54621/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	54621
890-4753-A-1-I MS	890-4753-A-1-I MS	Total/NA	Solid	8015B NM	54621
890-4753-A-1-J MSD	890-4753-A-1-J MSD	Total/NA	Solid	8015B NM	54621
Prep Batch: 54621					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4753-2	SS02	Total/NA	Solid	8015NM Prep	

Lab Sample ID		Ргер туре	Matrix	wiethoa	Ргер Бассп
890-4753-2	SS02	Total/NA	Solid	8015NM Prep	
890-4753-3	SS03	Total/NA	Solid	8015NM Prep	

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QC Association Summary

Client: Ensolum Project/Site: JRU 17 Battery

GC Semi VOA (Continued)

Prep Batch: 54621 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4753-4	SS04	Total/NA	Solid	8015NM Prep	
MB 880-54621/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-54621/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-54621/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4753-A-1-I MS	890-4753-A-1-I MS	Total/NA	Solid	8015NM Prep	
890-4753-A-1-J MSD	890-4753-A-1-J MSD	Total/NA	Solid	8015NM Prep	

Analysis Batch: 54741

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-4753-1	SS01	Total/NA	Solid	8015 NM	
890-4753-2	SS02	Total/NA	Solid	8015 NM	
890-4753-3	SS03	Total/NA	Solid	8015 NM	
890-4753-4	SS04	Total/NA	Solid	8015 NM	

Analysis Batch: 54827

Lab Sample ID 890-4753-1	Client Sample ID	Prep Type Total/NA	Matrix Solid	Method 8015B NM	Prep Batch 54840
MB 880-54840/1-A	Method Blank	Total/NA	Solid	8015B NM	54840
LCS 880-54840/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	54840
LCSD 880-54840/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	54840
880-29073-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	54840
880-29073-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	54840

Prep Batch: 54840

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4753-1	SS01	Total/NA	Solid	8015NM Prep	
MB 880-54840/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-54840/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-54840/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-29073-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-29073-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 54520

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4753-1	SS01	Soluble	Solid	DI Leach	
890-4753-2	SS02	Soluble	Solid	DI Leach	
890-4753-3	SS03	Soluble	Solid	DI Leach	
890-4753-4	SS04	Soluble	Solid	DI Leach	
MB 880-54520/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-54520/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-54520/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4753-1 MS	SS01	Soluble	Solid	DI Leach	
890-4753-1 MSD	SS01	Soluble	Solid	DI Leach	

Analysis Batch: 54607

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4753-1	SS01	Soluble	Solid	300.0	54520
890-4753-2	SS02	Soluble	Solid	300.0	54520
890-4753-3	SS03	Soluble	Solid	300.0	54520

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Job ID: 890-4753-1 SDG: 03C1558226

QC Association Summary

Client: Ensolum Project/Site: JRU 17 Battery

HPLC/IC (Continued)

Analysis Batch: 54607 (Continued)

Analysis Batch: 54607 (Continued)							
Lab Sample ID 890-4753-4	Client Sample ID SS04	Prep Type Soluble	Matrix Solid	Method 300.0	Prep Batch 54520		
MB 880-54520/1-A	Method Blank	Soluble	Solid	300.0	54520		
LCS 880-54520/2-A	Lab Control Sample	Soluble	Solid	300.0	54520		
LCSD 880-54520/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	54520		
890-4753-1 MS	SS01	Soluble	Solid	300.0	54520		
890-4753-1 MSD	SS01	Soluble	Solid	300.0	54520		

Job ID: 890-4753-1 SDG: 03C1558226

Initial

Amount

4.97 g

5 mL

10.03 g

1 uL

5.04 g

50 mL

Dil

1

1

1

1

1

Factor

Run

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Soluble

Soluble

Client Sample ID: SS01 Date Collected: 05/30/23 12:20 Date Received: 05/30/23 14:00

Batch

Туре

Prep

Analysis

Analysis

Analysis

Analysis

Leach

Analysis

Prep

Batch

5035

8021B

Total BTEX

8015NM Prep

8015 NM

8015B NM

DI Leach

300.0

Method

Job ID: 890-4753-1 SDG: 03C1558226

Lab Sample ID: 890-4753-1

Analyst

MNR

Prepared

or Analyzed

05/31/23 13:35

06/03/23 11:03 MNR

06/05/23 12:45 SM

06/05/23 11:22 SM

06/06/23 09:42 AM

06/06/23 13:09 SM

05/31/23 15:16 KS

06/02/23 10:32 CH

Batch

54501

54618

54759

54741

54840

54827

54520

54607

Number

Final

Amount

5 mL

5 mL

10 mL

1 uL

50 mL

50 mL

Matrix: Solid

Lab

EET MID

Matrix: Solid

Lab Sample ID: 890-4753-2 Matrix: Solid

Lab Sample ID: 890-4753-3

Lab Sample ID: 890-4753-4

x: Solid

Client Sample ID: SS02 Date Collected: 05/30/23 12:25 Date Received: 05/30/23 14:00

Date Received. 05/30/23 14.00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	54501	05/31/23 13:35	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	54618	06/03/23 11:29	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			54759	06/05/23 12:45	SM	EET MID
Total/NA	Analysis	8015 NM		1			54741	06/05/23 11:22	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	54621	06/02/23 09:01	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	54612	06/02/23 12:15	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	54520	05/31/23 15:16	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	54607	06/02/23 10:48	СН	EET MID

Client Sample ID: SS03 Date Collected: 05/30/23 12:30 Date Received: 05/30/23 14:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	54501	05/31/23 13:35	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	54618	06/03/23 11:56	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			54759	06/05/23 12:45	SM	EET MID
Total/NA	Analysis	8015 NM		1			54741	06/05/23 11:22	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	54621	06/02/23 09:01	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	54612	06/02/23 12:37	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	54520	05/31/23 15:16	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	54607	06/02/23 10:53	СН	EET MID

Client Sample ID: SS04 Date Collected: 05/30/23 12:35 Date Received: 05/30/23 14:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	54501	05/31/23 13:35	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	54618	06/03/23 12:22	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			54759	06/05/23 12:45	SM	EET MID

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Released to Imaging: 7/3/2023 10:56:35 AM

Matrix: Solid

Client: Ensolum Project/Site: JRU 17 Battery

Client Sample ID: SS04 Date Collected: 05/30/23 12:35 Date Received: 05/30/23 14:00

Job	ID:	890-	4753	3-1

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SDG: 03C1558226 Lab Sample ID: 890-4753-4

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			54741	06/05/23 11:22	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	54621	06/02/23 09:01	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	54612	06/02/23 12:59	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	54520	05/31/23 15:16	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	54607	06/02/23 10:59	СН	EET MID

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

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Accreditation/Certification Summary

Client: Ensolum Project/Site: JRU 17 Battery Job ID: 890-4753-1 SDG: 03C1558226

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Pr	ogram	Identification Number	Expiration Date	
Texas	NELAP		T104704400-22-25	06-30-23	
The following analytes	are included in this repo	ort but the laboratory is r	not certified by the governing authority.	This list may include analytes for which	
the agency does not c	•		lot contined by the governing autionty.		
• •	•	Matrix	Analyte		
the agency does not c	offer certification.		, , , , , ,		

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Method Summary

Client: Ensolum Project/Site: JRU 17 Battery Job ID: 890-4753-1 SDG: 03C1558226

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	EPA	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Ensolum Project/Site: JRU 17 Battery

Job ID: 890-4753-1
SDG: 03C1558226

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4753-1	SS01	Solid	05/30/23 12:20	05/30/23 14:00	0.5
890-4753-2	SS02	Solid	05/30/23 12:25	05/30/23 14:00	0.5
890-4753-3	SS03	Solid	05/30/23 12:30	05/30/23 14:00	0.5
890-4753-4	SS04	Solid	05/30/23 12:35	05/30/23 14:00	0.5

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Received by OCD: 6/27/2023 12:54:22 PM

Custody Seals Intact: Custody Seal No ∆ Yes ∆ No		Relinquished by	Kelinquished by	Empty Kit Relinquished by	Deliverable Requested 1 II III IV Other (specify)	Possible Hazard Identification Unconfirmed	Note Since laboratory accreditations are subject to change Eurofins Environment Testing South Central LLC places the ownership of method analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody if the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed the samples must be shipped back to the Eurofins Environment Testing South Central LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing South Central LLC attention immediately. If all requested accreditations are current to date return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing South Central LLC.			SS04 (890-4753-4)	SS03 (890-4753-3)	SS02 (890-4753-2)	SS01 (890-4753-1)		Sample Identification - Client ID (Lab ID)	Site:	Project Name JRU 17 Battery	Email	Phone 432-704-5440(Tel)	State, Zip TX 79701	City Midland	adaress 1211 W Florida Ave	Company Eurofins Environment Testing South Centr	Shipping/Receiving	Client Information (Sub Contract Lab)	1089 N Canal St. Carlsbad NM 88220 Phone: 575-988-3199 Fax 575-988-3199
	Date/Time	Date/Time	Date/Time		Primary Deliverable Rank		ment Testing South Cer id above for analysis/tes n Central LLC attention			5/30/23	5/30/23	5/30/23	5/30/23	M	Sample Date	SSOW#	Project #: 89000093	WO #-	PO #		TAT Requested (days).	Due Date Requested 6/5/2023		Phone:	Sampler	
				Date	erable Rank		ntral LLC place ts/matrix being immediately H			12 35 Mountain	12 30 Mountain	12 25 Mountain	12 20 Mountain	X	Sample Time						days).	sted				Chain
					2		is the ownershi analyzed the f all requested				_	_		Preserv	Sample Type (C=comp, G=grab)											of Cus
	Company	Company	Company				p of method an samples must la accreditations			Solid	Solid	Solid	Solid	1.00.0	Matrix (W=water S=solid, O=waste/oli, BT=Tissue, A=Alr									Jes	Lab	Chain of Custody Record
				Time,	ş	Sa	nalyte & ac be shipped are current							\propto	こ Field Filtered Perform MS/N			1000 Inclusion		la casi Oli V	in an		Accreditations Requ NELAP - Texas	E-Mail Jessica Kramer@et.eurofinsus com	Lab PM Kramer Jessica	Reco
Coole	Recei	Recen	R	P	Special Instructions/QC Requirements	Sample Disposal (A	back to date			×	×	×	×		8015MOD_NM/8	015NM	_S_Pr	ep (MO	D) Full	TPH			Accreditations Required (See note): NELAP - Texas	imer@	ssica	řđ
Cooler Temperature(s)	Received by	ved by	U ed by		Instru	le Disposal (A f Return To Client	tion co o the E > retun			×	×	×	×		8015MOD_Calc								Requir Xas	i)et.et		
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Login Sample Receipt Checklist

Client: Ensolum

Login Number: 4753 List Number: 1 Creator: Clifton, Cloe

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	N/A	Refer to Job Narrative for details.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Job Number: 890-4753-1

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Job Number: 890-4753-1 SDG Number: 03C1558226

List Source: Eurofins Midland

List Creation: 06/01/23 11:50 AM

Login Sample Receipt Checklist

Client: Ensolum

Login Number: 4753 List Number: 2 Creator: Teel, Brianna

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is	True	

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").

Received by OCD: 6/27/2023 12:54:22 PM



Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Tacoma Morrissey Ensolum 601 N. Marienfeld St. Suite 400 Midland, Texas 79701 Generated 6/9/2023 8:23:40 PM

JOB DESCRIPTION

JRU 17 Battery SDG NUMBER 03C1558226

JOB NUMBER

890-4776-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

See page two for job notos and contact information

Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization

AMER

Generated 6/9/2023 8:23:40 PM

Authorized for release by Jessica Kramer, Project Manager Jessica.Kramer@et.eurofinsus.com (432)704-5440

Eurofins Carlsbad is a laboratory within Eurofins Environment Testing South Central, LLC, a company within Eurofins Environment Testing Group of Companies

SDG: 03C1558226

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	Definitions/Glossary		
Client: Ensolum Project/Site: JR		Job ID: 890-4776-1 SDG: 03C1558226	2
Qualifiers			
			3
GC VOA	Qualifier Description		
Qualifier	Qualifier Description		
F1	MS and/or MSD recovery exceeds control limits.		
S1- U	Surrogate recovery exceeds control limits, low biased.		5
	Indicates the analyte was analyzed for but not detected.		
GC Semi VOA			
Qualifier	Qualifier Description		
S1-	Surrogate recovery exceeds control limits, low biased.		
S1+	Surrogate recovery exceeds control limits, high biased.		
U	Indicates the analyte was analyzed for but not detected.		8
HPLC/IC			
Qualifier	Qualifier Description		9
U	Indicates the analyte was analyzed for but not detected.		
Glossary			
Abbreviation	These commonly used abbreviations may or may not be present in this report.		
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis		
%R	Percent Recovery		
CFL	Contains Free Liquid		
CFU	Colony Forming Unit		
CNF	Contains No Free Liquid		
DER	Duplicate Error Ratio (normalized absolute difference)		
Dil Fac	Dilution Factor		
DL	Detection Limit (DoD/DOE)		
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample		
DLC	Decision Level Concentration (Radiochemistry)		
EDL	Estimated Detection Limit (Dioxin)		
LOD	Limit of Detection (DoD/DOE)		
LOQ	Limit of Quantitation (DoD/DOE)		
MCL	EPA recommended "Maximum Contaminant Level"		
MDA	Minimum Detectable Activity (Radiochemistry)		
MDC	Minimum Detectable Concentration (Radiochemistry)		
MDL	Method Detection Limit		
ML	Minimum Level (Dioxin)		
MPN	Most Probable Number		
MQL	Method Quantitation Limit		
NC	Not Calculated		
ND	Not Detected at the reporting limit (or MDL or EDL if shown)		
NEG	Negative / Absent		
POS	Positive / Present		
PQL	Practical Quantitation Limit		
PRES	Presumptive		
QC	Quality Control		
RER	Relative Error Ratio (Radiochemistry)		
RL	Reporting Limit or Requested Limit (Radiochemistry)		
RPD	Relative Percent Difference, a measure of the relative difference between two points		
TEF	Toxicity Equivalent Factor (Dioxin)		
TEQ	Toxicity Equivalent Quotient (Dioxin)		

- TEQ Toxicity Equivalent Quotient (Dioxin)
- TNTC Too Numerous To Count

Job ID: 890-4776-1

Job ID: 890-4776-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-4776-1

Receipt

The samples were received on 6/2/2023 1:29 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.2°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: BH01 (890-4776-1), BH01A (890-4776-2), BH02 (890-4776-3), BH02A (890-4776-4), BH03 (890-4776-5), BH03A (890-4776-6), BH04 (890-4776-7) and BH04A (890-4776-8).

GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-54782 and analytical batch 880-55088 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-55088 recovered above the upper control limit for Benzene, Toluene, Ethylbenzene, m-Xylene & p-Xylene and o-Xylene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCV 880-55088/20).

Method 8021B: Surrogate recovery for the following sample was outside control limits: (MB 880-54782/5-A). Evidence of matrix interferences is not obvious.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC Semi VOA

Method 8015MOD NM: Surrogate recovery for the following sample was outside control limits: (MB 880-54740/1-A). Evidence of matrix interferences is not obvious.

Method 8015MOD NM: The surrogate recovery for the blank associated with preparation batch 880-54720 and analytical batch 880-54713 was outside the upper control limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Method: SW846 8021B - Volatile Organic Compounds (GC)

Result Qualifier

<0.00201 U F1

<0.00201 U

RL

0.00201

0.00201

Unit

mg/Kg

mg/Kg

D

Prepared

06/05/23 15:21

06/05/23 15:21

Job ID: 890-4776-1 SDG: 03C1558226

Client Sample ID: BH01

Project/Site: JRU 17 Battery

Date Collected: 06/02/23 11:15 Date Received: 06/02/23 13:29

Sample Depth: 0.5'

Client: Ensolum

Analyte

Benzene

Toluene

Lab Sample ID: 890-4776-1

Analyzed

06/09/23 12:50

06/09/23 12:50

Matrix: Solid

5 Dil Fac

1

1

		-						-
Ethylbenzene	<0.00201	U F1	0.00201	mg/Kg		06/05/23 15:21	06/09/23 12:50	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		06/05/23 15:21	06/09/23 12:50	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		06/05/23 15:21	06/09/23 12:50	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		06/05/23 15:21	06/09/23 12:50	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130			06/05/23 15:21	06/09/23 12:50	1
1,4-Difluorobenzene (Surr)	86		70 - 130			06/05/23 15:21	06/09/23 12:50	1
Method: TAL SOP Total BTEX - T	otal BTEX Cal	culation						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			06/09/23 21:13	1
Method: SW846 8015 NM - Diese	I Panga Organ		60)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			06/06/23 11:08	1
Method: SW846 8015B NM - Dies	ol Pango Orga	nice (DBO)	(60)					
Analyte		Qualifier	(GC) RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.9	U	49.9	mg/Kg		06/05/23 11:12	06/06/23 00:01	1
(GRO)-C6-C10								
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		06/05/23 11:12	06/06/23 00:01	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		06/05/23 11:12	06/06/23 00:01	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	122		70 - 130			06/05/23 11:12	06/06/23 00:01	1
o-Terphenyl	128		70 - 130			06/05/23 11:12	06/06/23 00:01	1
Method: EPA 300.0 - Anions, Ion	Chromatogra	ohy - Solubl	e					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	56.9		5.02	mg/Kg			06/06/23 02:04	1
lient Sample ID: BH01A						Lab Sar	nple ID: 890-	4776-2
ate Collected: 06/02/23 10:40							Matri	ix: Solid
ate Received: 06/02/23 13:29								
ample Depth: 1'								
Method: SW846 8021B - Volatile	Organic Com	ounds (GC						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		06/05/23 15:21	06/09/23 13:15	1
Toluene	<0.00202	U	0.00202	mg/Kg		06/05/23 15:21	06/09/23 13:15	1
	.0.0000		0.00000			00/05/00 45 04	00/00/00 40 45	

4-Bromofluorobenzene (Surr)	103		70 - 130		06/05/23 15:21	06/09/23 13:15	1
Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
Xylenes, Total	<0.00403	U	0.00403	mg/Kg	06/05/23 15:21	06/09/23 13:15	1
o-Xylene	<0.00202	U	0.00202	mg/Kg	06/05/23 15:21	06/09/23 13:15	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg	06/05/23 15:21	06/09/23 13:15	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg	06/05/23 15:21	06/09/23 13:15	1
Toluene	<0.00202	U	0.00202	mg/Kg	06/05/23 15:21	06/09/23 13:15	1

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Client Sample Results

Job ID: 890-4776-1 SDG: 03C1558226

Lab Sample ID: 890-4776-2

Client Sample ID: BH01A

Date Collected: 06/02/23 10:40 Date Received: 06/02/23 13:29

Project/Site: JRU 17 Battery

Sample Depth: 1'

Client: Ensolum

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)	

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1,4-Difluorobenzene (Surr)	89		70 - 130			06/05/23 15:21	06/09/23 13:15	
Method: TAL SOP Total BTEX - 1	Total BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00403	U	0.00403	mg/Kg			06/09/23 21:13	
Method: SW846 8015 NM - Diese	el Range Organ	ics (DRO) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	<49.9	U	49.9	mg/Kg			06/06/23 11:08	
		nics (DRO) Qualifier	(GC) RL	Unit	D	Prepared	Analyzed	Dil Fa
			· · ·		_			
Analyte		Qualifier	· · ·	Unit mg/Kg	<u>D</u>	Prepared 06/05/23 11:12	Analyzed	Dil Fa
Analyte Gasoline Range Organics	Result	Qualifier	RL 49.9		<u>D</u>	-		Dil Fa
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result	Qualifier U			<u> </u>	-		Dil Fa
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result <49.9 <49.9	Qualifier U U	RL 49.9 49.9	mg/Kg	<u> </u>	06/05/23 11:12 06/05/23 11:12	06/06/23 00:23 06/06/23 00:23	Dil Fa
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result <49.9	Qualifier U U	RL 49.9	mg/Kg	<u> </u>	06/05/23 11:12	06/06/23 00:23	Dil Fa
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result <49.9 <49.9	Qualifier U U U	RL 49.9 49.9	mg/Kg	<u> </u>	06/05/23 11:12 06/05/23 11:12	06/06/23 00:23 06/06/23 00:23	
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	Result <49.9 <49.9 <49.9	Qualifier U U U	RL 49.9 49.9 49.9	mg/Kg	<u>D</u>	06/05/23 11:12 06/05/23 11:12 06/05/23 11:12	06/06/23 00:23 06/06/23 00:23 06/06/23 00:23	
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Result <49.9 <49.9 <49.9 <49.9 %Recovery	Qualifier U U U	RL 49.9 49.9 49.9 Limits	mg/Kg	<u>D</u>	06/05/23 11:12 06/05/23 11:12 06/05/23 11:12 06/05/23 11:12 Prepared	06/06/23 00:23 06/06/23 00:23 06/06/23 00:23 06/06/23 00:23 Analyzed	Dil Fa
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	Result <49.9 <49.9 <49.9 <49.9 <0.000 million <0.000 million 102 109	Qualifier U U Qualifier	RL 49.9 49.9 49.9 20.9 Limits 70 - 130 70 - 130	mg/Kg	<u> </u>	06/05/23 11:12 06/05/23 11:12 06/05/23 11:12 06/05/23 11:12 Prepared 06/05/23 11:12	06/06/23 00:23 06/06/23 00:23 06/06/23 00:23 <u>Analyzed</u> 06/06/23 00:23	
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl Method: EPA 300.0 - Anions, Ion Analyte	Result <49.9	Qualifier U U Qualifier	RL 49.9 49.9 49.9 20.9 Limits 70 - 130 70 - 130	mg/Kg	D	06/05/23 11:12 06/05/23 11:12 06/05/23 11:12 06/05/23 11:12 Prepared 06/05/23 11:12	06/06/23 00:23 06/06/23 00:23 06/06/23 00:23 <u>Analyzed</u> 06/06/23 00:23	

Analyte	Result	Qualifier	RL	Unit	U	Prepared	Analyzed	DIIFac
Chloride	46.2		4.95	mg/Kg			06/06/23 02:09	1

Client Sample ID: BH02

Date Collected: 06/02/23 11:20 Date Received: 06/02/23 13:29 Sample Depth: 0.5'

Lab Sample ID: 890-4776-3 Matrix: Solid

Analyte	ile Organic Comp	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
						· · · · · · · · · · · · · · · · · · ·		
Benzene	<0.00199		0.00199	mg/Kg		06/05/23 15:21	06/09/23 13:42	1
Toluene	<0.00199	U	0.00199	mg/Kg		06/05/23 15:21	06/09/23 13:42	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		06/05/23 15:21	06/09/23 13:42	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		06/05/23 15:21	06/09/23 13:42	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		06/05/23 15:21	06/09/23 13:42	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		06/05/23 15:21	06/09/23 13:42	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130			06/05/23 15:21	06/09/23 13:42	1
1,4-Difluorobenzene (Surr)	81		70 - 130			06/05/23 15:21	06/09/23 13:42	1
Method: TAL SOP Total BTEX	- Total BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Analyte								
Total BTEX	<0.00398	U	0.00398	mg/Kg			06/09/23 21:13	1
				mg/Kg			06/09/23 21:13	1
Total BTEX	esel Range Organ			mg/Kg Unit	 D	Prepared	06/09/23 21:13 Analyzed	1 Dil Fac

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Matrix: Solid

5

Released to Imaging: 7/3/2023 10:56:35 AM

Job ID: 890-4776-1 SDG: 03C1558226

Client Sample ID: BH02

Project/Site: JRU 17 Battery

Date Collected: 06/02/23 11:20 Date Received: 06/02/23 13:29

Sample Depth: 0.5'

Client: Ensolum

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		06/05/23 11:12	06/06/23 00:44	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		06/05/23 11:12	06/06/23 00:44	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		06/05/23 11:12	06/06/23 00:44	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	105		70 - 130			06/05/23 11:12	06/06/23 00:44	1
o-Terphenyl	108		70 - 130			06/05/23 11:12	06/06/23 00:44	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	45.1	4.96	mg/Kg			06/06/23 02:25	1

Client Sample ID: BH02A

Date Collected: 06/02/23 09:15 Date Received: 06/02/23 13:29

Sample Depth: 1'

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		06/05/23 15:21	06/09/23 14:08	1
Toluene	<0.00198	U	0.00198	mg/Kg		06/05/23 15:21	06/09/23 14:08	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		06/05/23 15:21	06/09/23 14:08	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		06/05/23 15:21	06/09/23 14:08	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		06/05/23 15:21	06/09/23 14:08	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		06/05/23 15:21	06/09/23 14:08	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	111		70 - 130			06/05/23 15:21	06/09/23 14:08	1
1,4-Difluorobenzene (Surr)	88		70 - 130			06/05/23 15:21	06/09/23 14:08	1

	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
l	Total BTEX	<0.00396	U	0.00396	mg/Kg			06/09/23 21:13	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			06/06/23 11:08	1
—								

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

I	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Gasoline Range Organics	<50.0	U	50.0	mg/Kg		06/05/23 11:12	06/06/23 01:05	1
	(GRO)-C6-C10								
	Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		06/05/23 11:12	06/06/23 01:05	1
	C10-C28)								
	Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		06/05/23 11:12	06/06/23 01:05	1
	Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
	1-Chlorooctane	107		70 - 130			06/05/23 11:12	06/06/23 01:05	1
	o-Terphenyl	114		70 - 130			06/05/23 11:12	06/06/23 01:05	1

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Lab Sample ID: 890-4776-4

Matrix: Solid

Released to Imaging: 7/3/2023 10:56:35 AM

		Clier	nt Sample Re	sults				
Client: Ensolum							Job ID: 890 SDG: 03C1	
Project/Site: JRU 17 Battery								
Client Sample ID: BH02A						Lab Sar	nple ID: 890-	4776-4
Date Collected: 06/02/23 09:15							Matri	x: Solio
Date Received: 06/02/23 13:29								
Sample Depth: 1'								
Method: EPA 300.0 - Anions, Ion	Chromatograp	ohy - Solub	le					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	57.6		5.00	mg/Kg			06/06/23 02:31	
Client Sample ID: BH03						Lab Sar	nple ID: 890-	4776-
Date Collected: 06/02/23 09:20							Matri	x: Solic
Date Received: 06/02/23 13:29								
Sample Depth: 1'								
_ Method: SW846 8021B - Volatile	Organic Comp	ounds (GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00200	U	0.00200	mg/Kg		06/05/23 15:21	06/09/23 14:34	
Toluene	<0.00200	U	0.00200	mg/Kg		06/05/23 15:21	06/09/23 14:34	
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		06/05/23 15:21	06/09/23 14:34	
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		06/05/23 15:21	06/09/23 14:34	
o-Xylene	<0.00200	U	0.00200	mg/Kg		06/05/23 15:21	06/09/23 14:34	
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		06/05/23 15:21	06/09/23 14:34	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	97		70 - 130			06/05/23 15:21	06/09/23 14:34	
1,4-Difluorobenzene (Surr) _	85		70 - 130			06/05/23 15:21	06/09/23 14:34	
- Method: TAL SOP Total BTEX - T	otal BTEX Cal	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00400	U	0.00400	mg/Kg			06/09/23 21:13	
_ Method: SW846 8015 NM - Diese	l Range Organ	ics (DRO) (GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	<50.0	U	50.0	mg/Kg			06/06/23 11:29	
Method: SW846 8015B NM - Dies					_	- ·		
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		06/05/23 09:14	06/05/23 17:57	
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		06/05/23 09:14	06/05/23 17:57	
C10-C28)				-33				
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		06/05/23 09:14	06/05/23 17:57	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1-Chlorooctane	114		70 - 130			06/05/23 09:14	06/05/23 17:57	
o-Terphenyl	85		70 - 130			06/05/23 09:14	06/05/23 17:57	
_ Method: EPA 300.0 - Anions, Ion	Chromatogram	ohy - Solub	le					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa

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06/06/23 02:36

Chloride

5.04

mg/Kg

46.1

Method: SW846 8021B - Volatile Organic Compounds (GC)

Job ID: 890-4776-1 SDG: 03C1558226

Client Sample ID: BH03A

Project/Site: JRU 17 Battery

Date Collected: 06/02/23 09:30 Date Received: 06/02/23 13:29

Sample Depth: 3'

Client: Ensolum

Lab Sample ID: 890-4776-6

Matrix: Solid

5

Analyte		Qualifier	, RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201		0.00201	mg/Kg		06/05/23 15:21	06/09/23 15:00	1
Toluene	<0.00201		0.00201	mg/Kg		06/05/23 15:21	06/09/23 15:00	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		06/05/23 15:21	06/09/23 15:00	1
m-Xylene & p-Xylene	<0.00402		0.00402	mg/Kg		06/05/23 15:21	06/09/23 15:00	1
o-Xylene	<0.00201		0.00201	mg/Kg		06/05/23 15:21	06/09/23 15:00	1
Xylenes, Total	<0.00402		0.00402	mg/Kg		06/05/23 15:21	06/09/23 15:00	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130			06/05/23 15:21	06/09/23 15:00	1
1,4-Difluorobenzene (Surr)	91		70 - 130			06/05/23 15:21	06/09/23 15:00	1
Method: TAL SOP Total BTEX - To	otal BTEX Cal	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			06/09/23 21:13	1
- Method: SW846 8015 NM - Diesel	I Range Orgar	iics (DRO) (GC)					
Analyte	Result	Qualifier		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			06/06/23 11:29	1
Method: SW846 8015B NM - Dies	sel Range Orga	anics (DRO)	/ (GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg	_	06/05/23 09:14	06/05/23 18:19	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		06/05/23 09:14	06/05/23 18:19	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		06/05/23 09:14	06/05/23 18:19	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	124		70 - 130			06/05/23 09:14	06/05/23 18:19	1
o-Terphenyl	97		70 - 130			06/05/23 09:14	06/05/23 18:19	1
Method: EPA 300.0 - Anions, Ion								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	51.4		5.05	mg/Kg			06/06/23 02:41	1
lient Sample ID: BH04						Lab Sar	mple ID: 890-4	4776-7
Date Collected: 06/02/23 10:00							Matri	ix: Solid
Date Received: 06/02/23 13:29								
Sample Depth: 1'								
			-					
Method: SW846 8021B - Volatile C Analyte		oounds (GC) Qualifier) RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202		0.00202	<u></u>		06/05/23 15:21	06/09/23 15:26	1
Toluene	<0.00202		0.00202	mg/Kg		06/05/23 15:21	06/09/23 15:26	1
Ethylbenzene	<0.00202		0.00202	mg/Kg		06/05/23 15:21	06/09/23 15:26	1
m-Xylene & p-Xylene	<0.00202		0.00404	mg/Kg		06/05/23 15:21	06/09/23 15:26	1
o-Xylene	< 0.00202		0.00202	mg/Kg		06/05/23 15:21	06/09/23 15:26	1
Xylenes, Total	<0.00202		0.00202	mg/Kg		06/05/23 15:21	06/09/23 15:26	1
Ayleries, Iotai	<0.00404	0	0.00404	mg/kg		00/05/25 15:21	00/09/23 15:20	1

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Client Sample Results

Job ID: 890-4776-1 SDG: 03C1558226

Matrix: Solid

5

Lab Sample ID: 890-4776-7

Client Sample ID: BH04

Project/Site: JRU 17 Battery

Date Collected: 06/02/23 10:00 Date Received: 06/02/23 13:29

Sample Depth: 1'

I

Client: Ensolum

ipic Deptil. I	
Ale a de ONA/0 40 0004 D	λ (a latile Operation Compared (OO) (Operations d)

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	87		70 - 130			06/05/23 15:21	06/09/23 15:26	1
Method: TAL SOP Total BTEX -	Total BTEX Calo	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404	mg/Kg			06/09/23 21:13	1
Method: SW846 8015 NM - Dies	el Range Organ	ics (DRO) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			06/06/23 11:29	1
Method: SW846 8015B NM - Die	sel Range Orga	nics (DRO)	(GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.9	U	49.9	mg/Kg		06/05/23 09:14	06/05/23 18:40	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<49.9	U	49.9	mg/Kg		06/05/23 09:14	06/05/23 18:40	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		06/05/23 09:14	06/05/23 18:40	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	128		70 - 130			06/05/23 09:14	06/05/23 18:40	1
o-Terphenyl	97		70 - 130			06/05/23 09:14	06/05/23 18:40	1
Method: EPA 300.0 - Anions, lor	n Chromatograp	ohy - Solubl	e					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

Client Sample ID: BH04A

Date Collected: 06/02/23 10:05 Date Received: 06/02/23 13:29 Sample Depth: 2' Lab Sample ID: 890-4776-8

Matrix: Solid

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		06/05/23 15:21	06/09/23 15:52	1
Toluene	<0.00200	U	0.00200	mg/Kg		06/05/23 15:21	06/09/23 15:52	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		06/05/23 15:21	06/09/23 15:52	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		06/05/23 15:21	06/09/23 15:52	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		06/05/23 15:21	06/09/23 15:52	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		06/05/23 15:21	06/09/23 15:52	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	118		70 - 130			06/05/23 15:21	06/09/23 15:52	1
1,4-Difluorobenzene (Surr)	90		70 - 130			06/05/23 15:21	06/09/23 15:52	1
Method: TAL SOP Total BTEX	- Total BTEX Cald	ulation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			06/09/23 21:13	1
Method: SW846 8015 NM - Die	esel Range Organ	ics (DRO) (GC)					
Analyte	Desult	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

06/06/23 11:29

Total TPH

50.0

mg/Kg

<50.0 U

Client Sample Results

Job ID: 890-4776-1 SDG: 03C1558226

Client Sample ID: BH04A

Project/Site: JRU 17 Battery

Date Collected: 06/02/23 10:05 Date Received: 06/02/23 13:29

Sample Depth: 2'

Client: Ensolum

Lab S	Sample ID: 890-4776-8
	Matrix: Solid

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		06/05/23 09:14	06/05/23 19:01	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		06/05/23 09:14	06/05/23 19:01	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		06/05/23 09:14	06/05/23 19:01	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane			70 - 130			06/05/23 09:14	06/05/23 19:01	1
o-Terphenyl	90		70 - 130			06/05/23 09:14	06/05/23 19:01	1
Method: EPA 300.0 - Anions, Ion	Chromatograp	ohy - Solubl	e					
	Decult	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Analyte	Result	Quaimer	NL.	Unit	U	Flepaleu	Analyzeu	DirFac

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890-4776-8
Method: 8021B - Volatile Organic Compounds (GC) Matrix: Solid

				Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1		
Lab Sample ID	Client Sample ID	(70-130)	(70-130)		
890-4776-1	BH01	102	86		
890-4776-1 MS	BH01	104	96		
890-4776-1 MSD	BH01	101	95		
890-4776-2	BH01A	103	89		
390-4776-3	BH02	108	81		
890-4776-4	BH02A	111	88		
390-4776-5	BH03	97	85		
390-4776-6	BH03A	122	91		
390-4776-7	BH04	107	87		
390-4776-8	BH04A	118	90		
_CS 880-54782/1-A	Lab Control Sample	98	88		
_CSD 880-54782/2-A	Lab Control Sample Dup	92	97		
MB 880-54782/5-A	Method Blank	64 S1-	86		
Surrogate Legend					
BFB = 4-Bromofluorobe					- 7
DFBZ = 1,4-Difluoroben	zene (Surr)				

Method: 8015B NM - Diesel Range Organics (DRO) (GC) Matrix: Solid

_			
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-4769-A-1-E MS	Matrix Spike	113	81
890-4769-A-1-F MSD	Matrix Spike Duplicate	111	79
890-4771-A-1-C MS	Matrix Spike	115	112
890-4771-A-1-D MSD	Matrix Spike Duplicate	112	111
890-4776-1	BH01	122	128
890-4776-2	BH01A	102	109
890-4776-3	BH02	105	108
890-4776-4	BH02A	107	114
890-4776-5	BH03	114	85
890-4776-6	BH03A	124	97
890-4776-7	BH04	128	97
890-4776-8	BH04A	118	90
LCS 880-54720/2-A	Lab Control Sample	109	84
LCS 880-54740/2-A	Lab Control Sample	101	106
LCSD 880-54720/3-A	Lab Control Sample Dup	99	75
LCSD 880-54740/3-A	Lab Control Sample Dup	103	108
MB 880-54720/1-A	Method Blank	136 S1+	108
MB 880-54740/1-A	Method Blank	15 S1-	17 S1-

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Job ID: 890-4776-1 SDG: 03C1558226

Prep Type: Total/NA

Prep Type: Total/NA

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Client: Ensolum Project/Site: JRU 17 Battery

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID	D: MB 880-54782/5-A	

Matrix: Solid Analysis Batch: 55088

-	МВ	МВ						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		06/05/23 15:21	06/09/23 12:23	1
Toluene	<0.00200	U	0.00200	mg/Kg		06/05/23 15:21	06/09/23 12:23	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		06/05/23 15:21	06/09/23 12:23	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		06/05/23 15:21	06/09/23 12:23	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		06/05/23 15:21	06/09/23 12:23	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		06/05/23 15:21	06/09/23 12:23	1
	МВ	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	64	S1-	70 - 130			06/05/23 15:21	06/09/23 12:23	1
1,4-Difluorobenzene (Surr)	86		70 - 130			06/05/23 15:21	06/09/23 12:23	1

Lab Sample ID: LCS 880-54782/1-A Matrix: Solid

Analysis Batch: 55088

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.1037		mg/Kg		104	70 - 130	
Toluene	0.100	0.09558		mg/Kg		96	70 - 130	
Ethylbenzene	0.100	0.1141		mg/Kg		114	70 - 130	
m-Xylene & p-Xylene	0.200	0.1956		mg/Kg		98	70 - 130	
o-Xylene	0.100	0.09937		mg/Kg		99	70 - 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	98		70 - 130
1,4-Difluorobenzene (Surr)	88		70 - 130

Lab Sample ID: LCSD 880-54782/2-A

Matrix: Solid

Analysis Batch: 55088							Prep	Batch:	54782
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.1235		mg/Kg		124	70 - 130	17	35
Toluene	0.100	0.1058		mg/Kg		106	70 - 130	10	35
Ethylbenzene	0.100	0.1171		mg/Kg		117	70 - 130	3	35
m-Xylene & p-Xylene	0.200	0.2010		mg/Kg		101	70 - 130	3	35
o-Xylene	0.100	0.1000		mg/Kg		100	70 - 130	1	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	92		70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

Lab Sample ID: 890-4776-1 MS Matrix: Solid

Analysis Bataby 55000

Analysis Batch: 55088									Prep	Batch: 54782
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00201	U F1	0.101	0.1526	F1	mg/Kg		151	70 - 130	
Toluene	<0.00201	U	0.101	0.1312		mg/Kg		130	70 - 130	

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Client Sample ID: BH01

Prep Type: Total/NA

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

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Job ID: 890-4776-1 SDG: 03C1558226

MS MS

0.1478 F1

0.2549

0.1257

Result Qualifier

Unit

mg/Kg

mg/Kg

mg/Kg

Spike

Added

0.101

0.202

0.101

Limits

70 - 130

70 - 130

Spike

Added

0.0990

0.0990

0.0990

0.198

Client: Ensolum Project/Site: JRU 17 Battery

Analysis Batch: 55088

4-Bromofluorobenzene (Surr)

Analysis Batch: 55088

Lab Sample ID: 890-4776-1 MSD

1,4-Difluorobenzene (Surr)

Matrix: Solid

Analyte

o-Xylene

Surrogate

Matrix: Solid

Analyte

Benzene

Toluene

Ethylbenzene

m-Xylene & p-Xylene

Ethylbenzene

m-Xylene & p-Xylene

Lab Sample ID: 890-4776-1 MS

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Sample Sample

MS MS

Qualifier

<0.00201 U F1

<0.00402 U

<0.00201 U

104

96

Sample Sample

<0.00201 UF1

<0.00201 UF1

<0.00201 U

<0.00402 U

Result Qualifier

%Recovery

Result Qualifier

Job ID: 890-4776-1 SDG: 03C1558226

Client Sample ID: BH01

%Rec

Limits

70 - 130

70 - 130

70 - 130

%Rec

147

126

125

D

Prep Type: Total/NA

Prep Batch: 54782

7

Client Sample ID: BH01
Prep Type: Total/NA
Pren Batch: 54782

тріе іD: Бної
Type: Total/NA
Batch: 54782
RPD

					Prep Type: Total/NA					
					Prep	Batch:	54782			
MSD	MSD				%Rec		RPD			
Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit			
0.1368	F1	mg/Kg		138	70 - 130	11	35			
0.1167		mg/Kg		118	70 - 130	12	35			
0.1325	F1	mg/Kg		134	70 - 130	11	35			
0.2270		mg/Kg		115	70 - 130	12	35			
0.1116		mg/Kg		113	70 - 130	12	35			

o-Xylene	<0.00201	U	0.0990
	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)			70 - 130
1,4-Difluorobenzene (Surr)	95		70 - 130

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-54720/1- Matrix: Solid Analysis Batch: 54713	Α					Client Sa	mple ID: Metho Prep Type: ⊺ Prep Batcł	Total/NA
	MB	МВ						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		06/05/23 08:00	06/05/23 08:21	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		06/05/23 08:00	06/05/23 08:21	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		06/05/23 08:00	06/05/23 08:21	1
	MB	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	136	S1+	70 - 130			06/05/23 08:00	06/05/23 08:21	1
o-Terphenyl	108		70 - 130			06/05/23 08:00	06/05/23 08:21	1
Lab Sample ID: LCS 880-54720/2	?-A				c	lient Sample I	D: Lab Control	Sample

Matrix: Solid Analysis Batch: 54713

Analysis Batch: 54713							Prep	Batch: 54720
	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	845.6		mg/Kg		85	70 - 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	885.3		mg/Kg		89	70 - 130	
C10-C28)								

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Prep Type: Total/NA

Client: Ensolum Project/Site: JRU 17 Battery

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCS 880-543 Matrix: Solid							Shell	Jample	ID: Lab Co Prep T	ype: To	
Analysis Batch: 54713										Batch:	
	1.05	LCS									
Surrogate	%Recovery		Limits								
1-Chlorooctane	- <u>////////////////////////////////////</u>	Quanner	70 - 130								
o-Terphenyl	84		70 - 130								
-											
Lab Sample ID: LCSD 880-5	4720/3-A					Clier	nt San	ple ID:	Lab Contro		
Matrix: Solid										ype: To	
Analysis Batch: 54713										Batch:	
			Spike		LCSD				%Rec		RPI
Analyte			Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limi
Gasoline Range Organics			1000	955.3		mg/Kg		96	70 - 130	12	2
(GRO)-C6-C10			1000	051 7		ma a /// a		05	70 120	7	2
Diesel Range Organics (Over C10-C28)			1000	951.7		mg/Kg		95	70 - 130	7	2
,	1000	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane		Quaimer	70 - 130								
o-Terphenyl	75		70 - 130 70 - 130								
	70		70 - 150								
Lab Sample ID: 890-4769-A-	1-E MS							Client	Sample ID	: Matrix	Spik
Matrix: Solid									Prep T	ype: To	tal/N/
Analysis Batch: 54713									Prep	Batch:	5472
-	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics	<49.9	U	1000	1080		mg/Kg		108	70 - 130		
(GRO)-C6-C10											
Diesel Range Organics (Over	<49.9	U	1000	957.5		mg/Kg		96	70 - 130		
C10-C28)											
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	113		70 - 130								
o-Terphenyl	81		70 - 130								
Lab Sample ID: 890-4769-A-	1-F MSD					CI	ient Sa	ample IF): Matrix Sp	nike Dur	olicate
Matrix: Solid										ype: To	
Analysis Batch: 54713										Batch:	
	Sample	Sample	Spike	MSD	MSD				%Rec		RPE
Analyte	-	Qualifier	Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limi
Gasoline Range Organics (GRO)-C6-C10	<49.9		998	1122		mg/Kg		112	70 - 130	4	20
Diesel Range Organics (Over	<49.9	U	998	925.7		mg/Kg		93	70 - 130	3	2
C10-C28)											
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	111		70 - 130								

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

_ab Sample ID: MB 880-54740/	1-A							Client S	ample ID: N		
Aatrix: Solid									Prep Ty	/pe: To	tal/NA
Analysis Batch: 54716									Prep l	Batch:	54740
		AB MB									
Analyte		ult Qualifier	RL		Unit			Prepared	Analyze		Dil Fac
Gasoline Range Organics	<50).0 U	50.0		mg/K	g	06	/05/23 11:12	06/05/23 2	1:06	1
(GRO)-C6-C10 Diesel Range Organics (Over	<50).0 U	50.0		mg/K	'n	06	/05/23 11:12	06/05/23 2	1.06	1
C10-C28)			50.0		iiig/ix	g	00	105/25 11.12	00/03/23 2	1.00	
Oll Range Organics (Over C28-C36)	<50).0 U	50.0		mg/K	g	06	/05/23 11:12	06/05/23 2	1:06	1
		MB MB						_ ,			.
Surrogate	%Recove	ery Qualifier 15 S1-	Limits					Prepared	Analyze		Dil Fac
1-Chlorooctane			70 - 130 70 - 130					/05/23 11:12	06/05/23 2		1
o-Terphenyl		17 S1-	70 - 130				06	/05/23 11:12	06/05/23 2	1:06	1
Lab Sample ID: LCS 880-54740)/2-A						Clier	t Sample	ID: Lab Co	ntrol S	ample
Matrix: Solid								oumple	Prep Ty		
Analysis Batch: 54716											54740
			Spike	LCS	LCS				%Rec		
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics			1000	865.0		mg/Kg		86	70 - 130		
(GRO)-C6-C10											
Diesel Range Organics (Over			1000	940.7		mg/Kg		94	70 - 130		
C10-C28)											
	LCS L	cs									
Surrogate	%Recovery G	Qualifier	Limits								
1-Chlorooctane	101		70 - 130								
o-Terphenyl	106		70 - 130								
Lab Sample ID: LCSD 880-5474	40/3-A					CI	ient Sa	mple ID: L	ab Control		
Matrix: Solid									Prep Ty		
Analysis Batch: 54716										Batch:	54740
			Spike		LCSD		_	~ -	%Rec		RPD
Analyte			Added		Qualifier	Unit	D		Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10			1000	957.3		mg/Kg		96	70 - 130	10	20
Diesel Range Organics (Over			1000	931.7		mg/Kg		93	70 - 130	1	20
C10-C28)											
	1005	000									
	LCSD L		Lingitz								
Surrogate 1-Chlorooctane	<u>%Recovery</u> 0 103	uaimer	Limits 70 - 130								
o-Terphenyl	108		70 - 130								
Lab Sample ID: 890-4771-A-1-0	CMS							Client	Sample ID:	Matrix	Spike
Matrix: Solid								Cheff	Prep Ty		
Analysis Batch: 54716										Ratch:	

Matrix: Solid									Prep 1	Type: Total/NA
Analysis Batch: 54716									Prep	Batch: 54740
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	<49.9	U	996	838.0		mg/Kg		81	70 - 130	
(GRO)-C6-C10 Diesel Range Organics (Over	<49.9	U	996	857.9		mg/Kg		86	70 - 130	
C10-C28)		C C		00110					101100	

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Lab Sample ID: 890-4771-A-1-C MS

Lab Sample ID: 890-4771-A-1-D MSD

QC Sample Results

Limits

70 - 130

70 - 130

Spike

Added

996

996

Limits

70 - 130

70 - 130

MSD MSD

806.4

843.3

Result Qualifier

Unit

mg/Kg

mg/Kg

D

%Rec

78

85

Analysis Batch: 54716

Analysis Batch: 54716

Gasoline Range Organics

Diesel Range Organics (Over

Matrix: Solid

Surrogate

o-Terphenyl

Analyte

C10-C28)

Surrogate

1-Chlorooctane o-Terphenyl

Matrix: Solid

Analysis Batch: 54802

1-Chlorooctane

Matrix: Solid

(GRO)-C6-C10

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

MS MS

Sample Sample

<49.9 U

<49.9 U

112

111

%Recovery

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-54725/1-A

MSD MSD

Qualifier

Result Qualifier

%Recovery Qualifier

115

112

RPD

4

2

Client Sample ID: Matrix Spike Prep Type: Total/NA Prep Batch: 54740 7 **Client Sample ID: Matrix Spike Duplicate** Prep Type: Total/NA Prep Batch: 54740 RPD Limit 20 20

Client Sample ID: Method Blank
Prep Type: Soluble

Prep	Type:	Soluble

%Rec

Limits

70 - 130

70 - 130

	MB	МВ										
Analyte	Result	Qualifier		RL		Unit		D	Prepared	Analyz	ed	Dil Fac
Chloride	<5.00	U		5.00		mg/K	g			06/06/23	00:17	1
 Lab Sample ID: LCS 880-54725/2-A								Clier	nt Sample	e ID: Lab Co	ontrol S	ample
Matrix: Solid										Prep	Type: S	oluble
Analysis Batch: 54802												
			Spike		LCS	LCS				%Rec		
Analyte			Added	R	esult	Qualifier	Unit	D	%Rec	Limits		
Chloride			250	2	251.2		mg/Kg		100	90 _ 110		
							CI	ient Sa	mple ID:	Lab Contro	ol Sampl	e Dup
Matrix: Solid											Type: S	
Analysis Batch: 54802												
			Spike	L	.CSD	LCSD				%Rec		RPD
Analyte			Added	R	esult	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride			250	:	252.0		mg/Kg		101	90 _ 110	0	20
									Client	Sample ID	: Matrix	Spike
Matrix: Solid											Type: S	
Analysis Batch: 54802											~ •	
Sa	nple Sam	nple	Spike		MS	MS				%Rec		
Analyte Ro	esult Qua	lifier	Added	R	esult	Qualifier	Unit	D	%Rec	Limits		
Chloride	107		249		341.5		mg/Kg		94	90 - 110		

Client: Ensolum Project/Site: JRU 17 Battery Job ID: 890-4776-1 SDG: 03C1558226

Method: 300.0 - Anions, Ion Chromatography (Continued)

		e Dupli pe: Sol		D: Ma	nple IC	it Sa	lien	C					NSD		Matrix: Solid
	PD		ec	%					MSD	MSD	Spike	Sample	Sample	atch: 54802	Analysis Bat
Chloride 107 249 341.2 mg/Kg 94 90-110 0	mit					<u>D</u> .			Qualifier			 Qualifier			
	20	0	110	90	94			mg/Kg		341.2	249		107		hloride

QC Association Summary

Client: Ensolum Project/Site: JRU 17 Battery

4 5 6

Job ID: 890-4776-1 SDG: 03C1558226

GC VOA

Prep Batch: 54782

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4776-1	BH01	Total/NA	Solid	5035	
890-4776-2	BH01A	Total/NA	Solid	5035	
890-4776-3	BH02	Total/NA	Solid	5035	
890-4776-4	BH02A	Total/NA	Solid	5035	
890-4776-5	BH03	Total/NA	Solid	5035	
890-4776-6	BH03A	Total/NA	Solid	5035	
890-4776-7	BH04	Total/NA	Solid	5035	
890-4776-8	BH04A	Total/NA	Solid	5035	
MB 880-54782/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-54782/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-54782/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4776-1 MS	BH01	Total/NA	Solid	5035	
890-4776-1 MSD	BH01	Total/NA	Solid	5035	

Analysis Batch: 55088

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4776-1	BH01	Total/NA	Solid	8021B	54782
890-4776-2	BH01A	Total/NA	Solid	8021B	54782
890-4776-3	BH02	Total/NA	Solid	8021B	54782
890-4776-4	BH02A	Total/NA	Solid	8021B	54782
890-4776-5	BH03	Total/NA	Solid	8021B	54782
890-4776-6	BH03A	Total/NA	Solid	8021B	54782
890-4776-7	BH04	Total/NA	Solid	8021B	54782
890-4776-8	BH04A	Total/NA	Solid	8021B	54782
MB 880-54782/5-A	Method Blank	Total/NA	Solid	8021B	54782
LCS 880-54782/1-A	Lab Control Sample	Total/NA	Solid	8021B	54782
LCSD 880-54782/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	54782
890-4776-1 MS	BH01	Total/NA	Solid	8021B	54782
890-4776-1 MSD	BH01	Total/NA	Solid	8021B	54782

Analysis Batch: 55199

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4776-1	BH01	Total/NA	Solid	Total BTEX	
890-4776-2	BH01A	Total/NA	Solid	Total BTEX	
890-4776-3	BH02	Total/NA	Solid	Total BTEX	
890-4776-4	BH02A	Total/NA	Solid	Total BTEX	
890-4776-5	BH03	Total/NA	Solid	Total BTEX	
890-4776-6	BH03A	Total/NA	Solid	Total BTEX	
890-4776-7	BH04	Total/NA	Solid	Total BTEX	
890-4776-8	BH04A	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 54713

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-4776-5	BH03	Total/NA	Solid	8015B NM	54720
890-4776-6	BH03A	Total/NA	Solid	8015B NM	54720
890-4776-7	BH04	Total/NA	Solid	8015B NM	54720
890-4776-8	BH04A	Total/NA	Solid	8015B NM	54720
MB 880-54720/1-A	Method Blank	Total/NA	Solid	8015B NM	54720
LCS 880-54720/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	54720

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QC Association Summary

Client: Ensolum Project/Site: JRU 17 Battery

GC Semi VOA (Continued)

Analysis Batch: 54713 (Continued)

Lab Sample ID LCSD 880-54720/3-A	Client Sample ID Lab Control Sample Dup	Prep Type Total/NA	Matrix	Method 8015B NM	Prep Batch 54720
890-4769-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	54720
890-4769-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	54720

Analysis Batch: 54716

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4776-1	BH01	Total/NA	Solid	8015B NM	54740
890-4776-2	BH01A	Total/NA	Solid	8015B NM	54740
890-4776-3	BH02	Total/NA	Solid	8015B NM	54740
890-4776-4	BH02A	Total/NA	Solid	8015B NM	54740
MB 880-54740/1-A	Method Blank	Total/NA	Solid	8015B NM	54740
LCS 880-54740/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	54740
LCSD 880-54740/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	54740
890-4771-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	54740
890-4771-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	54740

Prep Batch: 54720

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-4776-5	BH03	Total/NA	Solid	8015NM Prep	
890-4776-6	BH03A	Total/NA	Solid	8015NM Prep	
890-4776-7	BH04	Total/NA	Solid	8015NM Prep	
890-4776-8	BH04A	Total/NA	Solid	8015NM Prep	
MB 880-54720/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-54720/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-54720/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4769-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-4769-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Prep Batch: 54740

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4776-1	BH01	Total/NA	Solid	8015NM Prep	
890-4776-2	BH01A	Total/NA	Solid	8015NM Prep	
890-4776-3	BH02	Total/NA	Solid	8015NM Prep	
890-4776-4	BH02A	Total/NA	Solid	8015NM Prep	
MB 880-54740/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-54740/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-54740/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4771-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-4771-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 54874

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-4776-1	BH01	Total/NA	Solid	8015 NM	
890-4776-2	BH01A	Total/NA	Solid	8015 NM	
890-4776-3	BH02	Total/NA	Solid	8015 NM	
890-4776-4	BH02A	Total/NA	Solid	8015 NM	
890-4776-5	BH03	Total/NA	Solid	8015 NM	
890-4776-6	BH03A	Total/NA	Solid	8015 NM	
890-4776-7	BH04	Total/NA	Solid	8015 NM	
890-4776-8	BH04A	Total/NA	Solid	8015 NM	

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Job ID: 890-4776-1 SDG: 03C1558226

QC Association Summary

Client: Ensolum Project/Site: JRU 17 Battery

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Job ID: 890-4776-1 SDG: 03C1558226

HPLC/IC

Leach Batch: 54725

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4776-1	BH01	Soluble	Solid	DI Leach	
890-4776-2	BH01A	Soluble	Solid	DI Leach	
890-4776-3	BH02	Soluble	Solid	DI Leach	
890-4776-4	BH02A	Soluble	Solid	DI Leach	
890-4776-5	BH03	Soluble	Solid	DI Leach	
890-4776-6	BH03A	Soluble	Solid	DI Leach	
890-4776-7	BH04	Soluble	Solid	DI Leach	
890-4776-8	BH04A	Soluble	Solid	DI Leach	
MB 880-54725/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-54725/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-54725/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4775-A-2-C MS	Matrix Spike	Soluble	Solid	DI Leach	
890-4775-A-2-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 54802

890-4776-7	BH04	Soluble	Solid	DI Leach		
890-4776-8	BH04A	Soluble	Solid	DI Leach		8
MB 880-54725/1-A	Method Blank	Soluble	Solid	DI Leach		
LCS 880-54725/2-A	Lab Control Sample	Soluble	Solid	DI Leach		9
LCSD 880-54725/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach		
890-4775-A-2-C MS	Matrix Spike	Soluble	Solid	DI Leach		
890-4775-A-2-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach		
nalysis Batch: 54802						
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch	
890-4776-1	BH01	Soluble	Solid	300.0	54725	
90-4776-2	BH01A	Soluble	Solid	300.0	54725	12
90-4776-3	BH02	Soluble	Solid	300.0	54725	13
90-4776-4	BH02A	Soluble	Solid	300.0	54725	
90-4776-5	BH03	Soluble	Solid	300.0	54725	
90-4776-6	BH03A	Soluble	Solid	300.0	54725	
90-4776-7	BH04	Soluble	Solid	300.0	54725	
90-4776-8	BH04A	Soluble	Solid	300.0	54725	
B 880-54725/1-A	Method Blank	Soluble	Solid	300.0	54725	
CS 880-54725/2-A	Lab Control Sample	Soluble	Solid	300.0	54725	
CSD 880-54725/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	54725	
90-4775-A-2-C MS	Matrix Spike	Soluble	Solid	300.0	54725	
90-4775-A-2-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	54725	

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Job ID: 890-4776-1 SDG: 03C1558226

Lab Sample ID: 890-4776-1 Matrix: Solid

Lab Sample ID: 890-4776-2

Matrix: Solid

Date Collected: 06/02/23 11:15 Date Received: 06/02/23 13:29

Project/Site: JRU 17 Battery

Client Sample ID: BH01

Client: Ensolum

	Batch	Batch		Dil		Batch Prepared				
Prep Type	Туре	Method	ethod Run Factor	Factor		Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	54782	06/05/23 15:21	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55088	06/09/23 12:50	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			55199	06/09/23 21:13	AJ	EET MID
Total/NA	Analysis	8015 NM		1			54874	06/06/23 11:08	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	54740	06/05/23 11:12	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	54716	06/06/23 00:01	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	54725	06/05/23 09:46	KS	EET MID
Soluble	Analysis	300.0		1			54802	06/06/23 02:04	СН	EET MID

Client Sample ID: BH01A

Date Collected: 06/02/23 10:40

Date Received: 06/02/23 13:29

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	54782	06/05/23 15:21	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55088	06/09/23 13:15	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			55199	06/09/23 21:13	AJ	EET MID
Total/NA	Analysis	8015 NM		1			54874	06/06/23 11:08	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	54740	06/05/23 11:12	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	54716	06/06/23 00:23	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	54725	06/05/23 09:46	KS	EET MID
Soluble	Analysis	300.0		1			54802	06/06/23 02:09	СН	EET MID

Client Sample ID: BH02

Date Collected: 06/02/23 11:20

Date Received: 06/02/23 13:29

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	54782	06/05/23 15:21	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55088	06/09/23 13:42	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			55199	06/09/23 21:13	AJ	EET MID
Total/NA	Analysis	8015 NM		1			54874	06/06/23 11:08	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	54740	06/05/23 11:12	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	54716	06/06/23 00:44	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	54725	06/05/23 09:46	KS	EET MID
Soluble	Analysis	300.0		1			54802	06/06/23 02:25	СН	EET MID

Client Sample ID: BH02A Date Collected: 06/02/23 09:15 Date Received: 06/02/23 13:29

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	54782	06/05/23 15:21	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55088	06/09/23 14:08	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			55199	06/09/23 21:13	AJ	EET MID

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Lab Sample ID: 890-4776-3

Matrix: Solid

Matrix: Solid

Lab Sample ID: 890-4776-4

Job ID: 890-4776-1 SDG: 03C1558226

Lab Sample ID: 890-4776-4 Matrix: Solid

Lab Sample ID: 890-4776-5

Date Collected: 06/02/23 09:15 Date Received: 06/02/23 13:29

Client Sample ID: BH02A

Project/Site: JRU 17 Battery

Client: Ensolum

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			54874	06/06/23 11:08	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	54740	06/05/23 11:12	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	54716	06/06/23 01:05	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	54725	06/05/23 09:46	KS	EET MID
Soluble	Analysis	300.0		1			54802	06/06/23 02:31	СН	EET MID

Client Sample ID: BH03

Date Collected: 06/02/23 09:20 Date Received: 06/02/23 13:29

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	54782	06/05/23 15:21	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55088	06/09/23 14:34	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			55199	06/09/23 21:13	AJ	EET MID
Total/NA	Analysis	8015 NM		1			54874	06/06/23 11:29	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	54720	06/05/23 09:14	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	54713	06/05/23 17:57	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	54725	06/05/23 09:46	KS	EET MID
Soluble	Analysis	300.0		1			54802	06/06/23 02:36	СН	EET MID

Client Sample ID: BH03A

Date Collected: 06/02/23 09:30 Date Received: 06/02/23 13:29

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	54782	06/05/23 15:21	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55088	06/09/23 15:00	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			55199	06/09/23 21:13	AJ	EET MID
Total/NA	Analysis	8015 NM		1			54874	06/06/23 11:29	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	54720	06/05/23 09:14	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	54713	06/05/23 18:19	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	54725	06/05/23 09:46	KS	EET MID
Soluble	Analysis	300.0		1			54802	06/06/23 02:41	СН	EET MID

Client Sample ID: BH04

Date Collected: 06/02/23 10:00 Date Received: 06/02/23 13:29

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	54782	06/05/23 15:21	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55088	06/09/23 15:26	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			55199	06/09/23 21:13	AJ	EET MID
Total/NA	Analysis	8015 NM		1			54874	06/06/23 11:29	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	54720	06/05/23 09:14	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	54713	06/05/23 18:40	SM	EET MID

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Lab Sample ID: 890-4776-6

Lab Sample ID: 890-4776-7

Matrix: Solid

Matrix: Solid

Matrix: Solid

Lab Chronicle

Job ID: 890-4776-1 SDG: 03C1558226

Lab Sample ID: 890-4776-8

Client Sample ID: BH04 Date Collected: 06/02/23 10:00

Project/Site: JRU 17 Battery

Client: Ensolum

Date Received: 06/02/23 13:29

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.01 g	50 mL	54725	06/05/23 09:46	KS	EET MID
Soluble	Analysis	300.0		1			54802	06/06/23 02:46	CH	EET MID

Client Sample ID: BH04A Date Collected: 06/02/23 10:05 Date Received: 06/02/23 13:29

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	54782	06/05/23 15:21	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55088	06/09/23 15:52	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			55199	06/09/23 21:13	AJ	EET MID
Total/NA	Analysis	8015 NM		1			54874	06/06/23 11:29	SM	EET MID
Total/NA	Prep	8015NM Prep			10.010 g	10 mL	54720	06/05/23 09:14	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	54713	06/05/23 19:01	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	54725	06/05/23 09:46	KS	EET MID
Soluble	Analysis	300.0		1			54802	06/06/23 02:52	СН	EET MID

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Lab Sample ID: 890-4776-7 Matrix: Solid

Matrix: Solid

Accreditation/Certification Summary

Client: Ensolum Project/Site: JRU 17 Battery

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority		rogram	Identification Number	Expiration Date
xas	N	ELAP	T104704400-22-25	06-30-23
The following analytes the agency does not o	1 /	ut the laboratory is not certif	ied by the governing authority. This list ma	ay include analytes fo
0,		Matrix	Analyte	
Analysis Method 8015 NM	Prep Method	Matrix Solid	Analyte Total TPH	

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10

Job ID: 890-4776-1

SDG: 03C1558226

Client: Ensolum Project/Site: JRU 17 Battery Job ID: 890-4776-1 SDG: 03C1558226

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	EPA	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID
Protocol Refe	rences:		
ASTM = A	STM International		
EPA = US	Environmental Protection Agency		
SW846 = '	"Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Ed	ition, November 1986 And Its Updates.	
TAL SOP :	= TestAmerica Laboratories, Standard Operating Procedure		

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Ensolum Project/Site: JRU 17 Battery

SDG: 03C1558226

_ab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth	
390-4776-1	BH01	Solid	06/02/23 11:15	06/02/23 13:29	0.5'	_
390-4776-2	BH01A	Solid	06/02/23 10:40	06/02/23 13:29	1'	
390-4776-3	BH02	Solid	06/02/23 11:20	06/02/23 13:29	0.5'	Ę
390-4776-4	BH02A	Solid	06/02/23 09:15	06/02/23 13:29	1'	
390-4776-5	BH03	Solid	06/02/23 09:20	06/02/23 13:29	1'	
390-4776-6	BH03A	Solid	06/02/23 09:30	06/02/23 13:29	3'	
390-4776-7	BH04	Solid	06/02/23 10:00	06/02/23 13:29	1'	
390-4776-8	BH04A	Solid	06/02/23 10:05	06/02/23 13:29	2'	
						9 1
						1
						1

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Revised Date: 08/25/2020 Rev. 2020 2		4 0					
		e .	6/2/25132	Stuf	manglas		M. O. M.
Date/Time	Received by: (Signature)	Relinguished by: (Signature)	Date/Time	ure)	Received by: (Signature)	nature	Relinguished by (Signature)
	ionrons control iy negotiated.	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from cilent company to Eurofins Xenco, its afhilates and subcontractors. It assigns standard terms and commons of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	Eurofins Xenco, its affiliates and a expenses incurred by the client if a d to Eurofins Xenco, but not analy	order from client company t sponsibility for any losses or \$5 for each sample submitte	es constitutes a valid purchase les and shall not assume any re to each project and a charge of	and relinquishment of sample ble only for the cost of sampl ge of \$85.00 will be applied t	ice: Signature of this document ervice. Eurofins Xenco will be lis surofins Xenco. A minimum chai
0 / 7471	Hg: 1631 / 245.1 ,	TCLP/SPLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U	A Sb As Ba Be Cd C	SPLP 6010 : 8RCR	yzed TCLP,	Metal(s) to be anal	Circle Method(s) and Metal(s) to be analyzed
TI Sn U V Zn	Mg Mn Mo Ni K Se Ag SiO, Na Sr TI Sr	Ca Cr Co Cu Fe Pb Mg Mn M	Al Sh As Ba Be B Cd	13PPM Texas 11 A	SRCRA 13	200 8 / 6020.	Total 200 7 / 6010
LYTIORY DUCKE CITED IN THE	_		_				
receille encr			4	02. 1	G0.01	4	BHUHA
EW. 2019.03168.EKP.01	EW			01	10.0		י ו
	AFE			2	0:30		PHO3A
080921001	10			4	9-21		N
st center.	co.				0:15	_	RHN7A
nab1506430295	nA			0.5	11 20		RH02
nJMW 1314127698	201				10:	- (RUNIA
ncident #:	Inc		XXX 1	0.6.0	10/2/23 11:15	s	RHOI
Sample Comments				Depth Grab/ Comp	Date Time Sampled Sampled	on Matrix	Sample Identification
NaOH+ASCORDIC ACID: SAPC	NaCh		TE)	5	Corrected Temperature:		Total Containers:
Zn Acetate+NaOH: Zn	Zn Ad		ve	24	Temperature Reading:	Yes Not NA	Sample Custody Seals:
Na 25 20 3; NaSO 3		890-4776 Chain of		10.0	Correction Factor:	Yes NO MA	Cooler Custody Seals:
NaHSO 4: NABIS		A Custody		TM. 007	Thermometer ID:		Samples Received Intact:
H ₃ PO ₄ ; HP	H ₃ PO		eters	Yes No	(No Wet Ice:	Temp Blank:	SAMPLE RECEIPT
4: H 2 NaOH: Na	H ₂ SO ₄ : H ₂			the lab, if received by 4:30pm			
	HCL: HC			ne day		AVIADA I	Sampler's Name:
Cool MeOH: Me	Cool: Cool			France	103.81928 Due Date:	22519-	2
: NO DI Water: H ₂ O	None: NO		Pres.	Rush	ARout	301558220	ber: 0
Preservative Codes		ANALYSIS REQUEST		Turn Around		U IT Batter	Project Name: URU
Other:	Deliverables: EDDL_ ADaPT	EXXGNMObil Com	SVERT (EXXIN	Garvett. (8307 Email:	37)257-8	Phone: 3
	Level III	NM 88220 Repo	Cavisbad	City, State ZIP:	89220	risbad, NM	City, State ZIP: CAV
]	ject:		F.	V Address:	al Parks Hwy	122 Nationa	K
Is RRC Superfund	ram: UST/PST PRP Brownfields	THE XTU ENDON Program:	HUNSOLUM	Company Name:	IC J	Ensolum, L	Company Name: EY
nts	Work Order Comments	Sveen	Garrett (Bill to: (if different)	OKYISSEN	acima Mi	Project Manager:
Page 1 of 1	www.xenco.com Pa	NM (575) 988-3199	Hobbs, NM (575) 392-7550, Carisbad, NM (575) 988-3199	Hobbs, T			
		TX (806) 794-1296	EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296	EL Paso,		Xenco	
	Work Order No:	o, TX (210) 509-3334	Houston, 1X (281) 240-4200, Dalias, 1X (214) 902-0300 Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334	Housto Midland, T	Environment Testing	-	
						nc	Purofine
		Fordy	Chain of Custody				

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13

Job Number: 890-4776-1 SDG Number: 03C1558226

List Source: Eurofins Carlsbad

Login Sample Receipt Checklist

Client: Ensolum

Login Number: 4776 List Number: 1 Creator: Stutzman, Amanda

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	N/A	Refer to Job Narrative for details.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Job Number: 890-4776-1 SDG Number: 03C1558226

List Source: Eurofins Midland

List Creation: 06/05/23 09:16 AM

Login Sample Receipt Checklist

Client: Ensolum

Login Number: 4776 List Number: 2 Creator: Rodriguez, Leticia

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is	N/A	

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").

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APPENDIX D

NMOCD Notifications

From: To:	<u>Collins, Melanie</u> ocd.enviro (ocd.enviro@emnrd.nm.gov); <u>Hamlet, Robert, EMNRD (Robert, Hamlet@emnrd.nm.gov); Bratcher,</u> <u>Michael, EMNRD (mike.bratcher@emnrd.nm.gov); Harimon, Jocelyn, EMNRD (Jocelyn, Harimon@emnrd.nm.gov)</u>
Cc:	Green, Garrett J; DelawareSpills /SM; Tacoma Morrissey
Subject:	XTO - Sampling Notification (Week of 5/29/23 - 6/2/23)
Date:	Thursday, May 25, 2023 3:59:35 PM
Attachments:	image001.png

[**EXTERNAL EMAIL**]

All,

XTO plans to complete final sampling activities at the sites listed below for the week of May 29, 2023.

Tuesday

- PLU BS 15H / NAB1821157574
- JRU 17 Battery / nJMW1314127699 & nAB1506430295

Wednesday

- Poker Lake Unit 78 / nAB1606239294
- PLU-CVX-JV-BS #016H / nAB1521535958

Friday

- PLU 25 BD CTB / nAPP2310045769
- JRU 17 Battery / nJMW1314127699 & nAB1506430295

Thank you,

Melaníe Collíns



Environmental Technician melanie.collins@exxonmobil.com 432-556-3756



APPENDIX E

February 11, 2019, Deferral Request

LT Environmental, Inc.



3300 North "A" Street Building 1, Unit 103 Midland, Texas 79705 432,704,5178

February 11, 2019

Mr. Bradford Billings New Mexico Oil Conservation Division 1220 South St. Francis Drive, #3 Santa Fe, New Mexico 87505

RE: Deferral Request James Ranch Unit 17 Battery Remediation Permit Number 2RP-1657 and 2RP-2850 Eddy County, New Mexico

Dear Mr. Billings:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following report detailing excavation and soil sampling activities at the James Ranch Unit 17 Battery (Site) in Unit F, Section 6, Township 23 South, Range 31 East, in Eddy County, New Mexico (Figure 1). The purpose of the excavating and soil sampling activities was to address impacts to soil after two separate events caused releases of crude oil and produced water onto the well pad and surrounding pasture.

On April 26, 2013, a 2-inch circulating line on a 500-barrel (bbl) oil production tank failed due to corrosion. This resulted in 5 barrels (bbls) of crude oil and 15 bbls of produced water to be released within an unlined earthen containment berm. The 2-inch circulating line and the 500-bbl tank were both replaced. Approximately 5 bbls of crude oil were recovered, and no produced water was recovered. The former operator reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 on May 16, 2013, and was assigned Remediation Permit (RP) Number 2RP-1657 (Attachment 1). The initial Form C-141 misidentified the Site's unit letter as E. It has been corrected to unit letter F on the final Form C-141.

A second release occurred on February 20, 2015, when the well was being serviced by a pulling unit and the E-Pot was removed. The E-Pot is designed to shut the well down in the event of a stuffing box packing failure. During the E-Pot removal, the packing failed and 12 bbls of crude oil and 40 bbls of produced water were released onto the well pad and surrounding pasture area. The packing was replaced and approximately 5 bbls of crude oil and 10 bbls of produced water were recovered by a vacuum truck. The spill impacted approximately 2,300 square feet of caliche well pad and approximately 1,500 square feet of pasture. The former operator reported the release to the NMOCD on a Release Notification and Corrective Action Form C-141 on March 3, 2015, and was assigned RP Number 2RP-2850 (Attachment 1).





Although both releases occurred while the facility was operated by the previous operator, XTO is committed to addressing any releases that remain unresolved. Since the two releases described above occurred at the same production facility, the sampling and excavation activities were completed to address both releases simultaneously. The releases are included in the Compliance Agreement for Remediation for Historical Releases (Compliance Agreement) between XTO and the NMOCD, effective November 13, 2018. The purpose of the Compliance Agreement is to ensure that reportable releases that occurred prior to August 14, 2018, where XTO is responsible for the corrective action, comply with Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC) as amended on August 14, 2018. The releases are categorized as Tier II sites in the Compliance Agreement, meaning remediation of the releases began prior to August 14, 2018, the effective date of 19.15.29 NMAC. Based on the results of the confirmation soil sampling conducted, XTO is submitting this deferral request.

BACKGROUND

According to Section 12 of 19.15.29 NMAC, LTE applied Table 1, the Closure Criteria for Soils Impacted by a Release. Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest water well data and known aquifer properties. The nearest permitted water well with depth to groundwater data is C 02492, located about 0.86 miles southeast of the Site, with a depth to groundwater of 125 feet bgs and a total depth of 400 feet bgs. The elevation of the water well is 17 feet lower than the Site. The Site is greater than 1,000 feet from a water source and greater than 200 feet from a private domestic water source. The closest significant watercourse to the Site is a dry wash located approximately 0.94 miles southwest. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. Based on these criteria, the following remediation action levels apply: 10 milligrams per kilogram (mg/kg) benzene; 50 mg/kg total benzene, toluene, ethylbenzene, and total xylenes (BTEX); 2,500 mg/kg total petroleum hydrocarbons (TPH); 1,000 mg/kg TPH-gasoline range organics (GRO) and TPH-diesel range organics (DRO); and 20,000 mg/kg chloride.

PRELIMINARY SOIL SAMPLING

RP Number 2RP-1657

On October 1, 2018, an LTE scientist collected five initial soil samples, SS01 through SS05, to assess the lateral extent of impacted soil surrounding the tank battery. The soil sample locations were selected based on information provided on the initial Form C-141 and field observations (Figure 2). To eliminate the effects from weathering and natural degradation of contaminants at the ground surface, the soil samples were collected at approximately 0.5 feet bgs.





LTE used a hand auger to further investigate vertical impacts to soil in the location of preliminary soil samples SS01 through SS05. Discrete soil samples SS01A through SS05A and SS01B through SS05B were collected at depths ranging from 1 foot to 2 feet bgs.

All soil samples were screened for volatile aromatic hydrocarbons using a photo-ionization detector (PID) equipped with a 10.6 electron volt lamp and Hach® chloride QuanTab® test strips. The soil samples were placed directly into pre-cleaned glass jars, labeled with location, date, time, sampler, and method of analysis and immediately placed on ice. The soil samples were shipped at 4 degrees Celsius (°C) under strict chain-of-custody procedures to Xenco Laboratories, Inc. (Xenco) in Midland, Texas, for analysis of BTEX by United States Environmental Protection Agency (USEPA) Method 8021B, TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) by USEPA Method 8015M/D, and chloride by USEPA Method 300.0.

Laboratory analytical results for the site characterization soil samples indicated soil samples SS02A, SS04, SS04A, and SS04B exceeded the NMOCD Table 1 Closure Criteria for TPH and/or GRO/DRO. All other site characterization samples were compliant with NMOCD Table 1 Closure Criteria for TPH, BTEX, and chloride. Results are presented on Figure 2 and summarized in Table 1, and the complete laboratory analytical reports are included as Attachment 2. Soil sample logs are included as Attachment 4.

RP Number 2RP-2850

On October 2 and 3, 2018, LTE used a hand auger to collect site characterization samples surrounding the release location associated with 2RP-2850. Soil samples SS01 through SS11 and SS01A through SS11A were collected between 1 foot and 4 feet bgs. Based on the initial Form C-141 and field observations, it is not clear which direction the release went off pad. The site characterization samples were collected outward in every direction from the release source area so that any remaining impacted soil would be identified by the soil samples collected. Only one sample, SS05@1', contained concentrations of GRO/DRO exceeding NMOCD Table 1 Closure Criteria. No other site characterization sample exceeded Table 1 Closure Criteria for BTEX, TPH, or chloride.

EXCAVATION ACTIVITIES

RP Number 2RP-1657

Based on results from preliminary sampling and soil staining observed during that initial site investigation, LTE identified several areas for excavation: a heavily stained area in the southwest corner of the earthen containment, the area around preliminary soil sample SS02, and the area around preliminary soil sample SS04. Due to the high density of equipment and pipelines, excavation was conducted using a hydro-vacuum. On October 2 through 11, 2018, LTE returned





to the Site to oversee excavation. To direct excavation activities, LTE screened soil using a PID and Hach[®] chloride QuanTab[®] test strips.

The excavation in the southwest portion of the tank battery measured approximately 226 square feet and was completed to depths ranging from 3 feet to 4 feet bgs, with the western end being deeper (Figure 3). Composite soil samples FS01, FS02, SW01, and SW02 were collected from the floor and sidewalls of the excavation at depths ranging from 1 foot to 3 feet bgs to confirm removal of impacted soil (Figure 3). The 5-point composite samples were collected to represent no more than 200 square feet in area by depositing 5 aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. The soil samples were handled and analyzed as described above and submitted to Xenco in Midland, Texas. The excavation in the southwest corner of the tank battery was deepened in the area around soil sample FS02, which exceeded the NMOCD Table 1 Closure Criteria for GRO/DRO concentration. After the excavation was deepened, excavation floor sample FS02A was collected in the western portion of the southwestern excavation at 3 feet bgs.

A second excavation was advanced to approximately 3 feet bgs near preliminary soil sample SS04 on the northeast side of the tank battery. The excavation in the northeast portion of the tank battery measured approximately 102 square feet (Figure 3). The excavation was deepened in the area around soil sample SS04, SS04A, and SS04B, which exceeded NMOCD Table 1 Closure Criteria for TPH and/or GRO/DRO concentrations. After the excavation was deepened, excavation floor sample FS03 was collected at 3 feet bgs. Composite sidewall samples SW03 and SW04 were collected between 1-foot and 3 feet bgs. Composite sidewall sample SW03 was collected on southern sidewall of the excavation 2 feet from the production tanks. XTO safety policy restricts soil disturbing activities to a 2-foot radius of any production pipelines or tanks. These XTO safety policies are established to protect workers and to reduce the likelihood of compromising equipment and equipment foundations.

Similarly, LTE was unable to excavate soil near preliminary soil sample SS02 due to presence of aboveground production lines and production tanks. Approximately 45 cubic yards of impacted soil were removed from the two excavations. The impacted soil removed from the excavation was transported and properly disposed of at the Lea Land Landfill located in Hobbs, New Mexico.

RP Number 2RP-2850

On October 2 and 3, 2018, LTE personnel were on site to oversee excavation of impacted soil in the area surrounding the pumpjack at soil sample SS05. The excavation location was selected based on information provided on the initial Form C-141, field observations, and site characterization sampling results. Composite soil samples SW01 through SW04 were collected from the sidewalls of the excavation and soil sample FS01 was collected from the excavation floor at approximately 3 feet bgs. The samples were collected and submitted to Xenco for analysis using the methods described above. Further excavation south of sample location SW02 was





restricted by the pumpjack. XTO safety policy restricts soil disturbing activities to a 10-foot radius of any active pumpjack. These XTO safety policies are established to protect workers and to reduce the likelihood of compromising equipment and equipment foundations.

The excavation surrounding the pumpjack measured approximately 120 square feet and was completed to depths ranging from 1 foot to 3 feet bgs, with the southern portion of the excavation being the deepest (Figure 4). Approximately 85 cubic yards of impacted soil were removed from the excavation. The impacted soil removed from the excavation was transported and properly disposed of at the Lea Land Landfill located in Hobbs, New Mexico.

ANALYTICAL RESULTS

2RP-1657

Laboratory analytical results for site characterization soil samples SS02A, SS04, SS04A, and SS04B exceeded the NMOCD Table 1 Closure Criteria for TPH and/or GRO/DRO. The soil represented by the SS04 soil sample locations was excavated and excavation floor sample FS03, along with sidewall sample SW04 were compliant with NMOCD Table 1 Closure Criteria in the northwest excavation. Sidewall excavation sample SW03 exceeded NMOCD Table 1 Closure Criteria for TPH and GRO/DRO. Due to the proximity of this location being within 2 feet of the tank battery, it was unsafe to proceed with additional excavation activities to the south.

In the southwest excavation, floor sample FS02 exceeded the NMOCD Table 1 Closure Criteria for GRO/DRO. The excavation was deepened, and subsequent excavation soil samples were compliant with all NMOCD Table 1 Closure Criteria.

Site characterization sample SS02A was collected at 1 foot bgs. It contained a GRO/DRO concentration of 3,510 mg/kg and TPH of 4,300 mg/kg. Soil sample SS02B was collected in the same location at 3 feet bgs and was complaint with NMOCD Table 1 Closure Criteria for TPH, BTEX, and chloride. Due to the proximity of the production tanks, production piping, and containment wall within 2 feet of the soil sample location, the area could not be excavated. Because the release was contained within the berm, LTE delineated the remaining impacted soil based on location of the containment berm to the south and east. Samples SS01, SS01A, and SS01B delineate the impacted soil to the west. The northwest excavation samples and characterization samples SS03, SS03A, and SS03B delineate the impacted soil to the north. Results are presented on Figure 2 and summarized in Table 1, and the complete laboratory reports are included as Attachment 2.

An estimated 68 cubic yards of impacted soil remain in place under the tanks, assuming an area between soil samples SSO2 and SWO3 and bound by the excavation to the north, the containment to the south, SSO3 to the east, and SSO1 to the west. The impacted interval occurs in the subsurface from approximately 1 to 2.5 feet bgs and is delineated at 3 feet bgs.





2RP-2850

Laboratory analytical results for site characterization indicated soil sample SS05 contained a concentration of GRO/DRO that exceeded the NMOCD Table 1 Closure Criteria. That area was excavated, and all excavation confirmation soil samples were compliant with NMOCD Table 1 closure criteria for TPH, BTEX, and chloride, except for sidewall sample SW02, which contained 1,250 mg/kg GRO/DRO. Due to the proximity of this sample location being within 10-feet of the pumpjack, XTO safety policy restricts further excavation due to safety regulations. Results are presented on Figure 4 and summarized in Table 2, and the complete laboratory reports are included as Attachment 2.

LTE estimates that approximately 33 cubic yards of impacted soil remains in place in the area of sample location SW02 next to the pumpjack based on the lateral extent of the excavation, SS08 to the southeast, and a subsurface thickness of 1.5 feet. The excavation vertically delineates remaining impact to 3 feet bgs.

DEFERRAL REQUEST

A total of approximately 130 cubic yards of impacted soil were excavated from the Site; however, residual impacted soil was left in place for compliance with the XTO safety policies regarding earth-moving activities within 2-feet of production equipment in the tank containment and within 10-feet of the pumpjack. In the area within the tank battery (2RP-1657), an estimated 68 cubic yards of impacted soil remain in place under the tanks. In the area surrounding the pumpjack (2RP-2850), LTE estimates that approximately 33 cubic yards of impacted soil remain in place next to the pumpjack. XTO requests to backfill the existing excavations and complete remediation during any future major well pad construction/alteration or final plugging and abandonment, whichever occurs first. LTE and XTO do not believe deferment will result in imminent risk to human health, the environment, or groundwater. Upon approval of the deferral request, XTO will backfill the excavations with material purchased locally and recontour the Site to match pre-existing site conditions. An updated NMOCD Form C- 141 for each release is included as Attachment 1. A photographic log of the Site is included as Attachment 3.

If you have any questions or comments, please do not hesitate to contact Adrian Baker at (432) 887-1255 or <u>abaker@ltenv.com</u>.

Sincerely,

LT ENVIRONMENTAL, INC.

Adian Baker

Ashley L. ager





Adrian Baker Project Geologist Ashley L. Ager, P.G. Senior Geologist

cc: Kyle Littrell, XTO Mike Bratcher, NMOCD Jim Amos, BLM Deborah McKinney, BLM

Attachments:

- Figure 1 Site Location Map
- Figure 2 Preliminary Soil Sample Locations (2RP-1657)
- Figure 3 Final Soil Sample Locations (2RP-1657)
- Figure 4 Soil Sample Locations (2RP-2850)
- Table 1Soil Analytical Results (2RP-1657)
- Table 2Soil Analytical Results (2RP-2850)
- Attachment 1 Initial/Final NMOCD Form C-141 (2RP-1657 and 2RP-2850)
- Attachment 2 Laboratory Analytical Reports
- Attachment 3 Photographic Log (2RP-1657 and 2RP-2850)
- Attachment 4 Soil Sample Logs (2RP-1657 and 2RP-2850)



Received by OCD: 6/27/2023 12:54:22 PM

FIGURES







SOIL SAMPLE	0	60	120	N
B: BENZENE				
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES		Feet		/ N
GRO – GASOLINE RANGE ORGANICS		FIGURE 2		
DRO – DIESEL RANGE ORGANICS TPH – TOTAL PETROLEUM HYDROCARBONS	PRELIMINAF	RY SOIL SAMPL	E LOCATIONS	
CI - CHLORIDE	JAMES RANCH	HUNIT 17 BATT	ERY - 2RP-1657	IT-
NMAC – NEW MEXICO ADMINISTRATIVE CODE	• • • •	T F SEC 6 T23S		
NMOCD – NEW MEXICO OIL CONSERVATION DIVISION	EDDY	COUNTY, NEW		
NOTE: REMEDIATION PERMIT NUMBER 2RP-1657		XTO ENERGY, INC		

P:\XTO Energy\GIS\MXD\012918011_JRU #17\012918011_FIG02_PRELIMINARY SS_2018_1657.mxd





Received by OCD: 6/27/2023 12:54:22 PM

TABLES



TABLE 1 SOIL ANALYTICAL RESULTS

JAMES RANCH UNIT 17 BATTERY REMEDIATION PERMIT NUMBER 2RP-1657 EDDY COUNTY, NEW MEXICO **XTO ENERGY, INC.**

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	C6-C10 GRO (mg/kg)	C10-C28 DRO (mg/kg)	C28-C40 ORO (mg/kg)	GRO and DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
SS01	0.5	10/01/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	676	41.7	676	718	16.2
SS02	0.5	10/01/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<4.98
SS03	0.5	10/01/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	194	19.5	194	214	<4.95
SS04	0.5	10/01/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	1,190	52.9	1,190	1,240	<4.96
SS05	0.5	10/01/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	886	48.0	886	934	<4.96
FS01	1 - 4	10/04/2018	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<15.0	67.5	17.5	67.5	85.0	851
FS02	1.5 - 2	10/04/2018	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<15.0	1,620	259	1,620	1,880	603
SW01	1 - 3	10/04/2018	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<14.9	66.1	16.9	66.1	83.0	1,900
SS01A	1.5	10/04/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	587	118	587	705	175
SS01B	2	10/04/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<14.9	246	75.3	246	321	97.4
SW02	1 - 3	10/04/2018	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	20.3	20.4	<15.0	40.7	40.7	1,250
SS02A	1	10/04/2018	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<74.9	3,510	790	3,510	4,300	151
SS02B	2	10/04/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	20.2	223	66.0	243	309	144
SS03A	1	10/04/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	16.2	<15.0	16.2	16.2	<5.00
SS03B	2	10/04/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<5.00
SS04A	1.5	10/04/2018	<0.00200	0.00353	0.0138	0.0532	0.0705	95.0	2,380	313	2,480	2,790	348
SS04B	2	10/04/2018	<0.0100	0.0261	0.0817	0.308	0.416	78.1	2,810	309	2,890	3,200	326
SS05A	1	10/04/2018	<0.0100	0.0461	0.0761	0.423	0.545	<15.0	72.0	20.1	72.0	92.1	1,210
SS05B	2	10/04/2018	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<15.0	373	124	373	497	2,180
FS02A	3	12/11/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	31.4	<15.0	31.4	31.4	937
FS03	3	12/11/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	368	71.1	368	439	145
SW03	1 - 3	12/11/2018	<0.00200	0.0130	0.00854	0.154	0.176	126	2,210	293	2,340	2,630	54.2
SW04	1 - 3	12/11/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	36.2	<15.0	36.2	36.2	<5.00
D Table 1 Closur	e Criteria		10	NE	NE	NE	50	NE	NE	NE	1,000	2,500	20,000

Notes:

bgs - below ground surface BTEX - benzene, toluene, ethylbenzene, and total xylenes mg/kg - milligrams per kilogram NE - not established NMOCD - New Mexico Oil Conservation Division

- DRO diesel range organics
- GRO gasoline range organics

ORO - oil range organics

TPH - total petroleum hydrocarbons

< - indicates result is below laboratory reporting limits

Bold - indicates result exceeds the applicable regulatory standard

 * - indicates sample was collected in an area to be reclaimed after remediation is complete; closure criteria for chloride concentration in the top 4 feet of soil is 600 mg/kg Table 1 - closure criteria for soils impacted by a release per NMAC 19.15.29 August 2018 NMAC - New Mexico Administrative Code


TABLE 2 SOIL ANALYTICAL RESULTS

JAMES RANCH UNIT 17 BATTERY REMEDIATION PERMIT NUMBER 2RP-2850 EDDY COUNTY, NEW MEXICO XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	C6-C10 GRO (mg/kg)	C10-C28 DRO (mg/kg)	C28-C40 ORO (mg/kg)	GRO and DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
SS01	3	10/02/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	996
SS01A	4	10/02/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	1,650
SS02	3	10/02/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	1,080
SS02A	4	10/02/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	1,090
SS03	3	10/02/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	259
SS03A	4	10/02/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	378
SS04	3	10/02/2018	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	126
SS04A	4	10/02/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	281
SS05	1	10/02/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	1,810	24.8	1,810	1,830	999
SS05A	4	10/02/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	4,500
SS06	1	10/02/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	454
SS06A	4	10/02/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	441
SS07	3	10/02/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	1,240
SS07A	4	10/02/2018	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<14.9	<14.9	<14.9	<14.9	<14.9	1,370
FS01	3	10/03/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	16.4	<15.0	16.4	16.4	1,030
SS08	3	10/03/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	33.7
SS08A	4	10/03/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	86.3
SS09	3	10/03/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	449
SS09A	4	10/03/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	680
SS10	3	10/03/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	569
SS10A	4	10/03/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	793
SS11	3	10/03/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	677
SS11A	4	10/03/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	786
SW01	0.5 - 2	10/03/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	519
SW02	0.5 - 2	10/03/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	1,250	18.2	1,250	1,270	1,390
SW03	0.5 - 2	10/03/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	465
SW04	0.5 - 2	10/03/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	1,160
NMOCD Table 1 Closure (Criteria		10	NE	NE	NE	50	NE	NE	NE	1,000	2,500	20,000

Notes:

bgs - below ground surface

BTEX - benzene, toluene, ethylbenzene, and total xylenes mg/kg - milligrams per kilogram

NE - not established

NMOCD - New Mexico Oil Conservation Division

DRO - diesel range organics

GRO - gasoline range organics

ORO - oil range organics

TPH - total petroleum hydrocarbons

< - indicates result is below laboratory reporting limits

Bold- indicates result exceeds the applicable regulatory standard

* - indicates sample was collected in an area to be reclaimed after remediation is complete; closure criteria for chloride concentration in the top 4 feet of soil is 600 mg/kg Table 1 - closure criteria for soils impacted by a release per NMAC 19.15.29 August 2018

NMAC - New Mexico Administrative Code



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State of New Mexico Energy Minerals and Natural Resources

> Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

Form C-141 Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

20

1220 S. St. Fran	cis Dr., Santa Fe, Ni	M 87505			e, NM 875					_	
	Contract of the second s	20 N N	ease Notifi	catio	n and Co	orrective A	ction				
NMWIS	3412769	9			OPERA	ГOR	1	🛛 Initia	al Report	🗌 Fina	Rep
Name of Co	mpany: BOPCC	D, L.P. 26	0737		Contact: To	ny Savoie				ų	
Address: 52	2 W. Mermod, S	Suite 704 Carls	bad, N.M. 8822			No. 575-887-73	29				
	ne: James Ranch y is on the same					e: Exploration a		luction			
Surface Own	ner: Federal		Mineral	Owner:	Federal		1	API No	.30-015-277	84	
			LOCA	ATIO	N OF RE	LEASE					
Unit Letter E	Section Town 6 235	nship Range S 31E	Feet from the 2080	North North	South Line	Feet from the 1980	East/W West	est Line	County: Edd	ły	
		,	Latitude N 32	.335180	Longitud	e W 103.81928	0				
			NAT	TURE	OF REL	EASE					
Type of Relea	ise: Crude oil and	produced water	-			Release: 5 Bbls. s. produced water		Volume F	Recovered: 5 E	Bbls. oil	
	ease: 2" circulatin	ng line		R.	Date and H	lour of Occurrenc me unknown	e:	Date and 10:00 a.m	Hour of Disco 1.	overy: 4/26/	13 at
Was Immedia	te Notice Given?	🗌 Yes [] No 🛛 Not R	equired	If YES, To	Whom?					
By Whom?				-	Date and H	lour		-			
Was a Waterc	ourse Reached?				If YES, Vo	lume Impacting t	he Water	course.			
		Yes 🗌] No					1 500	C OPTIN	1-5	1
If a Watercour	rse was Impacted,	Describe Fully	4		1			1 1	IECEN	1ED	1
	····,								MAY 17	2013	i -
niconstation.				- 1 may - 1 -			13	NR	IOCD AF	TESIA	
The circulating Describe Area release. The ar containment ar inside impervi- I hereby certify regulations all public health o should their op or the environr	Affected and Cle rea measures appro- rea. The affected a ous containment: y that the informat operators are requ- or the environment perations have fail- ment. In addition, or local laws and/o	Bbl. oil producti anup Action Tal oximately 3000 area will be remo tion given above uired to report ar t. The acceptance ed to adequately NMOCD accep	en tank failed due en.* The entire su sq. ft. No remedia ediated in accorda is true and compl ad/or file certain re- ce of a C-141 repo investigate and re-	urface ar tion acti- nce to th lete to th elease nco- ort by the emediate	ea of the earth vities have tal e NMOCD g e best of my tifications an NMOCD ma contaminatic	hen containment a ken place, new gr uidelines, the tank knowledge and un d perform correct urked as "Final Re on that pose a three	around the avel was k battery w inderstand tive action eport" doe at to grou	e producti placed ov will be eva- that pursa ns for rele s not relia and water,	er the spill are aluated for re- uant to NMOC ases which many eve the operation , surface water	ea inside the constructio CD rules an ay endange or of liabili r, human he	e on d r ty calth
					÷	OIL CONS	SERVA	TION	DIVISION	I	
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Printed Name: Title: Waste M	Tony Savoie anagement and Ri	emediation Spec	ialist '		MA opproval Date	Y 2 1 2013	1101	piration D		MATCHL SP	
	s: tasavoie@bassp				Conditions of		1 64	En ación L		ъ.	
Date: 5/16/13			Phone: 432-556-87		Remed	liation per OC			Attached [
	onal Sheets If No					S. SUBMIT REP			2RP-	- 165	57

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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

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Submit to appropriate OCD District office

Incident ID	
District RP	2RP-1657
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party XTO Energy, Inc.	OGRID 5380
Contact Name Kyle Littrell	Contact Telephone 432-221-7331
Contact email Kyle_Littrell@xtoenergy.com	Incident # (assigned by OCD)
Contact mailing address 522 W. Mermod St Suite 704 Carlsbad, NM 8820	

Location of Release Source

Latitude	32.335180 (NAD 83 in decimal	Longitude103.819280 degrees to 5 decimal places)
Site Name	James Ranch Unit #17 Tank Battery	Site Type Exploration and Production
Date Release Disc	overed 4/26/2013	API# (if applicable) 30-015-27784
Date Release Dise	4/20/2015	и н (у аррисане) 50-013-27704

Unit Letter	Section	Township	Range	County
F	6	238	31E	Eddy

Surface Owner: State Federal Tribal Private (Name: BLM

Nature and Volume of Release

🛛 Crude Oil	Volume Released (bbls) 5	Volume Recovered (bbls) 5
Produced Water	Volume Released (bbls) 15	Volume Recovered (bbls) 0
	Is the concentration of dissolved chloride 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

The circulating line on the 500 bbl. Oil production tank failed due to corrosion. The line and the tank were replaced. The entire surface area of the earthen containment around the production tanks was affected by the release. The area measures approximately 3000 sq. ft. no remediation activities have taken place, new gravel was placed over the spill area inside the containment area. The affected area will be remediated in accordance to the NMOCD guidelines, the tank battery will be evaluated for re-construction inside the impervious containment.

	Incident ID	Page 113 oj
Oil Conservation Division	District RP	2RP-1657
	Facility ID	
	Application ID	
		Facility ID

Initial Response

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

 \boxtimes 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 not been undertaken, explain why:

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

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

Printed Name:	Kyle-Littrell	Title: SI	H&E Coordinator
Signature:	filent	Date:02/11/20	19
email:	le_Littrell@xtoenergy.com	Telephone: <u>432</u>	2-221-7331
OCD Only			
Received by:		Date:	_

Received by OCD: 6/27/2023 12:54:22 Essate of New Mexico Page 3 Oil Conservation Division

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Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>>100</u> (ft bgs)
Did this release impact groundwater or surface water?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	🗌 Yes 🛛 No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	🗌 Yes 🛛 No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	🗌 Yes 🛛 No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	🗌 Yes 🛛 No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of a wetland?	🗌 Yes 🛛 No
Are the lateral extents of the release overlying a subsurface mine?	🗌 Yes 🛛 No
Are the lateral extents of the release overlying an unstable area such as karst geology?	🗌 Yes 🛛 No
Are the lateral extents of the release within a 100-year floodplain?	🗌 Yes 🛛 No
Did the release impact areas 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
- Depth to water determination
- Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- Boring or excavation logs
- Photographs including date and GIS information
- Topographic/Aerial maps
- Laboratory data including chain of custody

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

	023 12:54:22 AMate of New Mexi	co	Incident ID	Page 115 of .
age 4	Oil Conservation Div	ision	District RP	2RP-1657
			Facility ID	
			Application ID	
regulations all operators ar public health or the environ failed to adequately investi addition, OCD acceptance and/or regulations. Printed Name: <u>Kyle</u>	Formation given above is true and complet re required to report and/or file certain rele nment. The acceptance of a C-141 report gate and remediate contamination that po of a C-141 report does not relieve the ope	ease notifications and perfo by the OCD does not relie se a threat to groundwater, erator of responsibility for o Title:	rm corrective actions for relevente operator of liability should be surface water, human health compliance with any other fe	eases which may endanger ould their operations have or the environment. In
Signa <u>ture:</u> email: Kyle_Litt	rell@xtoenergy.com		<u>432-221-7331</u>	

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District RP	2RP-1657
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Application ID	· · · · · · · · · · · · · · · · · ·

Remediation Plan

Remediation Plan Checklist: Each of the following items must be	included in the plan.
 Detailed description of proposed remediation technique Scaled sitemap with GPS coordinates showing delineation points Estimated volume of material to be remediated Closure criteria is to Table 1 specifications subject to 19.15.29.11 Proposed schedule for remediation (note if remediation plan time 	2(C)(4) NMAC
Deferral Requests Only: Each of the following items must be con	firmed as part of any request for deferral of remediation.
Contamination must be in areas immediately under or around prodeconstruction.	oduction equipment where remediation could cause a major facility
Extents of contamination must be fully delineated.	
Contamination does not cause an imminent risk to human health,	the environment, or groundwater.
I hereby certify that the information given above is true and complete rules and regulations all operators are required to report and/or file ca which may endanger public health or the environment. The acceptan liability should their operations have failed to adequately investigate surface water, human health or the environment. In addition, OCD a responsibility for compliance with any other federal, state, or local la	ertain release notifications and perform corrective actions for releases ce of a C-141 report by the OCD does not relieve the operator of and remediate contamination that pose a threat to groundwater, cceptance of a C-141 report does not relieve the operator of
Printed Name: Kyle Littrell	Title:SH&E Coordinator
Signature:	Date: 02/11/2019
email: Kyle Littrell@xtoenergy.com	Telephone:432-221-7331
OCD Only	
Received by:	Date:
Approved Approved with Attached Conditions of A	Approval Denied Deferral Approved
Signature:	Date:

1220 South St. Francis Dr. Santa Fe, NM 87505	RECEIVED	
Oil Conservation Division	Submit 1 Copy to appro	opriate District Office in e with 19.15.29 NMAC.
Energy Minerals and Natural Resources	MAR 0 3 2015	Revised August 8, 2011
NI State of New Mexico	ARTESIA DISTRICT	Form C-141
	State of New Mexico Energy Minerals and Natural Resources Oil Conservation Division 1220 South St. Francis Dr.	Energy Minerals and Natural ResourcesMAR 0 3 2015Oil Conservation DivisionSubmit 1 Copy to appro accordanc1220 South St. Francis Dr.RECEIVED

210073

OPERATOR

Contact: Tony Savoie

Initial Report

Final Repo

Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220			D	Telephone No. 575-887-7329				
Facility Name: James Ranch Unit #17				Facility Type: Exploration and Production				
Surface Ow	vner: Federal	Mineral C)wner:	er: Federal API No. 30-015-27784				0. 30-015-27784
		LOCA	TIO	N OF RE	LEASE			
Unit Letter F	Section Township 656 III 23S	Range 31E 2080		h/South Line Feet from the East/W lorth 1980 West			Vest Line County t Eddy	
		Latitude <u>N 32.:</u> NAT	1000	Longitud	Colorest and a second	<u>35</u>		
Type of Release: Crude oil and produced water			Volume of	Volume of Release: 12 bbls crude oil & 40 bbls produced water bbls produced water			Recovered: 5 bbls crude oil & 10 uced water	
Source of Release: Wellhead stuffing box		Date and Hour of Occurrence: 2/20/15 at approximately 4:00 p.m.						
Was Immedia	ate Notice Given?	Yes 🛛 No 🗌 Not Re	quired	If YES, To	Whom?			
By Whom? Amy Ruth			our: EH&S was r nd BLM were not			pill at 7:00 a.m on 2/23/15, the		
Was a Water	course Reached?	Yes 🛛 No		If YES, Vo	lume Impacting t	he Water	rcourse.	-
If a Watercou	irse was Impacted, Descri	be Fully.*						
3								
The stuffing b		dial Action Taken.* was:a pulling unit on location he well. The packing was rep		well mainten	ance, the E-Pot d	esigned t	to shut the	well down due to packing
		ction Taken.* The spill imp /as recovered with a vacuum						pproximately 1500 sq. ft of s is pending response activities.
I hereby certif	y that the information give	ven above is true and comple	ete to th	e best of my l	nowledge and ur	nderstand	that pursu	uant to NMOCD rules and
regulations all	operators are required to	report and/or file certain rel	lease no	tifications an	d perform correct	ive actio	ns for rele	ases which may endanger

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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature: 1 Oro Same	OIL CONSERVATION	DIVISION
Printed Name: Tony Savoie	Approved by Environmental Specialist:	ihn
Title: Waste Management and Remediation Specialist	Approval Date: 3/4/15 Expiration D	Date:
Date: 5/3/(5 Phone: 432-556-8730 SU	Conditions of Approval: mediation per O.C.D. Rules & Guidelines BMIT REMEDIATION PROPOSAL NO	Attached
Attach Additional Sheets If Necessary	TER THAN: 4 4 15	2RD-2850

Released to Imaging: 7/3/2023 10:56:35 AM

NAB 1501430295 Name of Company: BOPCO, L.P. Received by OCD: 6/27/2023 12:54:22 PM

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 Page 118 of 303

Form C-141 Revised August 24, 2018 Submit to appropriate OCD District office

Incident ID	
District RP	2RP-2850
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party XTO Energy, Inc,	OGRID 5380
Contact Name Kyle Littrell	Contact Telephone 432-221-7331
Contact email Kyle_Littrell@xtoenergy.com	Incident # (assigned by OCD)
Contact mailing address 522 W. Mermod St Suite 704 Carlsbad, NM 8820	F

Location of Release Source

Site Name		James Ranch Un	it #17		Site Type E	oploration an	nd Production
Date Release	Discovered	2/20/2015			API# (if applicable) 30-03	15-27784
Unit Letter	Section	Township	Range	1	County		
F	6	238	31E	Edd	v		

Nature and Volume of Release

🔀 Crude Oil	Volume Released (bbls) 12	Volume Recovered (bbls) 5
Produced Water	Volume Released (bbls) 40	Volume Recovered (bbls) 10
	Is the concentration of dissolved chloride 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

The stuffing box packing failed, there was a pulling unit on location doing well maintenance, the E-Pot designed to shut the well down due to packing failure had been removed to work on the well. The packing was replaced. The spill impacted approximately 2,300 sq. ft. of caliche well pad & approximately 1,500 sq. ft. of pasture. All the free standing fluid was recovered with a vacuum truck. The stained area on the well pad and pasture was left as is pending response activities.

Incident ID	Page 119 of 30
District RP	2RP-2850
Facility ID	
Application ID	

Was this a major release as defined by	If YES, for what reason(s) does the responsible party consider this a major release?
19.15.29.7(A) NMAC?	release volume > 25 bbls
🗙 Yes 🗌 No	
f YES, was immediate n	otice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
Vac. notice diver by	Tony Savoie to NMOCD and BLM on 2/23/15; means unknown.

Initial Response

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

 \square 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 not been undertaken, explain why:

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

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

Title:SH&E Coordinator
Date:02/11/2019
Telephone: <u>432-221-7331</u>
Date:

Rearie Ed by OCD: 6/27/2023 12:54:22 1State of New Mexico

Page 3

Oil Conservation Division

Incident ID	Page 120 of 30
District RP	2RP-2850
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>>100</u> (ft bgs)
Did this release impact groundwater or surface water?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	🗌 Yes 🛛 No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	🗌 Yes 🛛 No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	🗌 Yes 🛛 No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	🗌 Yes 🛛 No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of a wetland?	🗌 Yes 🛛 No
Are the lateral extents of the release overlying a subsurface mine?	🗌 Yes 🛛 No
Are the lateral extents of the release overlying an unstable area such as karst geology?	🗌 Yes 🛛 No
Are the lateral extents of the release within a 100-year floodplain?	🗌 Yes 🛛 No
Did the release impact areas 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

Depth to water determination

- Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- Boring or excavation logs

Photographs including date and GIS information

Topographic/Aerial maps

Laboratory data including chain of custody

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

	2 Mate of New Mexico		Incident ID	Page 121 of 3
Page 4	Oil Conservation Division		District RP	2RP-2850
			Facility ID	
			Application ID	
regulations all operators are required to public health or the environment. The a failed to adequately investigate and rem addition, OCD acceptance of a C-141 re and/or regulations. Printed Name: <u>Kyle Littrell</u> Signature: email: <u>Kyle Littrell@xtoence</u>	Da	s and perfo es not relie oundwater, sibility for tle:	orm corrective actions for rel we the operator of liability sl surface water, human healt	eases which may endanger hould their operations have h or the environment. In ederal, state, or local laws
OCD Only Received by:		Date: _		

Received-b& OCD: 6/27/2023	12:54:22 Mate of New Mexico
Page 5	Oil Conservation Division

Incident ID	Page 122 of 30
District RP	2RP-2850
Facility ID	
Application ID	

Remediation Plan

<u>Remediation Plan Checklist</u> : Each of the following items must be included in the plan.
Detailed description of proposed remediation technique
Scaled sitemap with GPS coordinates showing delineation points
Estimated volume of material to be remediated
Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)
Deferral Requests Only: Each of the following items must be confirmed as part of any request for deferral of remediation.
Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
Extents of contamination must be fully delineated.
Contamination does not cause an imminent risk to human health, the environment, or groundwater.
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
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surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of
responsibility for compliance with any other federal, state, or local laws and/or regulations.
Printed Name: Kyle Littrell Title: SH&E Coordinator
Signature: Date: 02/11/2019
email: Kyle Littrell@xtoenergy.com Telephone: 432-221-7331
eman. <u>Avie Entremaxtoenergy.com</u> relephone. <u>452-221-7551</u>
OCD Only
Received by: Date:
Approved Approved with Attached Conditions of Approval Denied Deferral Approved
Signature: Date:

Received by OCD: 6/27/2023 12:54:22 PM



for LT Environmental, Inc.

Project Manager: Adrian Baker

JRU-17

15-OCT-18

Collected By: Client





1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122): Texas (T104704215-18-27), 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 (T104704221-18-13) Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-17) 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) Xenco-Lakeland: Florida (E84098)



15-OCT-18

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

Reference: XENCO Report No(s): 601142 JRU-17 Project Address: Delaware Basin

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) 601142. 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. 601142 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 Vermer

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

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Released to Imaging: 7/3/2023 10:56:35 AM

Page 2 of 22



Sample Cross Reference 601142



LT Environmental, Inc., Arvada, CO

JRU-17

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	10-01-18 15:35	6 In	601142-001
SS02	S	10-01-18 15:40	6 In	601142-002
SS03	S	10-01-18 15:45	6 In	601142-003
SS04	S	10-01-18 15:50	6 In	601142-004
SS05	S	10-01-18 15:55	6 In	601142-005

Version: 1.%

.



CASE NARRATIVE

Client Name: LT Environmental, Inc. Project Name: JRU-17

Project ID: Work Order Number(s): 601142 Report Date: 15-OCT-18 Date Received: 10/03/2018

Sample receipt non conformances and comments:

PER CLIENTS EMAIL CORRECTED SAMPLE SS010 TO SS10. NEW VERSION GENERATED. JKR 10/12/18 PER CLIENTS EMAIL CORRECTED SAMPLE NAMES 001-005. NEW VERSION GENERATED. JKR 10/15/18

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3065828 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030. Lab Sample ID 600814-015 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Ethylbenzene, Toluene recovered below QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 600814-013, -014, -015, -016, -017. The Laboratory Control Sample for Toluene, m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.





Project Id:Contact:Adrian BakerProject Location:Delaware Basin



LT Environmental, Inc., Arvada, CO Project Name: JRU-17



Date Received in Lab:Wed Oct-03-18 10:32 amReport Date:15-OCT-18Project Manager:Jessica Kramer

	Lab Id:	601142-0	001	601142-0	002	601142-0	003	601142-0	004	601142-0	005	
A se standa De seconda d	Field Id:	SS01		SS02		SS03		SS04		SS05		
Analysis Requested	Depth:	6- In		6- In		6- In		6- In		6- In		
	Matrix:	SOIL		SOIL		SOIL		SOIL	,	SOIL	,	
	Sampled:	Oct-01-18	15:35	Oct-01-18	15:40	Oct-01-18	15:45	Oct-01-18	15:50	Oct-01-18	15:55	
BTEX by EPA 8021B	Extracted:	Oct-08-18 (08:30	Oct-08-18	08:30	Oct-08-18	08:30	Oct-08-18	08:30	Oct-08-18	08:30	
	Analyzed:	Oct-08-18	17:25	Oct-08-18	17:45	Oct-08-18	14:05	Oct-08-18	18:45	Oct-08-18	19:05	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	
Benzene		< 0.00199	0.00199	< 0.00200	0.00200	< 0.00202	0.00202	< 0.00202	0.00202	< 0.00201	0.00201	
Toluene		< 0.00199	0.00199	< 0.00200	0.00200	< 0.00202	0.00202	< 0.00202	0.00202	< 0.00201	0.00201	
Ethylbenzene		< 0.00199	0.00199	< 0.00200	0.00200	< 0.00202	0.00202	< 0.00202	0.00202	< 0.00201	0.00201	
m,p-Xylenes		< 0.00398	0.00398	< 0.00399	0.00399	< 0.00403	0.00403	< 0.00403	0.00403	< 0.00402	0.00402	
o-Xylene		< 0.00199	0.00199	< 0.00200	0.00200	< 0.00202	0.00202	< 0.00202	0.00202	< 0.00201	0.00201	
Total Xylenes		< 0.00199	0.00199	< 0.00200	0.00200	< 0.00202	0.00202	< 0.00202	0.00202	< 0.00201	0.00201	
Total BTEX		< 0.00199	0.00199	< 0.00200	0.00200	< 0.00202	0.00202	< 0.00202	0.00202	< 0.00201	0.00201	
Inorganic Anions by EPA 300	Extracted:	Oct-04-18	09:40	Oct-04-18	09:40	Oct-04-18	09:40	Oct-04-18	09:40	Oct-04-18	09:40	
	Analyzed:	Oct-04-18	11:38	Oct-04-18	11:43	Oct-04-18	12:00	Oct-04-18	12:06	Oct-04-18	12:12	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	
Chloride		16.2	5.01	<4.98	4.98	<4.95	4.95	<4.96	4.96	<4.96	4.96	
TPH by SW8015 Mod	Extracted:	Oct-04-18 09:00		Oct-04-18 09:00		Oct-04-18 09:00		Oct-04-18 09:00		Oct-04-18	09:00	
	Analyzed:	Oct-04-18 17:51		Oct-04-18	18:10	Oct-04-18	18:29	29 Oct-04-18 18:48		Oct-04-18	19:06	
	Units/RL:	mg/kg	RL	mg/kg	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	<15.0	15.0	<15.0	15.0	
Diesel Range Organics (DRO)		676	15.0	<15.0	15.0	194	15.0	1190	15.0	886	15.0	
Motor Oil Range Hydrocarbons (MRO)		41.7	15.0	<15.0	15.0	19.5	15.0	52.9	15.0	48.0	15.0	
Total TPH		718	15.0	<15.0	15.0	214	15.0	1240	15.0	934	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 - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Version: 1.%

fession kenner

Jessica Kramer Project Assistant

Page 5 of 22





LT Environmental, Inc., Arvada, CO

Sample Id:	SS01		Matrix:	Soil	1	Date Received:10.	03.18 10.3	2
Lab Sample	Id: 601142-001		Date Colle	ected: 10.01.18 15.35	ŝ	Sample Depth: 6 Ii	1	
Analytical M	lethod: Inorganic Anio	ns by EPA 300			I	Prep Method: E3	00P	
Tech:	SCM				ç	% Moisture:		
Analyst:	SCM		Date Prep:	10.04.18 09.40	I	Basis: We	t Weight	
Seq Number:	3065325							
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride		16887-00-6	16.2	5.01	mg/kg	10.04.18 11.38		1

Analytical Method: TPH by SW8015	5 Mod				Р	rep Method: TX	1005P	
Tech: ARM					%	Moisture:		
Analyst: ARM		Date Prep	b: 10.04	18 09.00	В	asis: We	t Weight	
Seq Number: 3065500								
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	10.04.18 17.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	676	15.0		mg/kg	10.04.18 17.51		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	41.7	15.0		mg/kg	10.04.18 17.51		1
Total TPH	PHC635	718	15.0		mg/kg	10.04.18 17.51		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	96	%	70-135	10.04.18 17.51		
o-Terphenyl		84-15-1	103	%	70-135	10.04.18 17.51		





LT Environmental, Inc., Arvada, CO

Sample Id:SS01Lab Sample Id:601142-001	Matrix: Soil Date Collected: 10.01.18 15.35	Date Received:10.03.18 10.32 Sample Depth: 6 In
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3065828	Date Prep: 10.08.18 08.30	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00199	0.00199		mg/kg	10.08.18 17.25	U	1
Toluene	108-88-3	< 0.00199	0.00199		mg/kg	10.08.18 17.25	U	1
Ethylbenzene	100-41-4	< 0.00199	0.00199		mg/kg	10.08.18 17.25	U	1
m,p-Xylenes	179601-23-1	< 0.00398	0.00398		mg/kg	10.08.18 17.25	U	1
o-Xylene	95-47-6	< 0.00199	0.00199		mg/kg	10.08.18 17.25	U	1
Total Xylenes	1330-20-7	< 0.00199	0.00199		mg/kg	10.08.18 17.25	U	1
Total BTEX		< 0.00199	0.00199		mg/kg	10.08.18 17.25	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	98	%	70-130	10.08.18 17.25		
1,4-Difluorobenzene		540-36-3	105	%	70-130	10.08.18 17.25		





LT Environmental, Inc., Arvada, CO

Sample Id: SS02		Matrix:	Soil	1	Date Received:10.0	03.18 10.3	2
Lab Sample Id: 601142-002		Date Collec	ted: 10.01.18 15.40	S	Sample Depth: 6 In	l	
Analytical Method: Inorganic Anion	s by EPA 300			I	Prep Method: E30	0P	
Tech: SCM				ç	% Moisture:		
Analyst: SCM		Date Prep:	10.04.18 09.40	1	Basis: Wet	t Weight	
Seq Number: 3065325							
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.98	4.98	mg/kg	10.04.18 11.43	U	1

Analytical Method: TPH by SW801	5 Mod				P	rep Method: TX	(1005P	
Tech: ARM					9	6 Moisture:		
Analyst: ARM		Date Pre	p: 10.04	.18 09.00	E	Basis: We	et Weight	
Seq Number: 3065500								
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	10.04.18 18.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0		mg/kg	10.04.18 18.10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0		mg/kg	10.04.18 18.10	U	1
Total TPH	PHC635	<15.0	15.0		mg/kg	10.04.18 18.10	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	97	%	70-135	10.04.18 18.10		
o-Terphenyl		84-15-1	100	%	70-135	10.04.18 18.10		





LT Environmental, Inc., Arvada, CO

Sample Id:SS02Lab Sample Id:601142-002	Matrix: Soil Date Collected: 10.01.18 15.40	Date Received:10.03.18 10.32 Sample Depth: 6 In
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3065828	Date Prep: 10.08.18 08.30	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	10.08.18 17.45	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	10.08.18 17.45	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	10.08.18 17.45	U	1
m,p-Xylenes	179601-23-1	< 0.00399	0.00399		mg/kg	10.08.18 17.45	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	10.08.18 17.45	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	10.08.18 17.45	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	10.08.18 17.45	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	106	%	70-130	10.08.18 17.45		
4-Bromofluorobenzene		460-00-4	95	%	70-130	10.08.18 17.45		





LT Environmental, Inc., Arvada, CO

Sample Id: SS03 Lab Sample Id: 601142-003		Matrix: Date Collec	Soil ted: 10.01.18 15.45		Date Received:10. Sample Depth: 6 In		2
Analytical Method: Inorganic Ar Tech: SCM Analyst: SCM Seq Number: 3065325	nions by EPA 300	Date Prep:	10.04.18 09.40		Prep Method: E30 % Moisture: Basis: We	00P et Weight	
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	10.04.18 12.00	U	1
Analytical Method: TPH by SW8 Tech: ARM Analyst: ARM Sea Number: 3065500	8015 Mod	Date Prep:	10.04.18 09.00		Prep Method: TX % Moisture: Basis: We	1005P et Weight	

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	10.04.18 18.29	U	1
Diesel Range Organics (DRO)	C10C28DRO	194	15.0		mg/kg	10.04.18 18.29		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	19.5	15.0		mg/kg	10.04.18 18.29		1
Total TPH	PHC635	214	15.0		mg/kg	10.04.18 18.29		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	95	%	70-135	10.04.18 18.29		
o-Terphenyl		84-15-1	99	%	70-135	10.04.18 18.29		





LT Environmental, Inc., Arvada, CO

Sample Id:SS03Lab Sample Id:601142-003	Matrix: Soil Date Collected: 10.01.18 15.45	Date Received:10.03.18 10.32 Sample Depth: 6 In
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3065828	Date Prep: 10.08.18 08.30	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00202	0.00202		mg/kg	10.08.18 14.05	U	1
Toluene	108-88-3	< 0.00202	0.00202		mg/kg	10.08.18 14.05	U	1
Ethylbenzene	100-41-4	< 0.00202	0.00202		mg/kg	10.08.18 14.05	U	1
m,p-Xylenes	179601-23-1	< 0.00403	0.00403		mg/kg	10.08.18 14.05	U	1
o-Xylene	95-47-6	< 0.00202	0.00202		mg/kg	10.08.18 14.05	U	1
Total Xylenes	1330-20-7	< 0.00202	0.00202		mg/kg	10.08.18 14.05	U	1
Total BTEX		< 0.00202	0.00202		mg/kg	10.08.18 14.05	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	101	%	70-130	10.08.18 14.05		
1,4-Difluorobenzene		540-36-3	102	%	70-130	10.08.18 14.05		





LT Environmental, Inc., Arvada, CO

Sample Id: S804 Lab Sample Id: 601142-004		Matrix: Date Collec	Soil cted: 10.01.18 15.50		Date Received:10. Sample Depth: 6 In		2
Analytical Method:InorganiTech:SCMAnalyst:SCMSeq Number:3065325	c Anions by EPA 300	Date Prep:	10.04.18 09.40		Prep Method: E30 % Moisture: Basis: We)0P t Weight	
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	10.04.18 12.06	U	1
Analytical Method: TPH by	SW8015 Mod				Prep Method: TX	1005P	
Tech: ARM					% Moisture:		

Tech: ARM					%	Moisture:		
Analyst: ARM		Date Prep	: 10.04.	18 09.00	В	asis: We	t Weight	
Seq Number: 3065500								
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	10.04.18 18.48	U	1
Diesel Range Organics (DRO)	C10C28DRO	1190	15.0		mg/kg	10.04.18 18.48		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	52.9	15.0		mg/kg	10.04.18 18.48		1
Total TPH	PHC635	1240	15.0		mg/kg	10.04.18 18.48		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	95	%	70-135	10.04.18 18.48		
o-Terphenyl		84-15-1	108	%	70-135	10.04.18 18.48		





LT Environmental, Inc., Arvada, CO

Sample Id:SS04Lab Sample Id:601142-004	Matrix: Soil Date Collected: 10.01.18 15.50	Date Received:10.03.18 10.32 Sample Depth: 6 In
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3065828	Date Prep: 10.08.18 08.30	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00202	0.00202		mg/kg	10.08.18 18.45	U	1
Toluene	108-88-3	< 0.00202	0.00202		mg/kg	10.08.18 18.45	U	1
Ethylbenzene	100-41-4	< 0.00202	0.00202		mg/kg	10.08.18 18.45	U	1
m,p-Xylenes	179601-23-1	< 0.00403	0.00403		mg/kg	10.08.18 18.45	U	1
o-Xylene	95-47-6	< 0.00202	0.00202		mg/kg	10.08.18 18.45	U	1
Total Xylenes	1330-20-7	< 0.00202	0.00202		mg/kg	10.08.18 18.45	U	1
Total BTEX		< 0.00202	0.00202		mg/kg	10.08.18 18.45	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	107	%	70-130	10.08.18 18.45		
4-Bromofluorobenzene		460-00-4	100	%	70-130	10.08.18 18.45		





LT Environmental, Inc., Arvada, CO

Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Seq Number:	3065500							
Analyst:	ARM		Date Prep:	10.04.18 09.00		Basis: We	et Weight	
Tech:	ARM					% Moisture:		
Analytical Me	thod: TPH by SW801	5 Mod				Prep Method: TX	1005P	
Chloride		16887-00-6	<4.96	4.96	mg/kg	10.04.18 12.12	U	1
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Seq Number:	3065325							
Analyst:	SCM		Date Prep:	10.04.18 09.40		Basis: We	et Weight	
Tech:	SCM					% Moisture:		
Analytical Me	thod: Inorganic Anion	s by EPA 300				Prep Method: E3	00P	
Lab Sample Id	: 601142-005		Date Collec	ted: 10.01.18 15.55		Sample Depth: 6 In	n	
Sample Id:	SS05		Matrix:	Soil		Date Received:10.		

Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	10.04.18 19.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	886	15.0		mg/kg	10.04.18 19.06		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	48.0	15.0		mg/kg	10.04.18 19.06		1
Total TPH	PHC635	934	15.0		mg/kg	10.04.18 19.06		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	98	%	70-135	10.04.18 19.06		
o-Terphenyl		84-15-1	102	%	70-135	10.04.18 19.06		





LT Environmental, Inc., Arvada, CO

Sample Id:SS05Lab Sample Id:601142-005	Matrix: Soil Date Collected: 10.01.18 15.55	Date Received:10.03.18 10.32 Sample Depth: 6 In
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3065828	Date Prep: 10.08.18 08.30	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00201	0.00201		mg/kg	10.08.18 19.05	U	1
Toluene	108-88-3	< 0.00201	0.00201		mg/kg	10.08.18 19.05	U	1
Ethylbenzene	100-41-4	< 0.00201	0.00201		mg/kg	10.08.18 19.05	U	1
m,p-Xylenes	179601-23-1	< 0.00402	0.00402		mg/kg	10.08.18 19.05	U	1
o-Xylene	95-47-6	< 0.00201	0.00201		mg/kg	10.08.18 19.05	U	1
Total Xylenes	1330-20-7	< 0.00201	0.00201		mg/kg	10.08.18 19.05	U	1
Total BTEX		< 0.00201	0.00201		mg/kg	10.08.18 19.05	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	103	%	70-130	10.08.18 19.05		
4-Bromofluorobenzene		460-00-4	95	%	70-130	10.08.18 19.05		



LABORATORIES

Flagging Criteria



Page 139 of 303

- 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	ent Sample	BLK	Method Blank	
BKS/LCS	S Blank Spike/Laboratory Control Sample	BKSD/LCSD	Blank Spike Duplicate/Labo	ratory 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 601142

LT Environmental, Inc.

JRU-17

Analytical Method:	Inorganic Anions b	y EPA 300						Pre	p Method	d: E3	00P	
Seq Number:	3065325			Matrix:	Solid				Date Prep	p: 10	.04.18	
MB Sample Id:	7663531-1-BLK		LCS San	nple Id:	7663531-1	I-BKS		LCSD	Sample	Id: 76	63531-1-BSD	
Parameter	MB	Spike	LCS	LCS	LCCD	LOOD	Limits	0/ DDD D	RPD Limit	Unite	Analysis	
1 al ameter	Result	Amount	Result	%Rec	LCSD Result	LCSD %Rec	Linnts	70KID K	I D Linni	Units	Date	Flag

Analytical Method:	Inorganic Anions b						Pr	ep Metho	d: E30	0P		
Seq Number:	3065325			Matrix:	Soil				Date Pre	ep: 10.0	4.18	
Parent Sample Id:	600987-003		MS Sar	nple Id:	600987-00)3 S		MSI	O Sample	Id: 6009	987-003 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limi	t Units	Analysis Date	Flag
Chloride	< 0.852	248	246	99	246	99	90-110	0	20	mg/kg	10.04.18 10:07	

Analytical Method:	Inorganic Anions b						Pı	ep Metho	od: E30	0P		
Seq Number:	3065325			Matrix:	Soil				Date Pre	ep: 10.0	4.18	
Parent Sample Id:	601153-002		MS Sar	nple Id:	601153-00	02 S		MS	D Sample	e Id: 601	153-002 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Lim	it Units	Analysis Date	Flag
Chloride	98.6	250	348	100	351	101	90-110	1	20	mg/kg	10.04.18 11:26	

Analytical Method:	TPH by S	W8015 M	od						Prep Method: TX1005P						
Seq Number:	3065500				Matrix:	Solid		Date Prep: 10.04.18							
MB Sample Id:	7663575-1	-BLK	LCS Sample Id: 7663575-1-BKS LCSD							SD Sample	D Sample Id: 7663575-1-BSD				
Parameter		MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPI	O RPD Limit	Units	Analysis Date	Flag		
Gasoline Range Hydrocarb	ons (GRO)	<8.00	1000	987	99	919	92	70-135	7	20	mg/kg	10.04.18 11:20			
Diesel Range Organics	(DRO)	<8.13	1000	1020	102	943	94	70-135	8	20	mg/kg	10.04.18 11:20			
Surrogate		MB %Rec	MB Flag		CS Rec	LCS Flag	LCSI %Ree			Limits	Units	Analysis Date			
1-Chlorooctane		95		1	22		114			70-135	%	10.04.18 11:20			
o-Terphenyl		101		1	10		104			70-135	%	10.04.18 11:20			

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 601142

LT Environmental, Inc.

JRU-17

Analytical Method:	TPH by S	W8015 M						Prep Method: TX1005P						
Seq Number:	3065500				Matrix:	Soil			Date Prep: 10.04.18					
Parent Sample Id:	1					MS Sample Id: 600982-001 S			MSD Sample Id: 600982-001 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)	8.67	997	855	85	887	88	70-135	4	20	mg/kg	10.04.18 12:16		
Diesel Range Organics ((DRO)	<8.10	997	890	89	936	94	70-135	5	20	mg/kg	10.04.18 12:16		
Surrogate					/IS Rec	MS Flag	MSD %Re		_	limits	Units	Analysis Date		
1-Chlorooctane				1	23		121		7	0-135	%	10.04.18 12:16		
o-Terphenyl				1	00		104		7	0-135	%	10.04.18 12:16		

Analytical Method: Seq Number: MB Sample Id:	BTEX by EPA 802 3065828 7663817-1-BLK	Matrix: nple Id:	Solid 7663817-	1-BKS		Prep Method: SW5030B Date Prep: 10.08.18 LCSD Sample Id: 7663817-1-BSD						
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPI	D RPD Limi	t Units	Analysis Date	Flag
Benzene	< 0.00200	0.100	0.0958	96	0.0995	99	70-130	4	35	mg/kg	10.08.18 10:25	
Toluene	< 0.00200	0.100	0.0985	99	0.102	101	70-130	3	35	mg/kg	10.08.18 10:25	
Ethylbenzene	< 0.00200	0.100	0.0971	97	0.101	100	70-130	4	35	mg/kg	10.08.18 10:25	
m,p-Xylenes	< 0.00401	0.200	0.187	94	0.194	96	70-130	4	35	mg/kg	10.08.18 10:25	
o-Xylene	< 0.00200	0.100	0.0892	89	0.0930	92	70-130	4	35	mg/kg	10.08.18 10:25	
Surrogate	MB %Rec	MB Flag		CS Rec	LCS Flag	LCSD %Rec			Limits	Units	Analysis Date	
1,4-Difluorobenzene	104		ç) 2		93			70-130	%	10.08.18 10:25	
4-Bromofluorobenzene	89			79		81			70-130	%	10.08.18 10:25	

Analytical Method: Seq Number: Parent Sample Id:	BTEX by EPA 802 3065828 600814-015	1B	MS San	Matrix: nple Id:	Soil 600814-0	15 S			Prep Metho Date Pre SD Sample	p: 10.0	5030B 8.18 814-015 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPE	RPD Limit	t Units	Analysis Date	Flag
Benzene	< 0.00200	0.0998	0.0879	88	0.0746	75	70-130	16	35	mg/kg	10.08.18 11:06	
Toluene	< 0.00200	0.0998	0.0810	81	0.0663	66	70-130	20	35	mg/kg	10.08.18 11:06	Х
Ethylbenzene	< 0.00200	0.0998	0.0714	72	0.0563	56	70-130	24	35	mg/kg	10.08.18 11:06	Х
m,p-Xylenes	< 0.00399	0.200	0.138	69	0.108	54	70-130	24	35	mg/kg	10.08.18 11:06	Х
o-Xylene	< 0.00200	0.0998	0.0655	66	0.0508	51	70-130	25	35	mg/kg	10.08.18 11:06	Х
Surrogate	te MS %Rec			MS Flag	MSD %Ree				Units	Analysis Date		
1,4-Difluorobenzene			ç	92		95		7	70-130	%	10.08.18 11:06	
4-Bromofluorobenzene			8	36		83		7	70-130	%	10.08.18 11:06	

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

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eived by OCD: 6/27/20		22 PM	1			1			Sar	8	Rec	Ten	5	Sar	P.O	Pro	Pro	Pho		Adc	Cor	Pro	Page 142
Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. The Cut right of the client of the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. The Cut right of the Cut of \$7.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. The Cut right of \$1.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. The Cut right of \$1.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. The Cut right of \$1.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. The Cut right of \$1.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. The Cut right of \$1.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. The Cut right of \$1.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. The Cut right of \$1.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco. A minimum charge of \$1.00 will be applied to each project and a charge of \$1.00 will be applied to each project and a charge of \$1.00 will be applied to each project and a charge of \$1.00 will be applied to each project and a charge of \$1.00 will be applied to each project and a charge of \$1.00 will be ap	Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed							Sample Identification	Sample Custody Seals:	Cooler Custody Seals:	Received Intact:	Temperature (°C):	SAMPLE RECEIPT	Sampler's Name.	P.O. Number:	Project Number:	Project Name:	Phone:	City, State ZIP:	Address:	Company Name:	Project Manager:	
his document ann be liable only fo charge of \$75.00 y: (Signature	6010 200 5 and Met			a 1 55	<u>8055</u>	507	5506	entification	eals: Yes	Yes				fabion	ZRP-1		JEU-1-	(432) ७७५	Midland	2300 %	LTEN	Adrian	BORATORIES
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samples constitutes a valid pur es and shall not assume any resi each project and a charge of \$5 Beceived by:-(Signature)	BRCRA 13PPM Texas				1242	1540	1535	Time Sampled	Total Containers:	Correction Factor:	21	Thermometer ID-		Due Date:	Rush:	Routine	Tu	Email:		1.#103			Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Anton Midland,TX (432-704-5440) EL Paso,TX (915)565-3443 Lubboc Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-
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	Cr Co Cu Fe																NALYSIS REQUEST						Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334 Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296 (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)
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ndard terms and condi matances beyond the c s previously negotiated Received by: Pal N-Ma																		Deliverables: EDD	g:Level II 🔲	State of Project:	I: UST/PST		
	Se Ag SiO] ADa	evel III 🗌 P.	1	PRP Bro	Nork Ordei	www.xenco.com
ature Date/Time	SiO2 Na Sr T							Sam	IAI starts lab, if								Wo		Reporting:Level II CLevel III PST/UST TRRP Level IV		Program: UST/PST PRP Brownfields RRC Superfund	ğ	m Page
$\frac{1}{10/h_2} = \frac{1}{20} = \frac{1}{$	TI Sn U V							Sample Comments	I A I starts the day received by the lab, if received by 4:30pm			************	In the second seco				Work Order Notes	Other:	קאה ∏ רפאנ	[RC Supe		
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Final 1.002

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After printing this label:

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

2. Fold the printed page along the horizontal line.

3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is \$1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide.



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Final 1.002
Received by OCD: 6/27/2023 12:54:22 PM



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: 10/03/2018 10:32:00 AM Temperature Measuring device used : R8 Work Order #: 601142 Sample Receipt Checklist #1 *Temperature of cooler(s)? .3 #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? N/A #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)?	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:

Brianna Teel

Date: 10/03/2018

Comments

Checklist reviewed by: Jession Vramer

Jessica Kramer

Date: 10/03/2018

for LT Environmental, Inc.

Project Manager: Adrian Baker

JRU-17

2RP-1657

11-DEC-18

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) Xenco-Lakeland: Florida (E84098)



11-DEC-18

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

Reference: XENCO Report No(s): 601915 JRU-17 Project Address: Delaware Basin

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) 601915. 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. 601915 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 Vermer

Jessica Kramer Project Assistant

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Sample Cross Reference 601915



LT Environmental, Inc., Arvada, CO

JRU-17

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01A	S	10-04-18 09:35	1.5 ft	601915-001
SS01B	S	10-04-18 09:50	2 ft	601915-002
SS02A	S	10-04-18 10:05	1 ft	601915-003
SS02B	S	10-04-18 10:30	2 ft	601915-004
SS03A	S	10-04-18 10:45	1 ft	601915-005
SS03B	S	10-04-18 11:05	2 ft	601915-006
SS04A	S	10-04-18 11:25	1.5 ft	601915-007
SS04B	S	10-04-18 11:35	2 ft	601915-008
SS05A	S	10-04-18 11:45	1 ft	601915-009
SS05B	S	10-04-18 12:05	2 ft	601915-010
SW01	S	10-04-18 14:10	1 - 3 ft	601915-011
SW02	S	10-04-18 14:20	1 - 3 ft	601915-012
FS01	S	10-04-18 14:30	1 - 4 ft	601915-013
FS02	S	10-04-18 14:35	1.5 - 2 ft	601915-014

Version: 1.%

.



CASE NARRATIVE

LABORATORIES

Client Name: LT Environmental, Inc. Project Name: JRU-17

Project ID:2RP-1657Work Order Number(s):601915

Report Date: *11-DEC-18* Date Received: *10/10/2018*

Sample receipt non conformances and comments:

PER CLIENTS EMAIL REQUEST CORRECTED SAMPLE NAMES. JKR 10/15/18 PER CLIENTS EMAIL REQUEST CORRECTED SAMPLE NAMES FOR SAMPLE 011 & 012 JKR 10/18/18 NEW VERSION GENERATED.

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3066628 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; data confirmed by re-analysis.

Samples affected are: 601915-007,601915-004.

Batch: LBA-3066632 BTEX by EPA 8021B

Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 601915-008 S,601915-008 SD,601915-008,601915-009.

Soil samples were not received in Terracore kits and therefore were prepared by method 5030. Lab Sample ID 601915-008 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). o-Xylene recovered below QC limits in the Matrix Spike. Benzene recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate. m,p-Xylenes recovered above QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 601915-008, -009, -010, -011, -012, -013, -014.

The Laboratory Control Sample for Benzene, m,p-Xylenes, o-Xylene is within laboratory Control Limits, therefore the data was accepted.

o-Xylene Relative Percent Difference (RPD) between matrix spike and duplicate was above quality control limits.

Samples in the analytical batch are: 601915-008, -009, -010, -011, -012, -013, -014





Project Id:2RP-1657Contact:Adrian BakerProject Location:Delaware Basin

Certificate of Analysis Summary 601915

LT Environmental, Inc., Arvada, CO Project Name: JRU-17



Date Received in Lab:Wed Oct-10-18 10:45 amReport Date:11-DEC-18Project Manager:Jessica Kramer

	Lab Id:	601915-	001	601915-	002	601915-0	003	601915-	004	601915-0	005	601915-0	006
	Field Id:	SS01/	4	SS01I	3	SS02A	1	SS02I	3	SS03A	4	SS03E	3
Analysis Requested	Depth:	1.5- f	t	2- ft		1- ft		2- ft		1- ft		2- ft	
	Matrix:	SOIL		SOIL	,	SOIL		SOIL		SOIL	,	SOIL	
	Sampled:	Oct-04-18	09:35	Oct-04-18	09:50	Oct-04-18	10:05	Oct-04-18	10:30	Oct-04-18	10:45	Oct-04-18	11:05
BTEX by EPA 8021B	Extracted:	Oct-15-18	16:45										
	Analyzed:	Oct-16-18	03:20	Oct-16-18	03:41	Oct-16-18	02:17	Oct-16-18	02:38	Oct-15-18	20:57	Oct-16-18	04:02
	Units/RL:	mg/kg	RL										
Benzene		< 0.00200	0.00200	< 0.00201	0.00201	< 0.00198	0.00198	< 0.00199	0.00199	< 0.00202	0.00202	< 0.00200	0.00200
Toluene		< 0.00200	0.00200	< 0.00201	0.00201	< 0.00198	0.00198	< 0.00199	0.00199	< 0.00202	0.00202	< 0.00200	0.00200
Ethylbenzene		< 0.00200	0.00200	< 0.00201	0.00201	< 0.00198	0.00198	< 0.00199	0.00199	< 0.00202	0.00202	< 0.00200	0.00200
m,p-Xylenes		< 0.00399	0.00399	< 0.00402	0.00402	< 0.00397	0.00397	< 0.00398	0.00398	< 0.00403	0.00403	< 0.00401	0.00401
o-Xylene		< 0.00200	0.00200	< 0.00201	0.00201	< 0.00198	0.00198	< 0.00199	0.00199	< 0.00202	0.00202	< 0.00200	0.00200
Total Xylenes		< 0.00200	0.00200	< 0.00201	0.00201	< 0.00198	0.00198	< 0.00199	0.00199	< 0.00202	0.00202	< 0.00200	0.00200
Total BTEX		< 0.00200	0.00200	< 0.00201	0.00201	< 0.00198	0.00198	< 0.00199	0.00199	< 0.00202	0.00202	< 0.00200	0.00200
Inorganic Anions by EPA 300	Extracted:	Oct-15-18	09:15	Oct-15-18	10:00								
	Analyzed:	Oct-15-18	18:13	Oct-15-18	18:18	Oct-15-18	18:24	Oct-15-18	18:30	Oct-15-18	18:35	Oct-15-18	19:09
	Units/RL:	mg/kg	RL										
Chloride		175	4.98	97.4	4.96	151	4.96	144	4.98	< 5.00	5.00	< 5.00	5.00
TPH by SW8015 Mod	Extracted:	Oct-13-18	11:00										
	Analyzed:	Oct-14-18	20:30	Oct-14-18	21:26	Oct-14-18	21:46	Oct-14-18	22:05	Oct-14-18	22:24	Oct-14-18	22:43
	Units/RL:	mg/kg	RL										
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<14.9	14.9	<74.9	74.9	20.2	14.9	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		587	15.0	246	14.9	3510	74.9	223	14.9	16.2	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		118	15.0	75.3	14.9	790	74.9	66.0	14.9	<15.0	15.0	<15.0	15.0
Total TPH		705	15.0	321	14.9	4300	74.9	309	14.9	16.2	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.

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Version: 1.%

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Jessica Kramer Project Assistant

Final 1.002





Project Id:2RP-1657Contact:Adrian BakerProject Location:Delaware Basin

Certificate of Analysis Summary 601915

LT Environmental, Inc., Arvada, CO Project Name: JRU-17



Date Received in Lab:Wed Oct-10-18 10:45 amReport Date:11-DEC-18Project Manager:Jessica Kramer

	Lab Id:	601915-	007	601915-0	008	601915-0)09	601915-0	010	601915-0	011	601915-0	012
	Field Id:	SS04.	A	SS04E	s	SS05A	1	SS05B	5	SW01		SW02	
Analysis Requested	Depth:	1.5- f	ì	2- ft		1- ft		2- ft		1-3 ft		1-3 ft	
	Matrix:	SOII	_	SOIL									
	Sampled:	Oct-04-18	11:25	Oct-04-18	11:35	Oct-04-18	11:45	Oct-04-18	12:05	Oct-04-18	14:10	Oct-04-18	14:20
BTEX by EPA 8021B	Extracted:	Oct-15-18	16:45	Oct-14-18	17:00	Oct-14-18	17:00	Oct-14-18	7:00	Oct-14-18	17:00	Oct-14-18	17:00
	Analyzed:	Oct-16-18	04:24	Oct-16-18 (07:12	Oct-16-18 (07:33	Oct-16-18 ()9:19	Oct-16-18 (09:40	Oct-16-18	10:02
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		< 0.00200	0.00200	< 0.0100	0.0100	< 0.0100	0.0100	< 0.0100	0.0100	< 0.0100	0.0100	< 0.0100	0.0100
Toluene		0.00353	0.00200	0.0261	0.0100	0.0461	0.0100	< 0.0100	0.0100	< 0.0100	0.0100	< 0.0100	0.0100
Ethylbenzene		0.0138	0.00200	0.0817	0.0100	0.0761	0.0100	< 0.0100	0.0100	< 0.0100	0.0100	< 0.0100	0.0100
m,p-Xylenes		0.0408	0.00399	0.308	0.0200	0.341	0.0200	< 0.0200	0.0200	< 0.0200	0.0200	< 0.0200	0.0200
o-Xylene		0.0124	0.00200	< 0.0100	0.0100	0.0821	0.0100	< 0.0100	0.0100	< 0.0100	0.0100	< 0.0100	0.0100
Total Xylenes		0.0532	0.00200	0.308	0.0100	0.423	0.0100	< 0.0100	0.0100	< 0.0100	0.0100	< 0.0100	0.0100
Total BTEX		0.0705	0.00200	0.416	0.0100	0.545	0.0100	< 0.0100	0.0100	< 0.0100	0.0100	< 0.0100	0.0100
Inorganic Anions by EPA 300	Extracted:	Oct-15-18	10:00	Oct-15-18	10:00	Oct-15-18	10:00	Oct-15-18	0:00	Oct-15-18	10:00	Oct-15-18	10:00
	Analyzed:	Oct-15-18	19:27	Oct-15-18	19:32	Oct-15-18	19:38	Oct-15-18	9:44	Oct-15-18 2	20:01	Oct-15-18 2	20:06
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		348	4.95	326	4.96	1210	24.8	2180	25.0	1900	25.0	1250	25.0
TPH by SW8015 Mod	Extracted:	Oct-13-18	11:00	Oct-13-18	11:00	Oct-13-18	11:00	Oct-13-18	1:00	Oct-13-18	1:00	Oct-13-18	11:00
	Analyzed:	Oct-14-18	23:01	Oct-14-18 2	23:20	Oct-14-18 2	23:39	Oct-14-18 2	23:58	Oct-15-18 (00:55	Oct-15-18 (01:14
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		95.0	15.0	78.1	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	20.3	15.0
Diesel Range Organics (DRO)		2380	15.0	2810	15.0	72.0	15.0	373	15.0	66.1	14.9	20.4	15.0
Motor Oil Range Hydrocarbons (MRO)		313	15.0	309	15.0	20.1	15.0	124	15.0	16.9	14.9	<15.0	15.0
Total TPH		2790	15.0	3200	15.0	92.1	15.0	497	15.0	83.0	14.9	40.7	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.

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Version: 1.%

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Jessica Kramer Project Assistant

Final 1.002





Project Id:2RP-1657Contact:Adrian BakerProject Location:Delaware Basin

Certificate of Analysis Summary 601915

LT Environmental, Inc., Arvada, CO Project Name: JRU-17



Date Received in Lab:Wed Oct-10-18 10:45 amReport Date:11-DEC-18Project Manager:Jessica Kramer

				1		1		1
Lab Id:	601915-0)13	601915-0	14				
Field Id:	FS01		FS02					
Depth:	1-4 ft		1.5-2 ft	t				
Matrix:	SOIL		SOIL					
Sampled:	Oct-04-18	14:30	Oct-04-18 1	4:35				
Extracted:	Oct-14-18	17:00	Oct-14-18 1	7:00				
Analyzed:	Oct-16-18	10:23	Oct-16-18 1	0:45				
Units/RL:	mg/kg	RL	mg/kg	RL				
	< 0.0100	0.0100	< 0.0100	0.0100				
	< 0.0100	0.0100	< 0.0100	0.0100				
	< 0.0100	0.0100	< 0.0100	0.0100				
	< 0.0200	0.0200	< 0.0200	0.0200				
	< 0.0100	0.0100	< 0.0100	0.0100				
	< 0.0100	0.0100	< 0.0100	0.0100				
	< 0.0100	0.0100	< 0.0100	0.0100				
Extracted:	Oct-15-18	10:00	Oct-15-18 1	0:00				
Analyzed:	Oct-15-18 2	20:12	Oct-15-18 2	20:18				
Units/RL:	mg/kg	RL	mg/kg	RL				
	851	24.8	603	4.95				
Extracted:	Oct-13-18	11:00	Oct-13-18 1	1:00				
Analyzed:	Oct-15-18 (01:33	Oct-15-18 0	01:52				
Units/RL:	mg/kg	RL	mg/kg	RL				
	<15.0	15.0	<15.0	15.0				
	67.5	15.0	1620	15.0				
	17.5	15.0	259	15.0				
	85.0	15.0	1880	15.0				
	Depth: Matrix: Sampled: Extracted: Analyzed: Units/RL: Extracted: Analyzed: Units/RL: Extracted: Analyzed:	Field Id: FS01 Depth: 1-4 ft Matrix: SOIL Sampled: Oct-04-18 Extracted: Oct-14-18 Analyzed: Oct-16-18 Units/RL: mg/kg Matrix: SOIL Extracted: Oct-04-18 Units/RL: mg/kg Øld Øld Øld Øld Øld Øld Øld Øld	Field Id: FS01 Depth: 1-4 ft Matrix: SOIL Sampled: Oct-04-18 14:30 Extracted: Oct-14-18 17:00 Analyzed: Oct-16-18 10:23 Units/RL: mg/kg RL <0.0100	Field Id: FS01 FS02 Depth: 1-4 ft 1.5-2 ft Matrix: SOIL SOIL Sampled: Oct-04-18 14:30 Oct-04-18 1 Analyzed: Oct-16-18 10:23 Oct-16-18 1 Units/RL: mg/kg RL mg/kg <0.0100	Field Id: FS01 FS02 Depth: 1-4 ft 1.5-2 ft Matrix: SOIL SOIL Sampled: Oct-04-18 14:30 Oct-04-18 14:35 Extracted: Oct-14-18 17:00 Oct-14-18 17:00 Analyzed: Oct-16-18 10:23 Oct-16-18 10:45 Units/RL: mg/kg RL mg/kg RL <d><0.0100</d>	Field Id: FS01 FS02 Depth: 1-4 ft 1.5-2 ft Matrix: SOIL SOIL Sampled: Oct-04-18 14:30 Oct-04-18 14:35 Extracted: Oct-14-18 17:00 Oct-14-18 17:00 Analyzed: Oct-16-18 10:23 Oct-16-18 10:45 Units/RL: mg/kg RL mg/kg RL < <0.0100	Field Id: FS01 FS02 Depth: 1-4 ft 1.5-2 ft Matrix: SOIL SOIL Sampled: Oct-04-18 14:30 Oct-04-18 14:35 Extracted: Oct-14-18 17:00 Oct-16-18 10:23 Oct-16-18 10:45 Units/RL: mg/kg RL mg/kg RL <0.0100	Field Id: FS01 FS02 Depth: 1.4 ft 1.5-2 ft Matrix: SOIL SOIL Sampled: Oct-04-18 14:30 Oct-04-18 14:35 Extracted: Oct-14-18 17:00 Oct-14-18 17:00 Analyzed: Oct-16-18 10:23 Oct-16-18 10:45 Units/RL: mg/kg RL mg/kg RL Oct-000 0.000 0.000 Oct-0100 0.0100 0.0100 Mg/kg RL mg/kg RL Oct-16-18 10:23 Oct-16-18 10:45 Units/RL: mg/kg RL mg/kg RL

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Version: 1.%

fession kenner

Jessica Kramer Project Assistant

Final 1.002





LT Environmental, Inc., Arvada, CO

Sample Id:SS01ALab Sample Id:601915-001		Matrix: Date Colle	Soil cted: 10.04.	.18 09.35		Date Received:10. Sample Depth: 1.5		5
Analytical Method: Inorganic Anio	ns by EPA 300				F	Prep Method: E30	00P	
Tech: CHE					9	% Moisture:		
Analyst: CHE		Date Prep:	10.15.	.18 09.15	E	Basis: We	t Weight	
Seq Number: 3066429								
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	175	4.98		mg/kg	10.15.18 18.13		1
Analytical Method: TPH by SW801	15 Mod				F	Prep Method: TX	1005P	
Analytical Method: TPH by SW801 Tech: ARM Analyst: ARM Seq Number: 3066664	15 Mod	Date Prep:	10.13.	.18 11.00	9	% Moisture:	1005P t Weight	
Tech: ARM Analyst: ARM	15 Mod Cas Number	Date Prep: Result	10.13. RL	.18 11.00	9	% Moisture:		Dil
Tech:ARMAnalyst:ARMSeq Number:3066664				.18 11.00	9 E	Moisture: Basis: We	t Weight	Dil
Tech: ARM Analyst: ARM Seq Number: 3066664 Parameter	Cas Number	Result	RL	.18 11.00	9 E Units	Moisture: Basis: We Analysis Date	t Weight Flag	
Tech: ARM Analyst: ARM Seq Number: 3066664 Parameter Gasoline Range Hydrocarbons (GRO)	Cas Number PHC610	Result <15.0	RL 15.0	.18 11.00	9 E Units mg/kg	Moisture: Basis: We Analysis Date 10.14.18 20.30	t Weight Flag	
Tech: ARM Analyst: ARM Seq Number: 3066664 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO)	Cas Number PHC610 C10C28DRO	Result <15.0 587	RL 15.0 15.0	.18 11.00	9 E Units mg/kg mg/kg	Moisture: Basis: We Analysis Date 10.14.18 20.30 10.14.18 20.30	t Weight Flag	1
Tech: ARM Analyst: ARM Seq Number: 3066664 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) Motor Oil Range Hydrocarbons (MRO)	Cas Number PHC610 C10C28DRO PHCG2835	Result <15.0 587 118 705	RL 15.0 15.0 15.0 15.0 %	.18 11.00 Units	9 E Units mg/kg mg/kg mg/kg	Moisture: Basis: We Analysis Date 10.14.18 20.30 10.14.18 20.30 10.14.18 20.30	t Weight Flag	1 1 1
Tech: ARM Analyst: ARM Seq Number: 3066664 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) Motor Oil Range Hydrocarbons (MRO) Total TPH	Cas Number PHC610 C10C28DRO PHCG2835 PHC635	Result <15.0 587 118 705	RL 15.0 15.0 15.0 15.0		9 E Units mg/kg mg/kg mg/kg mg/kg	⁶ Moisture: Basis: We Analysis Date 10.14.18 20.30 10.14.18 20.30 10.14.18 20.30 10.14.18 20.30	t Weight Flag U	1 1 1





LT Environmental, Inc., Arvada, CO

Sample Id:SS01ALab Sample Id:601915-001	Matrix: Soil Date Collected: 10.04.18 09.35	Date Received:10.10.18 10.45 Sample Depth: 1.5 ft
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3066628	Date Prep: 10.15.18 16.45	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	10.16.18 03.20	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	10.16.18 03.20	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	10.16.18 03.20	U	1
m,p-Xylenes	179601-23-1	< 0.00399	0.00399		mg/kg	10.16.18 03.20	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	10.16.18 03.20	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	10.16.18 03.20	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	10.16.18 03.20	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	102	%	70-130	10.16.18 03.20		
1,4-Difluorobenzene		540-36-3	99	%	70-130	10.16.18 03.20		





LT Environmental, Inc., Arvada, CO

JRU-17

Sample Id: SS01B Lab Sample Id: 601915-002		Matrix: Date Colle	Soil ected: 10.04	.18 09.50		Date Received:10. Sample Depth: 2 ft		5
Analytical Method: Inorganic Anio	ns by EPA 300				P	Prep Method: E3	00P	
Tech: CHE					9	6 Moisture:		
Analyst: CHE		Date Prep	: 10.15	.18 09.15	E	Basis: We	et Weight	
Seq Number: 3066429								
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	97.4	4.96		mg/kg	10.15.18 18.18		1
							100 5 D	
Analytical Method: TPH by SW80 Tech: ARM Analyst: ARM Seq Number: 3066664	15 Mod	Date Prep	: 10.13	.18 11.00	%	Prep Method: TX 6 Moisture: Basis: We	1005P et Weight	
Tech: ARM Analyst: ARM	15 Mod Cas Number	Date Prep Result	: 10.13 RL	.18 11.00	%	6 Moisture:		Dil
Tech: ARM Analyst: ARM Seq Number: 3066664		-	-	.18 11.00	% E	6 Moisture: Basis: We	et Weight	Dil
Tech: ARM Analyst: ARM Seq Number: 3066664 Parameter	Cas Number	Result	RL	.18 11.00	% E Units	6 Moisture: Basis: We Analysis Date	et Weight Flag	
Tech: ARM Analyst: ARM Seq Number: 3066664 Parameter Gasoline Range Hydrocarbons (GRO)	Cas Number PHC610	Result <14.9	RL 14.9	.18 11.00	% E Units mg/kg	6 Moisture: Basis: We Analysis Date 10.14.18 21.26	et Weight Flag	1
Tech: ARM Analyst: ARM Seq Number: 3066664 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO)	Cas Number PHC610 C10C28DRO	Result <14.9 246	RL 14.9 14.9	.18 11.00	9 E Units mg/kg mg/kg	6 Moisture: Basis: We Analysis Date 10.14.18 21.26 10.14.18 21.26	et Weight Flag	1
Tech: ARM Analyst: ARM Seq Number: 3066664 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) Motor Oil Range Hydrocarbons (MRO)	Cas Number PHC610 C10C28DRO PHCG2835	Result <14.9 246 75.3 321	RL 14.9 14.9 14.9	.18 11.00 	9 E Units mg/kg mg/kg mg/kg	6 Moisture: Basis: We Analysis Date 10.14.18 21.26 10.14.18 21.26 10.14.18 21.26	et Weight Flag	1 1 1

94

%

70-135

10.14.18 21.26

84-15-1

o-Terphenyl

.





LT Environmental, Inc., Arvada, CO

Sample Id:SS01BLab Sample Id:601915-002	Matrix: Soil Date Collected: 10.04.18 09.50	Date Received:10.10.18 10.45 Sample Depth: 2 ft
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3066628	Date Prep: 10.15.18 16.45	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00201	0.00201		mg/kg	10.16.18 03.41	U	1
Toluene	108-88-3	< 0.00201	0.00201		mg/kg	10.16.18 03.41	U	1
Ethylbenzene	100-41-4	< 0.00201	0.00201		mg/kg	10.16.18 03.41	U	1
m,p-Xylenes	179601-23-1	< 0.00402	0.00402		mg/kg	10.16.18 03.41	U	1
o-Xylene	95-47-6	< 0.00201	0.00201		mg/kg	10.16.18 03.41	U	1
Total Xylenes	1330-20-7	< 0.00201	0.00201		mg/kg	10.16.18 03.41	U	1
Total BTEX		< 0.00201	0.00201		mg/kg	10.16.18 03.41	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	100	%	70-130	10.16.18 03.41		
1,4-Difluorobenzene		540-36-3	97	%	70-130	10.16.18 03.41		





LT Environmental, Inc., Arvada, CO

JRU-17

Sample Id: SS02A Lab Sample Id: 601915-003		Matrix: Date Colle	Soil ected: 10.04.	18 10.05		Date Received:10 Sample Depth: 1 f		5
Analytical Method: Inorganic Anio Tech: CHE	ons by EPA 300					Prep Method: E3 % Moisture:	00P	
Analyst: CHE		Date Prep	: 10.15.	18 09.15			et Weight	
Seq Number: 3066429								
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	151	4.96		mg/kg	10.15.18 18.24		1
Analytical Method: TPH by SW80 Tech: ARM Analyst: ARM Seq Number: 3066664	15 Mod	Date Prep	: 10.13.	18 11.00	9	Prep Method: TX % Moisture: Basis: We	X1005P et Weight	
Tech: ARM Analyst: ARM	15 Mod Cas Number	Date Prep Result	: 10.13. RL	18 11.00	9	% Moisture:		Dil
Tech: ARM Analyst: ARM Seq Number: 3066664		-	-	18 11.00	9 E	Moisture: Basis: We	et Weight	Dil 5
Tech: ARM Analyst: ARM Seq Number: 3066664 Parameter	Cas Number	Result	RL	18 11.00	9 E Units	6 Moisture: Basis: We Analysis Date	et Weight Flag	
Tech: ARM Analyst: ARM Seq Number: 3066664 Parameter Gasoline Range Hydrocarbons (GRO)	Cas Number PHC610	Result <74.9	RL 74.9	18 11.00	9 E Units mg/kg	6 Moisture: Basis: We Analysis Date 10.14.18 21.46	et Weight Flag	5
Tech: ARM Analyst: ARM Seq Number: 3066664 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO)	Cas Number PHC610 C10C28DRO	Result <74.9 3510	RL 74.9 74.9	18 11.00	9 E Units mg/kg mg/kg	 Moisture: Basis: We Analysis Date 10.14.18 21.46 10.14.18 21.46 	et Weight Flag	5 5
Tech: ARM Analyst: ARM Seq Number: 3066664 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) Motor Oil Range Hydrocarbons (MRO)	Cas Number PHC610 C10C28DRO PHCG2835	Result <74.9 3510 790 4300	RL 74.9 74.9 74.9	18 11.00 Units	9 E Units mg/kg mg/kg mg/kg	Moisture: Basis: We Analysis Date 10.14.18 21.46 10.14.18 21.46 10.14.18 21.46	et Weight Flag	5 5 5

109

%

70-135

10.14.18 21.46

84-15-1

o-Terphenyl





LT Environmental, Inc., Arvada, CO

Sample Id:SS02ALab Sample Id:601915-003	Matrix: Soil Date Collected: 10.04.18 10.05	Date Received:10.10.18 10.45 Sample Depth: 1 ft
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3066628	Date Prep: 10.15.18 16.45	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00198	0.00198		mg/kg	10.16.18 02.17	U	1
Toluene	108-88-3	< 0.00198	0.00198		mg/kg	10.16.18 02.17	U	1
Ethylbenzene	100-41-4	< 0.00198	0.00198		mg/kg	10.16.18 02.17	U	1
m,p-Xylenes	179601-23-1	< 0.00397	0.00397		mg/kg	10.16.18 02.17	U	1
o-Xylene	95-47-6	< 0.00198	0.00198		mg/kg	10.16.18 02.17	U	1
Total Xylenes	1330-20-7	< 0.00198	0.00198		mg/kg	10.16.18 02.17	U	1
Total BTEX		< 0.00198	0.00198		mg/kg	10.16.18 02.17	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	88	%	70-130	10.16.18 02.17		
4-Bromofluorobenzene		460-00-4	101	%	70-130	10.16.18 02.17		





LT Environmental, Inc., Arvada, CO

Sample Id:SS02BLab Sample Id:601915-004		Matrix: Date Collec	Soil cted: 10.04	.18 10.30		Date Received:10. ample Depth:2 ft		5
Analytical Method: Inorganic Anion Tech: CHE	s by EPA 300					rep Method: E3	00P	
Analyst:CHESeq Number:3066429		Date Prep:	10.15	.18 09.15	B	Basis: We	et Weight	
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	144	4.98		mg/kg	10.15.18 18.30		1
Analytical Method: TPH by SW8015 Tech: ARM Analyst: ARM Seq Number: 3066664	5 Mod	Date Prep:	10.13	.18 11.00	%	rep Method: TX 6 Moisture: 8asis: We	X1005P et Weight	
Tech: ARM Analyst: ARM	5 Mod Cas Number	Date Prep: Result	10.13. RL	.18 11.00	%	6 Moisture:		Dil
Tech:ARMAnalyst:ARMSeq Number:3066664		·		.18 11.00	% E	6 Moisture: Basis: We	et Weight	Dil
Tech: ARM Analyst: ARM Seq Number: 3066664 Parameter	Cas Number	Result	RL	.18 11.00	% E Units	6 Moisture: Basis: We Analysis Date	et Weight	
Tech: ARM Analyst: ARM Seq Number: 3066664 Parameter Gasoline Range Hydrocarbons (GRO)	Cas Number PHC610	Result 20.2	RL 14.9	.18 11.00	% E Units mg/kg	6 Moisture: Basis: We Analysis Date	et Weight	
Tech: ARM Analyst: ARM Seq Number: 3066664 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO)	Cas Number PHC610 C10C28DRO	Result 20.2 223	RL 14.9 14.9	.18 11.00	% E Units mg/kg mg/kg	6 Moisture: Basis: We Analysis Date 10.14.18 22.05 10.14.18 22.05	et Weight	1
Tech: ARM Analyst: ARM Seq Number: 3066664 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) Motor Oil Range Hydrocarbons (MRO)	Cas Number PHC610 C10C28DRO PHCG2835	Result 20.2 223 66.0 309	RL 14.9 14.9 14.9 14.9 %	.18 11.00 Units	% E Units mg/kg mg/kg mg/kg	6 Moisture: Basis: We Analysis Date 10.14.18 22.05 10.14.18 22.05 10.14.18 22.05	et Weight	1 1 1
Tech: ARM Analyst: ARM Seq Number: 3066664 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) Motor Oil Range Hydrocarbons (MRO) Total TPH	Cas Number PHC610 C10C28DRO PHCG2835 PHC635	Result 20.2 223 66.0 309	RL 14.9 14.9 14.9 14.9		% E Units mg/kg mg/kg mg/kg mg/kg	Moisture: 6 Moisture: Basis: We Analysis Date 10.14.18 22.05 10.14.18 22.05 10.14.18 22.05 10.14.18 22.05 10.14.18 22.05 10.14.18 22.05	et Weight Flag	1 1 1





LT Environmental, Inc., Arvada, CO

Sample Id:SS02BLab Sample Id:601915-004	Matrix: Soil Date Collected: 10.04.18 10.30	Date Received:10.10.18 10.45 Sample Depth: 2 ft
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3066628	Date Prep: 10.15.18 16.45	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00199	0.00199		mg/kg	10.16.18 02.38	U	1
Toluene	108-88-3	< 0.00199	0.00199		mg/kg	10.16.18 02.38	U	1
Ethylbenzene	100-41-4	< 0.00199	0.00199		mg/kg	10.16.18 02.38	U	1
m,p-Xylenes	179601-23-1	< 0.00398	0.00398		mg/kg	10.16.18 02.38	U	1
o-Xylene	95-47-6	< 0.00199	0.00199		mg/kg	10.16.18 02.38	U	1
Total Xylenes	1330-20-7	< 0.00199	0.00199		mg/kg	10.16.18 02.38	U	1
Total BTEX		< 0.00199	0.00199		mg/kg	10.16.18 02.38	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	86	%	70-130	10.16.18 02.38		
4-Bromofluorobenzene		460-00-4	141	%	70-130	10.16.18 02.38	**	





LT Environmental, Inc., Arvada, CO

JRU-17

Sample Id: SS03A Lab Sample Id: 601915-005		Matrix: Date Colle	Soil ected: 10.04	.18 10.45		Date Received:10. Sample Depth: 1 ft		5
Analytical Method: Inorganic Anio Tech: CHE	ns by EPA 300				9	Prep Method: E30 6 Moisture:		
Analyst: CHE Seq Number: 3066429		Date Prep	10.15	.18 09.15	F	Basis: We	t Weight	
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00		mg/kg	10.15.18 18.35	U	1
Analytical Method:TPH by SW80Tech:ARMAnalyst:ARMSeq Number:3066664	15 Mod	Date Prep	10.13	.18 11.00	9	Prep Method: TX 6 Moisture: Basis: We	1005P t Weight	
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	10.14.18 22.24	U	1
Diesel Range Organics (DRO)	C10C28DRO	16.2	15.0		mg/kg	10.14.18 22.24		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0		mg/kg	10.14.18 22.24	U	1
Total TPH	PHC635	16.2	15.0		mg/kg	10.14.18 22.24		1
Surrogate			% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	92	%	70-135	10.14.18 22.24		

94

%

70-135

10.14.18 22.24

84-15-1

o-Terphenyl

.





LT Environmental, Inc., Arvada, CO

Sample Id:SS03ALab Sample Id:601915-005	Matrix: Soil Date Collected: 10.04.18 10.45	Date Received:10.10.18 10.45 Sample Depth: 1 ft
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3066628	Date Prep: 10.15.18 16.45	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00202	0.00202		mg/kg	10.15.18 20.57	U	1
Toluene	108-88-3	< 0.00202	0.00202		mg/kg	10.15.18 20.57	U	1
Ethylbenzene	100-41-4	< 0.00202	0.00202		mg/kg	10.15.18 20.57	U	1
m,p-Xylenes	179601-23-1	< 0.00403	0.00403		mg/kg	10.15.18 20.57	U	1
o-Xylene	95-47-6	< 0.00202	0.00202		mg/kg	10.15.18 20.57	U	1
Total Xylenes	1330-20-7	< 0.00202	0.00202		mg/kg	10.15.18 20.57	U	1
Total BTEX		< 0.00202	0.00202		mg/kg	10.15.18 20.57	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	84	%	70-130	10.15.18 20.57		
4-Bromofluorobenzene		460-00-4	94	%	70-130	10.15.18 20.57		



1-Chlorooctane

o-Terphenyl

Certificate of Analytical Results 601915



LT Environmental, Inc., Arvada, CO

JRU-17

Sample Id: SS03B Lab Sample Id: 601915-006		Matrix:	Soil ected: 10.04.18 11.05		Date Received:10. Sample Depth: 2 ft		5
Lao Sample Id. 001915-000		Date Cone	cted. 10.04.18 11.05		Sample Depth. 2 It		
Analytical Method: Inorganic Anic	ons by EPA 300				Prep Method: E30	90P	
Tech: CHE					% Moisture:		
Analyst: CHE		Date Prep	10.15.18 10.00		Basis: We	t Weight	
Seq Number: 3066431							
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	10.15.18 19.09	U	1
Tech: ARM Analyst: ARM		Date Prep	10.13.18 11.00		% Moisture: Basis: We	t Weight	
Seq Number: 3066664		-					
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Parameter Gasoline Range Hydrocarbons (GRO)	Cas Number PHC610	Result <15.0	RL 15.0	Units mg/kg	Analysis Date 10.14.18 22.43	Flag U	Dil 1
						6	
Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO)	PHC610	<15.0	15.0	mg/kg	10.14.18 22.43	U	1
Gasoline Range Hydrocarbons (GRO)	PHC610 C10C28DRO	<15.0 <15.0	15.0 15.0	mg/kg mg/kg	10.14.18 22.43 10.14.18 22.43	U U U	1
Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) Motor Oil Range Hydrocarbons (MRO)	PHC610 C10C28DRO PHCG2835	<15.0 <15.0 <15.0 <15.0	15.0 15.0 15.0	mg/kg mg/kg mg/kg	10.14.18 22.43 10.14.18 22.43 10.14.18 22.43	U U U U	1 1 1

91

91

%

%

70-135

70-135

10.14.18 22.43

10.14.18 22.43

111-85-3

84-15-1





LT Environmental, Inc., Arvada, CO

Sample Id:SS03BLab Sample Id:601915-006	Matrix: Soil Date Collected: 10.04.18 11.05	Date Received:10.10.18 10.45 Sample Depth: 2 ft
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3066628	Date Prep: 10.15.18 16.45	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	10.16.18 04.02	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	10.16.18 04.02	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	10.16.18 04.02	U	1
m,p-Xylenes	179601-23-1	< 0.00401	0.00401		mg/kg	10.16.18 04.02	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	10.16.18 04.02	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	10.16.18 04.02	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	10.16.18 04.02	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	96	%	70-130	10.16.18 04.02		
1,4-Difluorobenzene		540-36-3	97	%	70-130	10.16.18 04.02		





LT Environmental, Inc., Arvada, CO

Sample Id:SS04ALab Sample Id:601915-007		Matrix: Date Colle	Soil ected: 10.04	.18 11.25		Date Received:10. Sample Depth: 1.5		5
Analytical Method: Inorganic Anion	s by EPA 300				P	Prep Method: E3	00P	
Tech: CHE					9	6 Moisture:		
Analyst: CHE		Date Prep	: 10.15	.18 10.00	E	Basis: We	et Weight	
Seq Number: 3066431								
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	348	4.95		mg/kg	10.15.18 19.27		1
Analytical Method: TPH by SW8015	5 Mod				P	Prep Method: TX	(1005P	
Analytical Method: TPH by SW8015 Tech: ARM Analyst: ARM Seq Number: 3066664	i Mod	Date Prep	: 10.13	.18 11.00	9/	6 Moisture:	X1005P et Weight	
Tech: ARM Analyst: ARM	5 Mod Cas Number	Date Prep Result	: 10.13. RL	.18 11.00	9/	6 Moisture:		Dil
Tech:ARMAnalyst:ARMSeq Number:3066664				.18 11.00	9 E	6 Moisture: Basis: We	et Weight	Dil
Tech: ARM Analyst: ARM Seq Number: 3066664 Parameter	Cas Number	Result	RL	.18 11.00	% E Units	6 Moisture: Basis: We Analysis Date	et Weight	
Tech: ARM Analyst: ARM Seq Number: 3066664 Parameter Gasoline Range Hydrocarbons (GRO)	Cas Number PHC610	Result 95.0	RL 15.0	.18 11.00	% E Units mg/kg	6 Moisture: Basis: We Analysis Date 10.14.18 23.01	et Weight	
Tech: ARM Analyst: ARM Seq Number: 3066664 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO)	Cas Number PHC610 C10C28DRO	Result 95.0 2380	RL 15.0 15.0	.18 11.00	9 E Units mg/kg mg/kg	6 Moisture: Basis: We Analysis Date 10.14.18 23.01 10.14.18 23.01	et Weight	1
Tech: ARM Analyst: ARM Seq Number: 3066664 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) Motor Oil Range Hydrocarbons (MRO)	Cas Number PHC610 C10C28DRO PHCG2835	Result 95.0 2380 313 2790	RL 15.0 15.0 15.0	.18 11.00 Units	9 E Units mg/kg mg/kg mg/kg	6 Moisture: Basis: We Analysis Date 10.14.18 23.01 10.14.18 23.01 10.14.18 23.01	et Weight	1 1 1
Tech: ARM Analyst: ARM Seq Number: 3066664 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) Motor Oil Range Hydrocarbons (MRO) Total TPH	Cas Number PHC610 C10C28DRO PHCG2835 PHC635	Result 95.0 2380 313 2790	RL 15.0 15.0 15.0 15.0 %		9 E Units mg/kg mg/kg mg/kg mg/kg	6 Moisture: Basis: We Analysis Date 10.14.18 23.01 10.14.18 23.01 10.14.18 23.01 10.14.18 23.01	et Weight Flag	1 1 1





LT Environmental, Inc., Arvada, CO

Sample Id:SS04ALab Sample Id:601915-007	Matrix: Soil Date Collected: 10.04.18 11.25	Date Received:10.10.18 10.45 Sample Depth: 1.5 ft
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3066628	Date Prep: 10.15.18 16.45	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	10.16.18 04.24	U	1
Toluene	108-88-3	0.00353	0.00200		mg/kg	10.16.18 04.24		1
Ethylbenzene	100-41-4	0.0138	0.00200		mg/kg	10.16.18 04.24		1
m,p-Xylenes	179601-23-1	0.0408	0.00399		mg/kg	10.16.18 04.24		1
o-Xylene	95-47-6	0.0124	0.00200		mg/kg	10.16.18 04.24		1
Total Xylenes	1330-20-7	0.0532	0.00200		mg/kg	10.16.18 04.24		1
Total BTEX		0.0705	0.00200		mg/kg	10.16.18 04.24		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	160	%	70-130	10.16.18 04.24	**	
1,4-Difluorobenzene		540-36-3	120	%	70-130	10.16.18 04.24		





LT Environmental, Inc., Arvada, CO

JRU-17

Sample Id:SS04BLab Sample Id:601915-008		Matrix: Date Colle	Soil ected: 10.04	.18 11.35		Date Received:10. Sample Depth: 2 ft		5
Analytical Method: Inorganic Anion Tech: CHE Analyst: CHE	s by EPA 300		10.15	10.10.00	9	Prep Method: E3(% Moisture:		
Analyst: CHE Seq Number: 3066431		Date Prep	: 10.15	.18 10.00	ľ	Basis: We	t Weight	
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	326	4.96		mg/kg	10.15.18 19.32		1
Analytical Method: TPH by SW801: Tech: ARM Analyst: ARM Seq Number: 3066664	5 Mod	Date Prep	: 10.13	.18 11.00	9	Prep Method: TX % Moisture: Basis: We	1005P t Weight	
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	78.1	15.0		mg/kg	10.14.18 23.20		1
Diesel Range Organics (DRO)	C10C28DRO	2810	15.0		mg/kg	10.14.18 23.20		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	309	15.0		mg/kg	10.14.18 23.20		1
Total TPH	PHC635	3200	15.0		mg/kg	10.14.18 23.20		1
Surrogate		Cas Number 111-85-3	% Recovery 95	Units	Limits 70-135	Analysis Date 10.14.18 23.20	Flag	

115

%

70-135

10.14.18 23.20

84-15-1

o-Terphenyl





LT Environmental, Inc., Arvada, CO

Sample Id:SS04BLab Sample Id:601915-008	Matrix: Soil Date Collected: 10.04.18 11.35	Date Received:10.10.18 10.45 Sample Depth: 2 ft
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3066632	Date Prep: 10.14.18 17.00	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.0100	0.0100		mg/kg	10.16.18 07.12	U	1
Toluene	108-88-3	0.0261	0.0100		mg/kg	10.16.18 07.12		1
Ethylbenzene	100-41-4	0.0817	0.0100		mg/kg	10.16.18 07.12		1
m,p-Xylenes	179601-23-1	0.308	0.0200		mg/kg	10.16.18 07.12		1
o-Xylene	95-47-6	< 0.0100	0.0100		mg/kg	10.16.18 07.12	U	1
Total Xylenes	1330-20-7	0.308	0.0100		mg/kg	10.16.18 07.12		1
Total BTEX		0.416	0.0100		mg/kg	10.16.18 07.12		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	199	%	70-130	10.16.18 07.12	**	
1,4-Difluorobenzene		540-36-3	109	%	70-130	10.16.18 07.12		





LT Environmental, Inc., Arvada, CO

JRU-17

Sample Id: SS05A Lab Sample Id: 601915-009		Matrix: Date Colle	Soil cted: 10.04.1	18 11.45		Date Received:10 ample Depth: 1 f		5
Analytical Method: Inorganic Anio Tech: CHE	ns by EPA 300					rep Method: E3 6 Moisture:	00P	
Analyst:CHESeq Number:3066431		Date Prep:	10.15.1	18 10.00	B	Basis: We	et Weight	
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1210	24.8		mg/kg	10.15.18 19.38		5
Analytical Method: TPH by SW801 Tech: ARM Analyst: ARM Seq Number: 3066664	15 Mod	Date Prep:	10.13.1	18 11.00	%	rep Method: TX 6 Moisture: 8asis: Wo	K1005P et Weight	
Tech: ARM Analyst: ARM	15 Mod Cas Number	Date Prep: Result	10.13.1 RL	18 11.00	%	6 Moisture:		Dil
Tech: ARM Analyst: ARM Seq Number: 3066664		-		18 11.00	% E	6 Moisture: Basis: Wo	et Weight	Dil
Tech: ARM Analyst: ARM Seq Number: 3066664 Parameter	Cas Number	Result	RL	18 11.00	% E Units	6 Moisture: Basis: Wo Analysis Date	et Weight Flag	
Tech: ARM Analyst: ARM Seq Number: 3066664 Parameter Gasoline Range Hydrocarbons (GRO)	Cas Number PHC610	Result <15.0	RL 15.0	18 11.00	% E Units mg/kg	6 Moisture: Basis: Wo Analysis Date 10.14.18 23.39	et Weight Flag	1
Tech: ARM Analyst: ARM Seq Number: 3066664 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO)	Cas Number PHC610 C10C28DRO	Result <15.0 72.0	RL 15.0 15.0	18 11.00	% E Units mg/kg mg/kg	6 Moisture: Basis: Wo Analysis Date 10.14.18 23.39 10.14.18 23.39	et Weight Flag	1
Tech: ARM Analyst: ARM Seq Number: 3066664 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) Motor Oil Range Hydrocarbons (MRO)	Cas Number PHC610 C10C28DRO PHCG2835	Result <15.0 72.0 20.1 92.1	RL 15.0 15.0 15.0	18 11.00 Units	% E Units mg/kg mg/kg mg/kg	6 Moisture: Basis: Wo Analysis Date 10.14.18 23.39 10.14.18 23.39 10.14.18 23.39	et Weight Flag	1 1 1

90

%

70-135

10.14.18 23.39

84-15-1

o-Terphenyl





LT Environmental, Inc., Arvada, CO

Sample Id:SS05ALab Sample Id:601915-009	Matrix: Soil Date Collected: 10.04.18 11.45	Date Received:10.10.18 10.45 Sample Depth: 1 ft
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3066632	Date Prep: 10.14.18 17.00	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.0100	0.0100		mg/kg	10.16.18 07.33	U	1
Toluene	108-88-3	0.0461	0.0100		mg/kg	10.16.18 07.33		1
Ethylbenzene	100-41-4	0.0761	0.0100		mg/kg	10.16.18 07.33		1
m,p-Xylenes	179601-23-1	0.341	0.0200		mg/kg	10.16.18 07.33		1
o-Xylene	95-47-6	0.0821	0.0100		mg/kg	10.16.18 07.33		1
Total Xylenes	1330-20-7	0.423	0.0100		mg/kg	10.16.18 07.33		1
Total BTEX		0.545	0.0100		mg/kg	10.16.18 07.33		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	141	%	70-130	10.16.18 07.33	**	
1,4-Difluorobenzene		540-36-3	99	%	70-130	10.16.18 07.33		





LT Environmental, Inc., Arvada, CO

JRU-17

Sample Id:SS05BLab Sample Id:601915-010		Matrix: Date Colle	Soil cted: 10.04.18 12.05		Date Received:10.7 Sample Depth: 2 ft		5
Analytical Method: Inorganic Anio	ons by EPA 300]	Prep Method: E30)0P	
Tech: CHE					% Moisture:		
Analyst: CHE		Date Prep:	10.15.18 10.00	1	Basis: We	t Weight	
Seq Number: 3066431		ľ					
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2180	25.0	mg/kg	10.15.18 19.44		5
5	15 Mod]	Prep Method: TX	1005P	
Tech:ARMAnalyst:ARMSeq Number:3066664	15 Mod	Date Prep:	10.13.18 11.00		% Moisture:	1005P t Weight	
Tech: ARM Analyst: ARM	Cas Number	Date Prep: Result	10.13.18 11.00 RL		% Moisture:		Dil
Tech:ARMAnalyst:ARMSeq Number:3066664]	% Moisture: Basis: We	t Weight	Dil
Tech: ARM Analyst: ARM Seq Number: 3066664 Parameter	Cas Number	Result	RL	Units	Moisture: Basis: We Analysis Date	t Weight Flag	
Tech: ARM Analyst: ARM Seq Number: 3066664 Parameter Gasoline Range Hydrocarbons (GRO)	Cas Number PHC610	Result <15.0	RL 15.0	Units mg/kg	Moisture: Basis: We Analysis Date	t Weight Flag	
Tech: ARM Analyst: ARM Seq Number: 3066664 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO)	Cas Number PHC610 C10C28DRO	Result <15.0 373	RL 15.0 15.0	Units mg/kg mg/kg	Moisture: Basis: We Analysis Date 10.14.18 23.58 10.14.18 23.58	t Weight Flag	1
Tech: ARM Analyst: ARM Seq Number: 3066664 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) Motor Oil Range Hydrocarbons (MRO)	Cas Number PHC610 C10C28DRO PHCG2835	Result <15.0 373 124 497	RL 15.0 15.0 15.0	Units mg/kg mg/kg mg/kg	Moisture: Basis: Wer Analysis Date 10.14.18 23.58 10.14.18 23.58 10.14.18 23.58	t Weight Flag	1 1 1

91

92

%

%

70-135

70-135

10.14.18 23.58

10.14.18 23.58

111-85-3

84-15-1

1-Chlorooctane

o-Terphenyl





LT Environmental, Inc., Arvada, CO

Sample Id:SS05BLab Sample Id:601915-010	Matrix: Soil Date Collected: 10.04.18 12.05	Date Received:10.10.18 10.45 Sample Depth: 2 ft
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3066632	Date Prep: 10.14.18 17.00	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.0100	0.0100		mg/kg	10.16.18 09.19	U	1
Toluene	108-88-3	< 0.0100	0.0100		mg/kg	10.16.18 09.19	U	1
Ethylbenzene	100-41-4	< 0.0100	0.0100		mg/kg	10.16.18 09.19	U	1
m,p-Xylenes	179601-23-1	< 0.0200	0.0200		mg/kg	10.16.18 09.19	U	1
o-Xylene	95-47-6	< 0.0100	0.0100		mg/kg	10.16.18 09.19	U	1
Total Xylenes	1330-20-7	< 0.0100	0.0100		mg/kg	10.16.18 09.19	U	1
Total BTEX		< 0.0100	0.0100		mg/kg	10.16.18 09.19	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	113	%	70-130	10.16.18 09.19		
4-Bromofluorobenzene		460-00-4	73	%	70-130	10.16.18 09.19		





LT Environmental, Inc., Arvada, CO

Sample Id: SW01 Lab Sample Id: 601915-011		Matrix: Date Colle	Soil cted: 10.04	.18 14.10		Date Received:10. Sample Depth:1 -		5
Analytical Method: Inorganic Anio Tech: CHE	ns by EPA 300					Prep Method: E3	00P	
Analyst: CHE Seq Number: 3066431		Date Prep:	10.15	.18 10.00	,		et Weight	
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1900	25.0		mg/kg	10.15.18 20.01		5
Analytical Method:TPH by SW801Tech:ARMAnalyst:ARMSeq Number:3066664	15 Mod	Date Prep:	10.13	.18 11.00	9	Prep Method: TX % Moisture: 3asis: We	1005P et Weight	
Tech: ARM Analyst: ARM	15 Mod Cas Number	Date Prep: Result	10.13. RL	.18 11.00	9	% Moisture:		Dil
Tech:ARMAnalyst:ARMSeq Number:3066664				.18 11.00	9 E	Moisture: Basis: We	et Weight	Dil
Tech: ARM Analyst: ARM Seq Number: 3066664 Parameter	Cas Number	Result	RL	.18 11.00	9 E Units	Moisture: Basis: We Analysis Date	et Weight Flag	
Tech: ARM Analyst: ARM Seq Number: 3066664 Parameter Gasoline Range Hydrocarbons (GRO)	Cas Number PHC610	Result <14.9	RL 14.9	.18 11.00	9 E Units mg/kg	Moisture: Basis: We Analysis Date 10.15.18 00.55	et Weight Flag	
Tech: ARM Analyst: ARM Seq Number: 3066664 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO)	Cas Number PHC610 C10C28DRO	Result <14.9 66.1	RL 14.9 14.9	.18 11.00	9 E Units mg/kg mg/kg	Moisture: Basis: We Analysis Date 10.15.18 00.55 10.15.18 00.55	et Weight Flag	1
Tech: ARM Analyst: ARM Seq Number: 3066664 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) Motor Oil Range Hydrocarbons (MRO)	Cas Number PHC610 C10C28DRO PHCG2835	Result <14.9 66.1 16.9 83.0	RL 14.9 14.9 14.9 14.9 %	.18 11.00 Units	9 E Units mg/kg mg/kg mg/kg	Moisture: Basis: We Analysis Date 10.15.18 00.55 10.15.18 00.55 10.15.18 00.55	et Weight Flag	1 1 1
Tech: ARM Analyst: ARM Seq Number: 3066664 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) Motor Oil Range Hydrocarbons (MRO) Total TPH	Cas Number PHC610 C10C28DRO PHCG2835 PHC635	Result <14.9 66.1 16.9 83.0	RL 14.9 14.9 14.9 14.9		9 E Units mg/kg mg/kg mg/kg mg/kg	Moisture: Basis: We Analysis Date 10.15.18 00.55 10.15.18 00.55 10.15.18 00.55 10.15.18 00.55	et Weight Flag U	1 1 1





LT Environmental, Inc., Arvada, CO

Sample Id:SW01Lab Sample Id:601915-011	Matrix: Soil Date Collected: 10.04.18 14.10	Date Received:10.10.18 10.45 Sample Depth: 1 - 3 ft
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3066632	Date Prep: 10.14.18 17.00	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.0100	0.0100		mg/kg	10.16.18 09.40	U	1
Toluene	108-88-3	< 0.0100	0.0100		mg/kg	10.16.18 09.40	U	1
Ethylbenzene	100-41-4	< 0.0100	0.0100		mg/kg	10.16.18 09.40	U	1
m,p-Xylenes	179601-23-1	< 0.0200	0.0200		mg/kg	10.16.18 09.40	U	1
o-Xylene	95-47-6	< 0.0100	0.0100		mg/kg	10.16.18 09.40	U	1
Total Xylenes	1330-20-7	< 0.0100	0.0100		mg/kg	10.16.18 09.40	U	1
Total BTEX		< 0.0100	0.0100		mg/kg	10.16.18 09.40	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	103	%	70-130	10.16.18 09.40		
1,4-Difluorobenzene		540-36-3	120	%	70-130	10.16.18 09.40		





LT Environmental, Inc., Arvada, CO

JRU-17

Sample Id: SW02 Lab Sample Id: 601915-012		Matrix: Date Colle	Soil ected: 10.04	.18 14.20		Date Received:10. ample Depth: 1 -		5
Analytical Method: Inorganic Anion Tech: CHE	s by EPA 300				%	Prep Method: E30 6 Moisture:		
Analyst: CHE Seq Number: 3066431		Date Prep:	10.15	.18 10.00	B	Basis: We	et Weight	
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1250	25.0		mg/kg	10.15.18 20.06		5
Analytical Method: TPH by SW8015 Tech: ARM Analyst: ARM Seq Number: 3066664	5 Mod	Date Prep:	10.13	.18 11.00	%	Prep Method: TX 6 Moisture: Basis: We	1005P et Weight	
Tech: ARM Analyst: ARM	5 Mod Cas Number	Date Prep: Result	10.13. RL	.18 11.00	%	6 Moisture:		Dil
Tech: ARM Analyst: ARM Seq Number: 3066664				.18 11.00	% E	6 Moisture: Basis: We	et Weight	Dil
Tech: ARM Analyst: ARM Seq Number: 3066664 Parameter	Cas Number	Result	RL	.18 11.00	% E Units	6 Moisture: Basis: We Analysis Date	et Weight	
Tech: ARM Analyst: ARM Seq Number: 3066664 Parameter Gasoline Range Hydrocarbons (GRO)	Cas Number PHC610	Result	RL 15.0	.18 11.00	% E Units mg/kg	6 Moisture: Basis: We Analysis Date 10.15.18 01.14	et Weight	1
Tech: ARM Analyst: ARM Seq Number: 3066664 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO)	Cas Number PHC610 C10C28DRO	Result 20.3 20.4	RL 15.0 15.0	.18 11.00	% E Units mg/kg mg/kg	6 Moisture: Basis: We Analysis Date 10.15.18 01.14 10.15.18 01.14	t Weight Flag	1
Tech: ARM Analyst: ARM Seq Number: 3066664 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) Motor Oil Range Hydrocarbons (MRO) Total TPH Surrogate	Cas Number PHC610 C10C28DRO PHCG2835 PHC635	Result 20.3 20.4 <15.0 40.7 Cas Number	RL 15.0 15.0 15.0 15.0 % Recovery	Units	% E Units mg/kg mg/kg mg/kg mg/kg Limits	6 Moisture: Basis: We 10.15.18 01.14 10.15.18 01.14 10.15.18 01.14 10.15.18 01.14 10.15.18 01.14 Analysis Date	t Weight Flag	1 1 1
Tech: ARM Analyst: ARM Seq Number: 3066664 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) Motor Oil Range Hydrocarbons (MRO) Total TPH	Cas Number PHC610 C10C28DRO PHCG2835 PHC635	Result 20.3 20.4 <15.0 40.7	RL 15.0 15.0 15.0 %		% E Units mg/kg mg/kg mg/kg mg/kg	6 Moisture: Basis: We Analysis Date 10.15.18 01.14 10.15.18 01.14 10.15.18 01.14 10.15.18 01.14	t Weight Flag U	1 1 1





LT Environmental, Inc., Arvada, CO

Sample Id:SW02Lab Sample Id:601915-012	Matrix: Soil Date Collected: 10.04.18 14.20	Date Received:10.10.18 10.45 Sample Depth: 1 - 3 ft
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3066632	Date Prep: 10.14.18 17.00	Prep Method:SW5030B% Moisture:Basis:Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.0100	0.0100		mg/kg	10.16.18 10.02	U	1
Toluene	108-88-3	< 0.0100	0.0100		mg/kg	10.16.18 10.02	U	1
Ethylbenzene	100-41-4	< 0.0100	0.0100		mg/kg	10.16.18 10.02	U	1
m,p-Xylenes	179601-23-1	< 0.0200	0.0200		mg/kg	10.16.18 10.02	U	1
o-Xylene	95-47-6	< 0.0100	0.0100		mg/kg	10.16.18 10.02	U	1
Total Xylenes	1330-20-7	< 0.0100	0.0100		mg/kg	10.16.18 10.02	U	1
Total BTEX		< 0.0100	0.0100		mg/kg	10.16.18 10.02	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	81	%	70-130	10.16.18 10.02		
1,4-Difluorobenzene		540-36-3	122	%	70-130	10.16.18 10.02		





LT Environmental, Inc., Arvada, CO

Sample Id:FS01Lab Sample Id:601915-013		Matrix: Date Colle	Soil cted: 10.04.	.18 14.30		Date Received:10. Sample Depth: 1 -		5
Analytical Method: Inorganic Anio Tech: CHE	ns by EPA 300					Prep Method: E3 6 Moisture:	00P	
Analyst: CHE Seq Number: 3066431		Date Prep:	10.15.	.18 10.00	В	Basis: We	et Weight	
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	851	24.8		mg/kg	10.15.18 20.12		5
Analytical Method: TPH by SW80 Tech: ARM Analyst: ARM Seq Number: 3066664	15 Mod	Date Prep:	10.13.	.18 11.00	%	Prep Method: TX 6 Moisture: Basis: We	1005P et Weight	
Tech: ARM Analyst: ARM	15 Mod Cas Number	Date Prep: Result	10.13. RL	.18 11.00	%	6 Moisture:		Dil
Tech:ARMAnalyst:ARMSeq Number:3066664		-		.18 11.00	% E	6 Moisture: Basis: We	et Weight	Dil
Tech: ARM Analyst: ARM Seq Number: 3066664 Parameter	Cas Number	Result	RL	.18 11.00	% E Units	6 Moisture: Basis: We Analysis Date	et Weight Flag	
Tech: ARM Analyst: ARM Seq Number: 3066664 Parameter Gasoline Range Hydrocarbons (GRO)	Cas Number PHC610	Result <15.0	RL 15.0	.18 11.00	% E Units mg/kg	6 Moisture: Basis: We Analysis Date 10.15.18 01.33	et Weight Flag	1
Tech: ARM Analyst: ARM Seq Number: 3066664 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO)	Cas Number PHC610 C10C28DRO	Result <15.0 67.5	RL 15.0 15.0	.18 11.00	% E Units mg/kg mg/kg	6 Moisture: Basis: We Analysis Date 10.15.18 01.33 10.15.18 01.33	et Weight Flag	1
Tech: ARM Analyst: ARM Seq Number: 3066664 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) Motor Oil Range Hydrocarbons (MRO)	Cas Number PHC610 C10C28DRO PHCG2835	Result <15.0 67.5 17.5 85.0	RL 15.0 15.0 15.0 15.0 %	.18 11.00 Units	% E Units mg/kg mg/kg mg/kg	6 Moisture: Basis: We Analysis Date 10.15.18 01.33 10.15.18 01.33 10.15.18 01.33	et Weight Flag	1 1 1
Tech: ARM Analyst: ARM Seq Number: 3066664 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) Motor Oil Range Hydrocarbons (MRO) Total TPH	Cas Number PHC610 C10C28DRO PHCG2835 PHC635	Result <15.0 67.5 17.5 85.0	RL 15.0 15.0 15.0 15.0		% E Units mg/kg mg/kg mg/kg mg/kg	6 Moisture: Basis: We Analysis Date 10.15.18 01.33 10.15.18 01.33 10.15.18 01.33 10.15.18 01.33	et Weight Flag U	1 1 1





LT Environmental, Inc., Arvada, CO

Sample Id:FS01Lab Sample Id:601915-013	Matrix: Soil Date Collected: 10.04.18 14.30	Date Received:10.10.18 10.45 Sample Depth: 1 - 4 ft
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3066632	Date Prep: 10.14.18 17.00	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.0100	0.0100		mg/kg	10.16.18 10.23	U	1
Toluene	108-88-3	< 0.0100	0.0100		mg/kg	10.16.18 10.23	U	1
Ethylbenzene	100-41-4	< 0.0100	0.0100		mg/kg	10.16.18 10.23	U	1
m,p-Xylenes	179601-23-1	< 0.0200	0.0200		mg/kg	10.16.18 10.23	U	1
o-Xylene	95-47-6	< 0.0100	0.0100		mg/kg	10.16.18 10.23	U	1
Total Xylenes	1330-20-7	< 0.0100	0.0100		mg/kg	10.16.18 10.23	U	1
Total BTEX		< 0.0100	0.0100		mg/kg	10.16.18 10.23	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	80	%	70-130	10.16.18 10.23		
1,4-Difluorobenzene		540-36-3	122	%	70-130	10.16.18 10.23		





LT Environmental, Inc., Arvada, CO

Sample Id:FS02Lab Sample Id:601915-014		Matrix: Date Colle	Soil cted: 10.04	.18 14.35		Date Received:10. ample Depth: 1.5		5
Analytical Method: Inorganic Anio Tech: CHE	ns by EPA 300					rep Method: E3	90P	
Analyst: CHE Seq Number: 3066431		Date Prep:	10.15	.18 10.00			et Weight	
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	603	4.95		mg/kg	10.15.18 20.18		1
Analytical Method:TPH by SW80Tech:ARMAnalyst:ARMSeq Number:3066664	15 Mod	Date Prep:	10.13	.18 11.00	%	rep Method: TX 5 Moisture: 8asis: We	1005P et Weight	
Tech: ARM Analyst: ARM	15 Mod Cas Number	Date Prep: Result	10.13. RL	.18 11.00	%	5 Moisture:		Dil
Tech:ARMAnalyst:ARMSeq Number:3066664		-		.18 11.00	% E	6 Moisture: Basis: We	et Weight	Dil
Tech: ARM Analyst: ARM Seq Number: 3066664 Parameter	Cas Number	Result	RL	.18 11.00	% E Units	6 Moisture: asis: We Analysis Date	et Weight Flag	
Tech: ARM Analyst: ARM Seq Number: 3066664 Parameter Gasoline Range Hydrocarbons (GRO)	Cas Number PHC610	Result	RL 15.0	.18 11.00	% E Units mg/kg	5 Moisture: Basis: We Analysis Date	et Weight Flag	1
Tech: ARM Analyst: ARM Seq Number: 3066664 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO)	Cas Number PHC610 C10C28DRO	Result <15.0 1620	RL 15.0 15.0	.18 11.00	% E Units mg/kg mg/kg	6 Moisture: asis: We Analysis Date 10.15.18 01.52 10.15.18 01.52	et Weight Flag	1
Tech: ARM Analyst: ARM Seq Number: 3066664 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) Motor Oil Range Hydrocarbons (MRO)	Cas Number PHC610 C10C28DRO PHCG2835 PHC635	Result <15.0 1620 259 1880	RL 15.0 15.0 15.0 15.0 %	.18 11.00 Units	% E Units mg/kg mg/kg mg/kg	Moisture: asis: We Analysis Date 10.15.18 01.52 10.15.18 01.52 10.15.18 01.52	et Weight Flag	1 1 1
Tech: ARM Analyst: ARM Seq Number: 3066664 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) Motor Oil Range Hydrocarbons (MRO) Total TPH	Cas Number PHC610 C10C28DRO PHCG2835 PHC635	Result <15.0 1620 259 1880	RL 15.0 15.0 15.0 15.0		% E Units mg/kg mg/kg mg/kg mg/kg	Moisture: asis: We Analysis Date 10.15.18 01.52 10.15.18 01.52 10.15.18 01.52 10.15.18 01.52 10.15.18 01.52	et Weight Flag U	1 1 1





LT Environmental, Inc., Arvada, CO

Sample Id:FS02Lab Sample Id:601915-014	Matrix: Soil Date Collected: 10.04.18 14.35	Date Received:10.10.18 10.45 Sample Depth: 1.5 - 2 ft
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3066632	Date Prep: 10.14.18 17.00	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.0100	0.0100		mg/kg	10.16.18 10.45	U	1
Toluene	108-88-3	< 0.0100	0.0100		mg/kg	10.16.18 10.45	U	1
Ethylbenzene	100-41-4	< 0.0100	0.0100		mg/kg	10.16.18 10.45	U	1
m,p-Xylenes	179601-23-1	< 0.0200	0.0200		mg/kg	10.16.18 10.45	U	1
o-Xylene	95-47-6	< 0.0100	0.0100		mg/kg	10.16.18 10.45	U	1
Total Xylenes	1330-20-7	< 0.0100	0.0100		mg/kg	10.16.18 10.45	U	1
Total BTEX		< 0.0100	0.0100		mg/kg	10.16.18 10.45	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	77	%	70-130	10.16.18 10.45		
1,4-Difluorobenzene		540-36-3	118	%	70-130	10.16.18 10.45		


LABORATORIES

Flagging Criteria



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- 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	ent Sample	BLK	Method Blank	
BKS/LCS	S Blank Spike/Laboratory Control Sample	BKSD/LCSD	Blank Spike Duplicate/Labo	ratory 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 601915

LT Environmental, Inc.

JRU-17

Analytical Method:	Inorganic Anions by	y EPA 300						Pr	ep Method	l: E30	00P	
Seq Number:	1			Matrix:	Solid				Date Prep	p: 10.	15.18	
MB Sample Id:	mple Id: 7664172-1-BLK			nple Id:	7664172-1	1-BKS		LCSI	D Sample	ld: 766	64172-1-BSD	
	MD	a "	TOO	TOO			. ,			TT		
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%KPD	RPD Limit	Units	Analysis Date	Flag
Parameter Chloride							Limits 90-110	%RPD 1	20	mg/kg	•	Flag

Analytical Method:	Inorganic Anions b	y EPA 300						Pre	ep Metho	d: E30	0P	
Seq Number:	3066431			Matrix:	Solid				Date Pre	p: 10.1	5.18	
MB Sample Id:	7664174-1-BLK		LCS San	nple Id:	7664174-2	1-BKS		LCSE	Sample	Id: 766	4174-1-BSD	
Parameter	MB	Spike		LCS	LCSD	LCSD	Limits	%RPD I	RPD Limit	Units	Analysis	Flag
	Result	Amount	Result	%Rec	Result	%Rec					Date	

Analytical Method:	Inorganic Anions b	y EPA 300						P	rep Meth	od: E30	0P	
Seq Number:	3066429		Matrix:	Soil				Date Pr	ep: 10.1	5.18		
Parent Sample Id:	601913-007		MS San	nple Id:	601913-00)7 S		MS	D Sample	e Id: 601	913-007 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Lim	it Units	Analysis Date	Flag
Chloride	174	250	429	102	434	104	90-110	1	20	mg/kg	10.15.18 16:08	

Analytical Method:	Inorganic Anions b	y EPA 300						Pr	ep Meth	od: E30)P	
Seq Number:	3066429			Matrix:	Soil				Date Pr	ep: 10.1	5.18	
Parent Sample Id:	601914-005	MS Sar	nple Id:	601914-00)5 S		MS	D Sample	e Id: 6019	914-005 SD		
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Lim	it Units	Analysis Date	Flag
Chloride	423	248	684	105	661	96	90-110	3	20	mg/kg	10.15.18 17:27	

Analytical Method:	alytical Method: Inorganic Anions by EPA 300 2 Number: 2066421							Pr	ep Metho	d: E30	OP	
Seq Number:	3066431			Matrix:	Soil				Date Pre	ep: 10.1	15.18	
Parent Sample Id:	601915-006		MS Sar	nple Id:	601915-00)6 S		MSI	D Sample	Id: 601	915-006 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limi	t Units	Analysis Date	Flag
Chloride	< 0.858	250	248	99	249	100	90-110	0	20	mg/kg	10.15.18 19:15	

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

Received by OCD: 6/27/2023 12:54:22 PM



QC Summary 601915

LT Environmental, Inc.

JRU-17

Analytical Method:	Inorganic Anions b	y EPA 300						Pr	ep Metho	od: E30	0P	
Seq Number:	3066431		Matrix:	Soil				Date Pr	ep: 10.1	5.18		
Parent Sample Id:	601916-002		MS Sar	nple Id:	601916-00	02 S		MSI	O Sample	d: 601	916-002 SD	
Parameter	Parent Snike		MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD 1	RPD Lim	it Units	Analysis Date	Flag
Chloride	392	250	639	99	639	99	90-110	0	20	mg/kg	10.15.18 20:35	

Analytical Method:TPH by SW8015 ModSeq Number:3066664MB Sample Id:7664109-1-BLK				LCS Sar	Matrix: nple Id:	Solid 7664109-	1-BKS			Prep Method Date Prep SD Sample 1	p: 10.1	005P 3.18 4109-1-BSD	
Parameter	,00110,	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarb	oons (GRO)	<8.00	1000	1040	104	1040	104	70-135	0	20	mg/kg	10.14.18 19:51	
Diesel Range Organics	(DRO)	<8.13	1000	1070	107	1090	109	70-135	2	20	mg/kg	10.14.18 19:51	
Surrogate		MB %Rec	MB Flag		CS Rec	LCS Flag	LCSI %Re			Limits	Units	Analysis Date	
1-Chlorooctane		99		1	30		126		7	0-135	%	10.14.18 19:51	
o-Terphenyl		102		1	27		108		7	0-135	%	10.14.18 19:51	

Analytical Method:TPH by SW8015 ModSeq Number:3066664Parent Sample Id:601915-001					Matrix: nple Id:	Soil 601915-00)1 S			rep Method Date Prep D Sample I): 10.1	1005P 3.18 915-001 SD	
Parameter		Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarb	ons (GRO)	13.1	999	854	84	887	87	70-135	4	20	mg/kg	10.14.18 20:49	
Diesel Range Organics	(DRO)	587	999	1610	102	1610	102	70-135	0	20	mg/kg	10.14.18 20:49	
Surrogate					1S Rec	MS Flag	MSD %Ree			imits	Units	Analysis Date	
1-Chlorooctane				1	19		123		7	0-135	%	10.14.18 20:49	
o-Terphenyl				1	05		103		7	0-135	%	10.14.18 20:49	

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



ORATORIES

QC Summary 601915

LT Environmental, Inc.

JRU-17

Analytical Method: Seq Number: MB Sample Id:	BTEX by EPA 802 3066632 7664300-1-BLK	1B	LCS Sar	Matrix: nple Id:		1-BKS			Prep Methoo Date Prej SD Sample	p: 10.1	5030B 14.18 4300-1-BSD	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPE	RPD Limit	Units	Analysis Date	Flag
Benzene	< 0.0100	0.500	0.601	120	0.600	120	70-130	0	35	mg/kg	10.16.18 05:07	
Toluene	< 0.00228	0.500	0.487	97	0.490	98	70-130	1	35	mg/kg	10.16.18 05:07	
Ethylbenzene	< 0.0100	0.500	0.574	115	0.569	114	70-130	1	35	mg/kg	10.16.18 05:07	
m,p-Xylenes	< 0.0200	1.00	1.22	122	1.18	118	70-130	3	35	mg/kg	10.16.18 05:07	
o-Xylene	< 0.0100	0.500	0.586	117	0.563	113	70-130	4	35	mg/kg	10.16.18 05:07	
Surrogate	MB %Rec	MB Flag			LCS Flag	LCSE %Ree		-	Limits	Units	Analysis Date	
1,4-Difluorobenzene	107		9	93		90		7	70-130	%	10.16.18 05:07	
4-Bromofluorobenzene	88		1	13		110		7	70-130	%	10.16.18 05:07	

Analytical Method: BTEX by EPA 8021BPrep Method:SW5030B												
Seq Number:	3066628]	Matrix:	Solid				Date Pre	p: 10.1	5.18	
MB Sample Id:	7664298-1-BLK		LCS San	nple Id:	7664298-	1-BKS		LC	SD Sample	Id: 7664	4298-1-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	0.0925	93	0.114	113	70-130	21	35	mg/kg	10.15.18 18:49	
Toluene	< 0.00201	0.100	0.0798	80	0.102	101	70-130	24	35	mg/kg	10.15.18 18:49	
Ethylbenzene	< 0.00201	0.100	0.0929	93	0.108	107	70-130	15	35	mg/kg	10.15.18 18:49	
m,p-Xylenes	< 0.00402	0.201	0.189	94	0.232	115	70-130	20	35	mg/kg	10.15.18 18:49	
o-Xylene	< 0.00201	0.100	0.0926	93	0.120	119	70-130	26	35	mg/kg	10.15.18 18:49	
Surrogate	MB %Rec	MB Flag			LCS Flag	LCSD %Rec			Limits	Units	Analysis Date	
1,4-Difluorobenzene	93		7	73		88		,	70-130	%	10.15.18 18:49	
4-Bromofluorobenzene	98		8	34		112		,	70-130	%	10.15.18 18:49	

Analytical Method: Seq Number: Parent Sample Id:	BTEX by EPA 802 3066632 601915-008	1B	MS San	Matrix: nple Id:		08 S			rep Metho Date Pre D Sample	p: 10.1	5030B 4.18 915-008 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	< 0.0100	0.500	0.891	178	0.870	174	70-130	2	35	mg/kg	10.16.18 05:49	Х
Toluene	0.0261	0.500	0.576	110	0.475	90	70-130	19	35	mg/kg	10.16.18 05:49	
Ethylbenzene	0.0817	0.500	0.680	120	0.552	94	70-130	21	35	mg/kg	10.16.18 05:49	
m,p-Xylenes	0.308	1.00	1.53	122	1.73	142	70-130	12	35	mg/kg	10.16.18 05:49	Х
o-Xylene	< 0.0100	0.500	0.0181	4	0.422	84	70-130	184	35	mg/kg	10.16.18 05:49	XF
Surrogate				1S Rec	MS Flag	MSD %Rec			imits	Units	Analysis Date	
1,4-Difluorobenzene			1	15		108		70	0-130	%	10.16.18 05:49	
4-Bromofluorobenzene			1	74	**	537	**	70	0-130	%	10.16.18 05:49	

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 MA = Parent Result MC = MS/LCS Result ME = MSD/LCSD Result

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





LT Environmental, Inc.

JRU-17

Analytical Method	BTEX by EPA 8021B
Analytical Michigu.	DIEA UY EIA OUZID

Analytical Method: Seq Number: Parent Sample Id:	BTEX by EPA 802 3066628 601915-005	1B		Matrix: nple Id:		05 S			Prep Method Date Prep SD Sample I	p: 10.1	5030B 5.18 915-005 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPI	D RPD Limit	Units	Analysis Date	Flag
Benzene	< 0.00201	0.100	0.104	104	0.0976	98	70-130	6	35	mg/kg	10.15.18 19:32	
Toluene	< 0.00201	0.100	0.0883	88	0.0765	77	70-130	14	35	mg/kg	10.15.18 19:32	
Ethylbenzene	< 0.00201	0.100	0.0954	95	0.0828	83	70-130	14	35	mg/kg	10.15.18 19:32	
m,p-Xylenes	< 0.00402	0.201	0.190	95	0.162	81	70-130	16	35	mg/kg	10.15.18 19:32	
o-Xylene	< 0.00201	0.100	0.0925	93	0.0798	80	70-130	15	35	mg/kg	10.15.18 19:32	
Surrogate				AS Rec	MS Flag	MSD %Ree			Limits	Units	Analysis Date	
1,4-Difluorobenzene			8	87		86			70-130	%	10.15.18 19:32	
4-Bromofluorobenzene			1	00		103			70-130	%	10.15.18 19:32	

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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	5 3 Contraction of the second se	Relinquished by: (Signature) Received t	Notice: Signature of this document and relinquishment of samples com- of service. Xenco will be liable only for the cost of samples and shall n of Xenco. A minimum charge of \$75.00 will be applied to each project a	Total 200.7 / 6010 200.8 / 6020: 8RCRA Circle Method(s) and Metal(s) to be analyzed TCL	$ \qquad \qquad$. 5	~	5 10/4/18	1/1/1/18	2 10/4/18	811 HOI C	5 10/4/18	Matrix Sampled	Sample Custody Seals: Yes No (N/A) Total		Received Intact: (Yes) No	Temperature (°C):	SAMPLE RECEIPT Temp Blank: Yes No	Sampler's Name: Tabián Lubani	P.O. Number: 2 RP - 1657	Project Number: ZRP-1(057	Project Name: JRUX - 17	Phone: (432) 704-5178	e ZIP: Widlms, TX 79705 (3300'A' street, Building HI	Company Name: LT EN U/ COMMENTAN	Project Manager: Adrian Baker			
	Valitie 1015/18 1710 2 (Juies 1	ture) Date/Time Relinquishe	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	TCLP/SPLP6010: 8RCRA Sb As Ba Be Cd Ca Cr Co 4 TCLP/SPLP6010: 8RCRA Sb As Ba Be Cd Cr Co Cu P	1205 2' 1 K X K	1, (2° 1 ×	1.51 - X K				0935 1.5. (× × ×	a Pepth Numt BT	Ex	(i DR	n_{tai}	y { (6)		<u>(M</u>	Rush:	}	Turn Around ANALYS	Email: ABAKE CTEN, com		<i> ↓</i> {103 Address:	: · ' ×:	Bill to: (it different) Kyle Liftre (1	Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296 Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (8	Chain of Custody Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334	
77734 24-50 /SUU 18 Rev. 2018.1	CHONDIAN MONTE SUM	d by: (Signature) Peceived by: (Signature) Date/Time	ntractors. It assigns standard terms and conditions h losses are due to circumstances beyond the control ns will be enforced unless previously negotiated.) Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn Pb Mn Mo Ni Se Ag Ti U 1631/245.1/7470 /7471 :Hg									Sample Comments	lab, if received by 4:30pm	TAT starts the day received by the						· · · · · · · · · · · · · · · · · · ·	SIS REQUEST Work Order Notes	Deliverables: EDD ADaPT C Other:	Reporting:Level II Level III PST/UST TRRP Level IV	State of Project:	Program: UST/PST PRP Brownfields RRC Superfund	omments	306)794-1296 Tampa,FL (813-620-2000) www.xenco.com Page 1 of 2	Work Order No: 1001415	~ えつろう

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	Notice: Signature of this document and relinquishment of samples constitutes a valid pur of service: Xenco will be liable only for the cost of samples and shall not assume any resi of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 Relinquished by: (Signature) Received by: (Signature) Received by: (Signature) Mude Vulloo S	Total 200.7 / 6010 200.8 / 6020: 8RCRA 13F Circle Method(s) and Metal(s) to be analyzed TCLP / S			Matrix Date Sampled	Temperature (°C): D. Thermometer ID Received Intact: Yes No PC Cooler Custody Seals: Yes No No Correction Factor: Sample Custody Seals: Yes No Total Containers:	remp Blank: Yes Mo Wo		Name: JLU-17	Phone: $/432/104-513$	3300 'A' street	/ Name:	Project Manager: Adrin Balar	LABORATORIES Hous
	chase order from client company to Xenco, its affiliates and sub consibility for any losses or expenses incurred by the client if s for each sample submitted to Xenco, but not analyzed. These te Date/Time Relinquished UO(5) 15 $IT(0)$ 2 $OUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUU$	TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Ca Cr Co Cu Fe	8//S//S		numbe BTEA	C.	(mro)	Routine	E CIENTICOM	<u></u>		Company Name: XTO	1 2	Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334 Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296
77747474701500 Date 051418 Rev. 2018.1	Sign	Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr TI Sn U V Zn Pb Mn Mo Ni Se Ag TI U 1631/245.1/7470/7471 - Hn		Composite sample	Sample Comments	TAT starts the day received by the		QUEST Work Order Notes	Deliverables: EDD ADaPT Other:		State of Project:	Work Order Comments	Tampa,FL (813-620-2000) www.xenco.com Page <u>2</u> of <u>2</u>	

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Work Order No: _____0010/15

Chain of Custody

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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: 10/10/2018 10:45:00 AM Temperature Measuring device used : R8 Work Order #: 601915 Comments Sample Receipt Checklist 3.1 #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?

* 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: 10/10/2018

N/A

Checklist reviewed by:

Jessiga VRAMER

Jessica Kramer

Date: 10/10/2018

for LT Environmental, Inc.

Project Manager: Adrian Baker

JRU 17 Battery

2RP-1657

20-DEC-18

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) Xenco-Lakeland: Florida (E84098)



20-DEC-18

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

Reference: XENCO Report No(s): 608833 JRU 17 Battery Project Address: Delaware Basin

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) 608833. 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. 608833 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,

fession kenner

Jessica Kramer Project Assistant

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Sample Cross Reference 608833



LT Environmental, Inc., Arvada, CO

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS03	S	12-11-18 13:00	3 ft	608833-001
SW04	S	12-11-18 13:30	1 - 3 ft	608833-002
FS02A	S	12-11-18 14:30	3 ft	608833-003
SW03	S	12-11-18 13:20	1 - 3 ft	608833-004



CASE NARRATIVE

Client Name: LT Environmental, Inc. Project Name: JRU 17 Battery

Project ID: 2*RP-1657* Work Order Number(s): 608833

TORIES

Report Date:20-DEC-18Date Received:12/15/2018

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments: Batch: LBA-3073331 BTEX by EPA 8021B Soil samples were not received in Terracore kits and therefore were prepared by method 5030.





Certificate of Analysis Summary 608833

LT Environmental, Inc., Arvada, CO Project Name: JRU 17 Battery



Date Received in Lab:Sat Dec-15-18 09:30 amReport Date:20-DEC-18Project Manager:Jessica Kramer

	Lab Id:	608833-0	001	608833-0	002	608833-0	003	608833-	004		
An alugia Do au osto d	Field Id:	FS03		SW04	+	FS02A	\	SW03	3		
Analysis Requested	Depth:	3- ft		1-3 ft		3- ft		1-3 ft	:		
	Matrix:	SOIL		SOIL		SOIL		SOIL	,		
	Sampled:	Dec-11-18	13:00	Dec-11-18	13:30	Dec-11-18	14:30	Dec-11-18	13:20		
BTEX by EPA 8021B	Extracted:	Dec-18-18	16:30	Dec-18-18	16:30	Dec-18-18	16:30	Dec-18-18	16:30		
	Analyzed:	Dec-19-18	07:10	Dec-19-18	07:29	Dec-19-18	07:48	Dec-19-18	08:45		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzene		< 0.00200	0.00200	<0.00199	0.00199	< 0.00200	0.00200	< 0.00200	0.00200		
Toluene		< 0.00200	0.00200	<0.00199	0.00199	< 0.00200	0.00200	0.0130	0.00200		
Ethylbenzene		< 0.00200	0.00200	<0.00199	0.00199	< 0.00200	0.00200	0.00854	0.00200		
m,p-Xylenes		< 0.00401	0.00401	< 0.00398	0.00398	< 0.00400	0.00400	0.0143	0.00400		
o-Xylene		< 0.00200	0.00200	<0.00199	0.00199	< 0.00200	0.00200	0.140	0.00200		
Total Xylenes		< 0.00200	0.00200	<0.00199	0.00199	< 0.00200	0.00200	0.154	0.00200		
Total BTEX		< 0.00200	0.00200	< 0.00199	0.00199	< 0.00200	0.00200	0.176	0.00200		
Inorganic Anions by EPA 300	Extracted:	Dec-17-18	16:00	Dec-17-18	16:00	Dec-17-18	16:00	Dec-17-18	16:00		
	Analyzed:	Dec-18-18	04:02	Dec-18-18	04:08	Dec-18-18	04:14	Dec-18-18	04:21		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		145	5.00	< 5.00	5.00	937	25.0	54.2	5.00		
TPH by SW8015 Mod	Extracted:	Dec-19-18	18:00	Dec-19-18	18:00	Dec-19-18	18:00	Dec-19-18	18:00		
	Analyzed:	Dec-20-18	01:48	Dec-20-18	02:53	Dec-20-18	03:14	Dec-20-18	03:36		
	Units/RL:	mg/kg	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	126	14.9		
Diesel Range Organics (DRO)		368	15.0	36.2	15.0	31.4	15.0	2210	14.9		
Motor Oil Range Hydrocarbons (MRO)		71.1	15.0	<15.0	15.0	<15.0	15.0	293	14.9		
Total TPH		439	15.0	36.2	15.0	31.4	15.0	2630	14.9		

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.

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fession kenner

Jessica Kramer Project Assistant

Final 1.000





LT Environmental, Inc., Arvada, CO

Sample Id: FS03 Lab Sample Id: 608833-001		Matrix: Date Collec	Soil cted: 12.11.18 13.00		Date Received:12. Sample Depth: 3 ft		0
Analytical Method: Inorganic Anio	ns by EPA 300				Prep Method: E30	00P	
Tech: CHE Analyst: CHE		Date Prep:	12.17.18 16.00		% Moisture: Basis: We	t Weight	
Seq Number: 3073190							
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	145	5.00	mg/kg	12.18.18 04.02		1
Analytical Method: TPH by SW80	15 Mod				Prep Method: TX	1005P	
Tech:ARMAnalyst:ARMSeq Number:3073493		Date Prep:	12.19.18 18.00		% Moisture: Basis: We	t Weight	
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.20.18 01.48	U	1
	GLOGODDO						

`	Sasonne Range Hydrocarbons (ORO)	THEORO	<15.0	15.0		mg/kg	12.20.10 01.40	U	1	
]	Diesel Range Organics (DRO)	C10C28DRO	368	15.0		mg/kg	12.20.18 01.48		1	
l	Motor Oil Range Hydrocarbons (MRO)	PHCG2835	71.1	15.0		mg/kg	12.20.18 01.48		1	
5	Fotal TPH	PHC635	439	15.0		mg/kg	12.20.18 01.48		1	
	~ · ·		~	%						
	Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
	Surrogate 1-Chlorooctane		Cas Number 111-85-3		Units %	Limits 70-135	Analysis Date 12.20.18 01.48	Flag		
	8			Recovery			e	Flag		





LT Environmental, Inc., Arvada, CO

Sample Id:FS03Lab Sample Id:608833-001	Matrix: Soil Date Collected: 12.11.18 13.00	Date Received:12.15.18 09.30 Sample Depth: 3 ft
Analytical Method:BTEX by EPA 8021BTech:SCMAnalyst:SCMSeq Number:3073331	Date Prep: 12.18.18 16.30	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	12.19.18 07.10	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	12.19.18 07.10	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	12.19.18 07.10	U	1
m,p-Xylenes	179601-23-1	< 0.00401	0.00401		mg/kg	12.19.18 07.10	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	12.19.18 07.10	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	12.19.18 07.10	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	12.19.18 07.10	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	107	%	70-130	12.19.18 07.10		
4-Bromofluorobenzene		460-00-4	92	%	70-130	12.19.18 07.10		





LT Environmental, Inc., Arvada, CO

Sample Id:SW04Lab Sample Id:608833-002		Matrix: Date Collec	Soil cted: 12.11.18 13.30		Date Received:12. Sample Depth: 1 -		0
Analytical Method: Inorganic Anio Tech: CHE	ns by EPA 300				Prep Method: E30 % Moisture:	00P	
Analyst: CHE Seq Number: 3073190		Date Prep:	12.17.18 16.00		Basis: We	t Weight	
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	12.18.18 04.08	U	1
Analytical Method: TPH by SW80	15 Mod				Prep Method: TX	1005P	
Tech: ARM					% Moisture:		
Analyst: ARM		Date Prep:	12.19.18 18.00		Basis: We	t Weight	
Seq Number: 3073493							
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.20.18 02.53	U	1

Diesel Range Organics (DRO)	C10C28DRO	36.2	15.0		mg/kg	12.20.18 02.53		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0		mg/kg	12.20.18 02.53	U	1
Total TPH	PHC635	36.2	15.0		mg/kg	12.20.18 02.53		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	97	%	70-135	12.20.18 02.53		
o-Terphenyl		84-15-1	98	%	70-135	12.20.18 02.53		





LT Environmental, Inc., Arvada, CO

Sample Id:SW04Lab Sample Id:608833-002	Matrix: Soil Date Collected: 12.11.18 13.30	Date Received:12.15.18 09.30 Sample Depth: 1 - 3 ft			
Analytical Method:BTEX by EPA 8021BTech:SCMAnalyst:SCMSeq Number:3073331	Date Prep: 12.18.18 16.30	Prep Method: SW5030B % Moisture: Basis: Wet Weight			

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00199	0.00199	0.00199		12.19.18 07.29	U	1
Toluene	108-88-3	< 0.00199	0.00199	0199		12.19.18 07.29	U	1
Ethylbenzene	100-41-4	< 0.00199	0.00199		mg/kg	12.19.18 07.29	U	1
m,p-Xylenes	179601-23-1	< 0.00398	0.00398	mg/kg		12.19.18 07.29	U	1
o-Xylene	95-47-6	< 0.00199	0.00199		mg/kg	12.19.18 07.29	U	1
Total Xylenes	1330-20-7	< 0.00199	0.00199		mg/kg	12.19.18 07.29	U	1
Total BTEX		< 0.00199	0.00199		mg/kg	12.19.18 07.29	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	95	%	70-130	12.19.18 07.29		
1,4-Difluorobenzene		540-36-3	110	%	70-130	12.19.18 07.29		





LT Environmental, Inc., Arvada, CO

Sample Id: FS02A		Matrix:	Matrix: Soil Date			.18 09.30
Lab Sample Id: 608833-003		Date Collec	ted: 12.11.18 14.30		Sample Depth: 3 ft	
Analytical Method: Inorganic	Anions by EPA 300				Prep Method: E300	Р
Tech: CHE					% Moisture:	
Analyst: CHE		Date Prep:	12.17.18 16.00		Basis: Wet W	Veight
Seq Number: 3073190						
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag Dil
Chloride	16887-00-6	937	25.0	mg/kg	12.18.18 04.14	5
Analytical Method: TPH by S	W8015 Mod				Prep Method: TX10	05P

Tech: ARM					%	6 Moisture:		
Analyst: ARM		Date Pre	p: 12.19.	18 18.00	В	Basis: We	t Weight	
Seq Number: 3073493								
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	12.20.18 03.14	U	1
Diesel Range Organics (DRO)	C10C28DRO	31.4	15.0		mg/kg	12.20.18 03.14		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0		mg/kg	12.20.18 03.14	U	1
Total TPH	PHC635	31.4	15.0		mg/kg	12.20.18 03.14		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	94	%	70-135	12.20.18 03.14		
o-Terphenyl		84-15-1	95	%	70-135	12.20.18 03.14		





LT Environmental, Inc., Arvada, CO

Sample Id: FS02A	Matrix: Soi	1	Date Received:	12.15.18 09.30	
Lab Sample Id: 608833-003	Date Collected: 12.	11.18 14.30	Sample Depth: 3 ft		
Analytical Method: BTEX by EPA 8021B			Prep Method:	SW5030B	
Tech: SCM			% Moisture:		
Analyst: SCM	Date Prep: 12.	18.18 16.30	Basis:	Wet Weight	
Seq Number: 3073331					

Parameter	Cas Number	Result RL			Units	Analysis Date	sis Date Flag	
Benzene	71-43-2	< 0.00200	0.00200	0.00200		12.19.18 07.48	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	12.19.18 07.48	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	12.19.18 07.48	U	1
m,p-Xylenes	179601-23-1	< 0.00400	0.00400		mg/kg	12.19.18 07.48	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	12.19.18 07.48	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	12.19.18 07.48	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	12.19.18 07.48	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	109	%	70-130	12.19.18 07.48		
4-Bromofluorobenzene		460-00-4	92	%	70-130	12.19.18 07.48		





LT Environmental, Inc., Arvada, CO

Sample Id:SW03Lab Sample Id:608833-004		Matrix: Date Collec	Soil cted: 12.11.18 13.20	Date Received:12.15.18 09.30 Sample Depth: 1 - 3 ft			
Analytical Method: Inorganic Anion	s by EPA 300				Prep Method: E30)0P	
Tech: CHE					% Moisture:		
Analyst: CHE		Date Prep:	12.17.18 16.00		Basis: We	t Weight	
Seq Number: 3073190							
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	54.2	5.00	mg/kg	12.18.18 04.21		1
Analytical Method: TPH by SW801 Tech: ARM	5 Mod				Prep Method: TX % Moisture:	1005P	
Analyst: ARM		Date Prep:	12.19.18 18.00		Basis: We	t Weight	
Seq Number: 3073493							
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	126	14.9	mg/kg	12.20.18 03.36		1
Diesel Range Organics (DRO)	C10C28DRO	2210	14.9	mg/kg	12.20.18 03.36		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	293	14.9	mg/kg	12.20.18 03.36		1
Total TPH	PHC635	2630	14.9	mg/kg	12.20.18 03.36		1

Fotal TPH	PHC635	2630	14.9		mg/kg	12.20.18 03.36		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	98	%	70-135	12.20.18 03.36		
o-Terphenyl		84-15-1	111	%	70-135	12.20.18 03.36		





LT Environmental, Inc., Arvada, CO

Sample Id:SW03Lab Sample Id:608833-004	Matrix: Soil Date Collected: 12.11.18 13.20	Date Received:12.15.18 09.30 Sample Depth: 1 - 3 ft
Analytical Method:BTEX by EPA 8021BTech:SCMAnalyst:SCMSeq Number:3073331	Date Prep: 12.18.18 16.30	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL	RL		Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200	0.00200		12.19.18 08.45	U	1
Toluene	108-88-3	0.0130	0.00200		mg/kg	12.19.18 08.45		1
Ethylbenzene	100-41-4	0.00854	0.00200		mg/kg	12.19.18 08.45		1
m,p-Xylenes	179601-23-1	0.0143	0.00400		mg/kg	12.19.18 08.45		1
o-Xylene	95-47-6	0.140	0.00200		mg/kg	12.19.18 08.45		1
Total Xylenes	1330-20-7	0.154	0.00200		mg/kg	12.19.18 08.45		1
Total BTEX		0.176	0.00200		mg/kg	12.19.18 08.45		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	86	%	70-130	12.19.18 08.45		
4-Bromofluorobenzene		460-00-4	109	%	70-130	12.19.18 08.45		



LABORATORIES

Flagging Criteria



Page 202 of 303

- 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	ent Sample	BLK	Method Blank	
BKS/LCS	S Blank Spike/Laboratory Control Sample	BKSD/LCSD	Blank Spike Duplicate/Labo	ratory 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. JRU 17 Battery

Analytical Method:	Inorganic Anions b	y EPA 300						Pre	ep Metho	d: E30	0P	
Seq Number:	3073190			Matrix:	Solid				Date Pre	p: 12.1	7.18	
MB Sample Id:	7668220-1-BLK		LCS Sar	nple Id:	7668220-2	I-BKS		LCSI	Sample	Id: 766	8220-1-BSD	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD I	RPD Limi	t Units	Analysis Date	Flag
Chloride	< 5.00	250	274	110	274	110	90-110	0	20	mg/kg	12.18.18 01:30	

Analytical Method:	Inorganic Anions b	y EPA 300						Pr	ep Metho	d: E30	0P	
Seq Number:	3073190			Matrix:	Soil				Date Pre	p: 12.1	7.18	
Parent Sample Id:	608832-003		MS Sar	nple Id:	608832-00)3 S		MSI	O Sample	Id: 608	832-003 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD I	RPD Limi	t Units	Analysis Date	Flag
Chloride	53.1	250	289	94	291	95	90-110	1	20	mg/kg	12.18.18 03:20	

Analytical Method:	Inorganic Anions b	y EPA 300						Pi	rep Metho	od: E30	0P	
Seq Number:	3073190			Matrix:	Soil				Date Pr	ep: 12.1	7.18	
Parent Sample Id:	608888-004		MS Sar	nple Id:	608888-00	04 S		MS	D Sample	e Id: 608	888-004 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Lim	it Units	Analysis Date	Flag
Chloride	< 0.850	248	248	100	254	102	90-110	2	20	mg/kg	12.18.18 01:48	

Analytical Method:	TPH by S	W8015 M	od						Р	rep Method	l: TX1	.005P	
Seq Number:	3073493				Matrix:	Solid				Date Prep	p: 12.1	9.18	
MB Sample Id:	7668405-1	-BLK		LCS Sar	nple Id:	7668405-	1-BKS		LCS	D Sample l	ld: 766	8405-1-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	932	93	921	92	70-135	1	20	mg/kg	12.19.18 21:18	
Diesel Range Organics	(DRO)	<8.13	1000	973	97	965	97	70-135	1	20	mg/kg	12.19.18 21:18	
Surrogate		MB %Rec	MB Flag		CS Rec	LCS Flag	LCSI %Re			imits	Units	Analysis Date	
1-Chlorooctane		107		1	25		121		70)-135	%	12.19.18 21:18	
o-Terphenyl		109		1	06		106		70)-135	%	12.19.18 21:18	

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

[D] = 100*(C-A) / B $\begin{aligned} \text{RPD} &= 200^* \mid (\text{C-E}) / (\text{C+E}) \mid \\ \text{[D]} &= 100^* (\text{C}) / \text{[B]} \end{aligned}$ 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.

JRU 17 Battery

Analytical Method: Seq Number: Parent Sample Id:	TPH by S 3073493 608832-00		lod		Matrix: nple Id:		01 S		Prep Met Date F MSD Samp	Prep: 12.1	1005P 9.18 832-001 SD	
Parameter		Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD RPD Lin	nit Units	Analysis Date	Flag
Gasoline Range Hydrocarbo	ons (GRO)	<7.97	996	853	86	868	87	70-135	2 20	mg/kg	12.19.18 22:19	
Diesel Range Organics ((DRO)	89.1	996	940	85	954	87	70-135	1 20	mg/kg	12.19.18 22:19	
Surrogate					AS Rec	MS Flag	MSD %Re			Units	Analysis Date	
1-Chlorooctane				1	08		107		70-135	%	12.19.18 22:19	
o-Terphenyl				9	96		95		70-135	%	12.19.18 22:19	

Analytical Method: Seq Number: MB Sample Id:	BTEX by EPA 802 3073331 7668320-1-BLK	1B] LCS San	Matrix: ple Id:	Solid 7668320-	1-BKS			Prep Method Date Prep SD Sample	p: 12.1	5030B 8.18 8320-1-BSD	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPI) RPD Limit	Units	Analysis Date	Flag
Benzene	< 0.000384	0.0998	0.0887	89	0.0848	85	70-130	4	35	mg/kg	12.19.18 04:02	
Toluene	< 0.000455	0.0998	0.0839	84	0.0803	80	70-130	4	35	mg/kg	12.19.18 04:02	
Ethylbenzene	< 0.000564	0.0998	0.0897	90	0.0857	86	70-130	5	35	mg/kg	12.19.18 04:02	
m,p-Xylenes	< 0.00101	0.200	0.162	81	0.155	78	70-130	4	35	mg/kg	12.19.18 04:02	
o-Xylene	< 0.00200	0.0998	0.0811	81	0.0775	78	70-130	5	35	mg/kg	12.19.18 04:02	
Surrogate	MB %Rec	MB Flag			LCS Flag	LCSE %Rec			Limits	Units	Analysis Date	
1,4-Difluorobenzene	104		10	01		101			70-130	%	12.19.18 04:02	
4-Bromofluorobenzene	81		8	6		86			70-130	%	12.19.18 04:02	

Analytical Method: Seq Number: Parent Sample Id:	BTEX by EPA 802 3073331 608832-003	1B		Matrix: nple Id:		03 S			Prep Metho Date Pre SD Sample	p: 12.1	5030B 8.18 832-003 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPE	RPD Limit	Units	Analysis Date	Flag
Benzene	< 0.000385	0.100	0.0523	52	0.0615	61	70-130	16	35	mg/kg	12.19.18 04:40	Х
Toluene	< 0.000456	0.100	0.0541	54	0.0634	63	70-130	16	35	mg/kg	12.19.18 04:40	Х
Ethylbenzene	< 0.000565	0.100	0.0620	62	0.0708	70	70-130	13	35	mg/kg	12.19.18 04:40	Х
m,p-Xylenes	< 0.00101	0.200	0.123	62	0.137	68	70-130	11	35	mg/kg	12.19.18 04:40	Х
o-Xylene	< 0.000344	0.100	0.0626	63	0.0700	69	70-130	11	35	mg/kg	12.19.18 04:40	Х
Surrogate				1S Rec	MS Flag	MSD %Rec		-	Limits	Units	Analysis Date	
1,4-Difluorobenzene			1	01		100		7	70-130	%	12.19.18 04:40	
4-Bromofluorobenzene			8	35		87		7	70-130	%	12.19.18 04:40	

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

[D] = 100*(C-A) / B $\begin{aligned} \text{RPD} &= 200^* \mid (\text{C-E}) / (\text{C+E}) \mid \\ \text{[D]} &= 100^* (\text{C}) / \text{[B]} \end{aligned}$ 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 June June June June June June June June	3 1 and 1	Relinquished by: (Signature)	Notice: Signature of this document and relinquishment of samples constitued of service. Xenco will be liable only for the cost of samples and station of Xenco. A minimum charge of \$76.00 will be applied to set h project and	Circle Method(s) and Metal(s) to be analyzed T	Total 200 7 / 6010 200 8 / 6020: 8R						F6 03 5 12/11/18 1	Sample Identification Matrix Sampled \$	NO (NIÀ)	Seals: Yes No NA	(Yes) Non		SAMPLE RECEIPT Temp Blank: Yes No	Sampler's Name: Bun Belin	P.O. Number:	ar: 220-165	Project Name: JRV 17 Buttery		City, State ZIP: Midland, TX 79705		Company Name: LT Environmental, Inc., Permian office	Project Manager: Adrian Baker	Hobbs,NI		
		17/15/19 920 12/1 4/10 1402	Received by: (Signature) Date/Time Relinguished by (Signature)	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and staudard terms and conditions of service. Xenco will be liable only for the cost of samples and staudard terms and conditions of service. Xenco will be liable only for the cost of samples and staudard terms of the control of Xenco. A minimum charge of \$76.00 will be applied to service of the cost of sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	TCLP/SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U	ARCRA 13PPM Texas 11 AI Sh As Ba Be B Cd Ca Cr Co Cu Fe		2		1430 3' 4 K K K I	×	X N	Sampled Depth Number TPH (E BTEX (Chlorid	PA 8 EPA	f Co (802	ntai	⊐ (Wet Ice: Yes No	Due Date:	Rush:	Routine	Turn Around ANALYSIS REQUEST	Email: Abaker Eltenv. com	City, State ZIP: Cirlsbard, NM 88220	Address: 3104	Company Name: XTD	Bill to: (if different) Ky/e LiftKU	Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)	Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334 Midland TX (432-704-5440) EL Paso, TX (915)585-3443 Lubbock, TX (806)794-1296	Chain of Custody
7739 9211 8173 1739 9211 8173		apple to the solution of the s	nature) Received by: (Signature) Date/Time	ractors. It assigns standard terms and conditions losses are due to circumstances beyond the control will be enforced unless previously negotlated.	1631 / 245.1 / 7470 /	bhan Mn Mn Ni K Se An SiO2 Na Sr TI Sn U V Zn						Composite	Sample Comments	lab, if received by 4:30pm	TAT starts the day received by the							QUEST Work Order Notes	Deliverables: EDD ADaPT D Other:	Reporting:Level II Level III PST/UST RP bvel IV	l	Program: UST/PST PRP Brownfields RC Uperfund	Work Order Con	813-620-2000) <u>www.xenco.com</u> Page / of	34	Work Order No: 100833

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	5	3 -	Relinquished by: (Signature)	Notice: Signature of this document and relinquishment of samples cor of service. Xenco will be liable only for the cost of samples and shall of Xenco. A minimum charge of \$75.00 will be applied to each project	Circle Method(s) and Metal(s) to be analyzed	Total 200.7 / 6010 200.8 / 6020:						8W03 S 12/11/8	Sample Identification Matrix Sampled		Sample Custody Seals: Yes No (N/A) Tot	Ves No Min	SAMPLE RECEIPT Temp Blank: Yes No	Sampler's Name: Sen Bel N	P.O. Number:	Project Number: $2RP - 1657$	Project Name: JRV 17 Berthery	Phone: 432.704.5178	City, State ZIP: Midland, TX 79705	Address: 3300 North A Street	Company Name: LT Environmental, Inc., Permian office	Project Manager: Adrian Baker	Hob	XmZCO	
		1 12/15/18 930 "1/1/1/2/20 a	Received by: (Signature) Date/Time Relinquished by: (Signature)	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the contrc of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	TCLP/SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mu	8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe			1 del			1320 1'-3' I K	Sampled Depth Num BTEX Chlor	ber EP4	• of C A 801	1 Conta 5) 021)) Wet Ice: Yes No	Due Date:	Rush:	Routine 1	Turn Around ANALYSIS REQUEST	Email: ababer @ Itenv. com	City, State ZIP: Carls band, Non 88220	Address: 3104 E. Grea Street	Company Name: XTO En		Midiand, I X (432-704-5440) EL Paso, I X (915)585-3443 Lubbock, I X (806)/94-1296 Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (8	Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334	Chain of Custody
77799118173 Revised Date 051418 Rev. 2018		ati h1/2/ 2011/2	Received by: (Signature) Date/T	tractors. It assigns standard terms and conditions losses are due to circumstances beyond the control will be enforced unless previously negotiated.	26 Mn Mo Ni Se Ag TI U 1631/245.1/7470/7471: Hg	Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn						Compesible	Sample Comments		TAT starts the day received by the lab, if received by 4:30pm						UEST Work Order Notes	Deliverables: EDD ADaPT Other:	Reporting:Level II Devel III DST/UST RP Bvel IV	State of Project:	Program: UST/PST PRP prownfields RC uperfund	Work Order Com	06)/94-1296 <u>2</u> Tampa,FL (813-620-2000) <u>www.xenco.com</u> Page <u>2</u> of <u>2</u>		Work Order No: (100005

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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: 12/15/2018 09:30:00 AM Temperature Measuring device used : R8 Work Order #: 608833 Comments Sample Receipt Checklist 3.7 #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

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

Analyst:

PH Device/Lot#:

Checklist completed by:

#16 All samples received within hold time?

#18 Water VOC samples have zero headspace?

#17 Subcontract of sample(s)?

Katie Lowe

Date: 12/17/2018

Yes

No

N/A

Checklist reviewed by:

Jession VRAMER

Jessica Kramer

Date: 12/18/2018

for LT Environmental, Inc.

Project Manager: Adrian Baker

JRU-17

15-OCT-18

Collected By: Client





1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122): Texas (T104704215-18-27), 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 (T104704221-18-13) Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-17) 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) Xenco-Lakeland: Florida (E84098)



15-OCT-18

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

Reference: XENCO Report No(s): 601524 JRU-17 Project Address: Delaware Basin

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) 601524. 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. 601524 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 Vermer

Jessica Kramer Project Assistant

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Sample Cross Reference 601524



LT Environmental, Inc., Arvada, CO

JRU-17

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	10-02-18 12:10	3 ft	601524-001
SS01A	S	10-02-18 12:15	4 ft	601524-002
SS02	S	10-02-18 12:30	3 ft	601524-003
SS02A	S	10-02-18 12:45	4 ft	601524-004
SS03	S	10-02-18 13:10	3 ft	601524-005
SS03A	S	10-02-18 13:15	4 ft	601524-006
SS04	S	10-02-18 13:35	3 ft	601524-007
SS04A	S	10-02-18 13:40	4 ft	601524-008
SS05	S	10-02-18 13:55	1 ft	601524-009
SS05A	S	10-02-18 14:10	4 ft	601524-010
SS06	S	10-02-18 14:20	1 ft	601524-011
SS06A	S	10-02-18 14:35	4 ft	601524-012
SS07	S	10-02-18 15:10	3 ft	601524-013
SS07A	S	10-02-18 15:15	4 ft	601524-014
SS08	S	10-03-18 09:05	3 ft	601524-015
SS08A	S	10-03-18 09:10	4 ft	601524-016
SS09	S	10-03-18 09:30	3 ft	601524-017
SS09A	S	10-03-18 09:35	4 ft	601524-018
SS10	S	10-03-18 09:50	3 ft	601524-019
SS10A	S	10-03-18 09:55	4 ft	601524-020
SS11	S	10-03-18 10:15	3 ft	601524-021
SS11A	S	10-03-18 10:20	4 ft	601524-022
SW01	S	10-03-18 14:30	.5 - 2 ft	601524-023
SW02	S	10-03-18 14:40	.5 - 2 ft	601524-024
SW03	S	10-03-18 14:45	.5 - 2 ft	601524-025
SW04	S	10-03-18 14:20	.5 - 2 ft	601524-026
FS01	S	10-03-18 09:05	3 ft	601524-027



CASE NARRATIVE

Client Name: LT Environmental, Inc. Project Name: JRU-17

Project ID: Work Order Number(s): 601524 Report Date: 15-OCT-18 Date Received: 10/05/2018

Sample receipt non conformances and comments: PER CLIENTS EMAIL REQUEST CORRECTED SAMPLE NAMES. JKR 10/15/18

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3066331 BTEX by EPA 8021B

o-Xylene Relative Percent Difference (RPD) between matrix spike and duplicate was above quality control limits.

Samples in the analytical batch are: 601524-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013, -014, -015, -016, -017, -018, -019, -020

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

Lab Sample ID 601524-009 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 601524-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013, -014, -015, -016, -017, -018, -019, -020.

The Laboratory Control Sample for Toluene, m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3066343 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; data confirmed by re-analysis.

Samples affected are: 601524-026.







LT Environmental, Inc., Arvada, CO Project Name: JRU-17



Date Received in Lab: Fri Oct-05-18 10:50 am Report Date: 15-OCT-18 Project Manager: Jessica Kramer

	Lab Id:	601524-0	001	601524-	002	601524-0	003	601524-	004	601524-	005	601524-	006
Analysis Requested	Field Id:	SS01		SS01/	4	SS02		SS024	4 A	SS03		SS034	A
Analysis Kequesteu	Depth:	3- ft		4- ft		3- ft		4- ft		3- ft		4- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL	,	SOIL		SOIL	
	Sampled:	Oct-02-18	12:10	Oct-02-18	12:15	Oct-02-18	12:30	Oct-02-18	12:45	Oct-02-18	13:10	Oct-02-18	13:15
BTEX by EPA 8021B	Extracted:	Oct-12-18	12:00										
	Analyzed:	Oct-12-18	21:29	Oct-12-18	21:49	Oct-12-18	22:09	Oct-12-18	22:29	Oct-12-18	22:49	Oct-12-18	23:09
	Units/RL:	mg/kg	RL										
Benzene		< 0.00201	0.00201	< 0.00202	0.00202	< 0.00199	0.00199	< 0.00200	0.00200	< 0.00202	0.00202	< 0.00200	0.00200
Toluene		< 0.00201	0.00201	< 0.00202	0.00202	< 0.00199	0.00199	< 0.00200	0.00200	< 0.00202	0.00202	< 0.00200	0.00200
Ethylbenzene		< 0.00201	0.00201	< 0.00202	0.00202	< 0.00199	0.00199	< 0.00200	0.00200	< 0.00202	0.00202	< 0.00200	0.00200
m,p-Xylenes		< 0.00402	0.00402	< 0.00404	0.00404	< 0.00398	0.00398	< 0.00399	0.00399	< 0.00403	0.00403	< 0.00401	0.00401
o-Xylene		< 0.00201	0.00201	< 0.00202	0.00202	< 0.00199	0.00199	< 0.00200	0.00200	< 0.00202	0.00202	< 0.00200	0.00200
Total Xylenes		< 0.00201	0.00201	< 0.00202	0.00202	< 0.00199	0.00199	< 0.00200	0.00200	< 0.00202	0.00202	< 0.00200	0.00200
Total BTEX		< 0.00201	0.00201	< 0.00202	0.00202	< 0.00199	0.00199	< 0.00200	0.00200	< 0.00202	0.00202	< 0.00200	0.00200

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fession kenner

Jessica Kramer Project Assistant







LT Environmental, Inc., Arvada, CO Project Name: JRU-17



Date Received in Lab: Fri Oct-05-18 10:50 am Report Date: 15-OCT-18 Project Manager: Jessica Kramer

	Lab Id:	601524-0	01	601524-0	02	601524-0	03	601524-0	04	601524-0	05	601524-00	06
An aluais Do an astad	Field Id:	SS01		SS01A		SS02		SS02A		SS 03		SS03A	
Analysis Requested	Depth:	3- ft		4- ft		3- ft		4- ft		3- ft		4- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Oct-02-18 1	2:10	Oct-02-18 1	2:15	Oct-02-18 1	2:30	Oct-02-18 1	2:45	Oct-02-18 1	3:10	Oct-02-18 1	3:15
Inorganic Anions by EPA 300	Extracted:	Oct-09-18 1	2:30	Oct-09-18 1	2:30	Oct-09-18 1	2:30	Oct-09-18 1	2:30	Oct-09-18 1	2:30	Oct-09-18 1	2:30
	Analyzed:	Oct-09-18 2	21:10	Oct-09-18 2	1:27	Oct-09-18 2	1:33	Oct-09-18 2	1:39	Oct-09-18 2	1:44	Oct-09-18 2	1:50
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		996	4.96	1650	24.8	1080	4.97	1090	4.95	259	4.95	378	4.95
TPH by SW8015 Mod	Extracted:	Oct-09-18 (9:00	Oct-09-18 0	9:00	Oct-09-18 0	9:00	Oct-09-18 0	9:00	Oct-09-18 0	9:00	Oct-09-18 0	9:00
	Analyzed:	Oct-09-18 1	4:44	Oct-09-18 1	5:40	Oct-09-18 1	5:58	Oct-09-18 1	6:17	Oct-09-18 1	6:35	Oct-09-18 1	6:54
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	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	<14.9	14.9	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<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	<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0
Total TPH		<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0

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fession kramer

Jessica Kramer Project Assistant







LT Environmental, Inc., Arvada, CO Project Name: JRU-17



Date Received in Lab: Fri Oct-05-18 10:50 am Report Date: 15-OCT-18 Project Manager: Jessica Kramer

	Lab Id:	601524-	007	601524-	008	601524-0	009	601524-	010	601524-0	011	601524-	012
Analysis Requested	Field Id:	SS 04		SS044	A	SS05		SS054	4	SS06		SS064	A
Anaiysis Kequesieu	Depth:	3- ft		4- ft		1- ft		4- ft		1- ft		4- ft	
	Matrix:	SOIL		SOIL	_	SOIL		SOIL		SOIL		SOIL	-
	Sampled:	Oct-02-18	13:35	Oct-02-18	13:40	Oct-02-18	13:55	Oct-02-18	14:10	Oct-02-18	14:20	Oct-02-18	14:35
BTEX by EPA 8021B	Extracted:	Oct-12-18	12:00	Oct-12-18	12:00	Oct-12-18	12:00	Oct-12-18	12:00	Oct-12-18	12:00	Oct-12-18	12:00
	Analyzed:	Oct-12-18	23:29	Oct-12-18	23:50	Oct-13-18	00:10	Oct-13-18	00:30	Oct-13-18	01:49	Oct-13-18	02:09
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		< 0.00198	0.00198	< 0.00201	0.00201	< 0.00202	0.00202	< 0.00199	0.00199	< 0.00200	0.00200	< 0.00201	0.00201
Toluene		< 0.00198	0.00198	< 0.00201	0.00201	< 0.00202	0.00202	< 0.00199	0.00199	< 0.00200	0.00200	< 0.00201	0.00201
Ethylbenzene		< 0.00198	0.00198	< 0.00201	0.00201	< 0.00202	0.00202	< 0.00199	0.00199	< 0.00200	0.00200	< 0.00201	0.00201
m,p-Xylenes		< 0.00397	0.00397	< 0.00402	0.00402	< 0.00404	0.00404	< 0.00398	0.00398	< 0.00399	0.00399	< 0.00402	0.00402
o-Xylene		< 0.00198	0.00198	< 0.00201	0.00201	< 0.00202	0.00202	< 0.00199	0.00199	< 0.00200	0.00200	< 0.00201	0.00201
Total Xylenes		< 0.00198	0.00198	< 0.00201	0.00201	< 0.00202	0.00202	< 0.00199	0.00199	< 0.00200	0.00200	< 0.00201	0.00201
Total BTEX		< 0.00198	0.00198	< 0.00201	0.00201	< 0.00202	0.00202	< 0.00199	0.00199	< 0.00200	0.00200	< 0.00201	0.00201

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fession kenner

Jessica Kramer Project Assistant







LT Environmental, Inc., Arvada, CO Project Name: JRU-17



Date Received in Lab: Fri Oct-05-18 10:50 am Report Date: 15-OCT-18 Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	601524-007		601524-008		601524-009		601524-010		601524-011		601524-012	
	Field Id:	SS04		SS04A		SS05		SS05A		SS06		SS06A	
	Depth:	3- ft		4- ft		1- ft		4- ft		1- ft		4- ft	
	Matrix:	SOIL											
	Sampled:	Oct-02-18 13:35		Oct-02-18 13:40		Oct-02-18 13:55		Oct-02-18 14:10		Oct-02-18 14:20		Oct-02-18 14:35	
Inorganic Anions by EPA 300	Extracted:	Oct-09-18 12:30		Oct-09-18 12:30		Oct-09-18 17:15		Oct-09-18 17:15		Oct-09-18 17:15		Oct-09-18 17:15	
	Analyzed:	Oct-09-18 21:56		Oct-09-18 22:01		Oct-10-18 03:48		Oct-10-18 03:54		Oct-10-18 03:59		Oct-10-18 04:05	
	Units/RL:	mg/kg	RL										
Chloride		126	5.00	281	4.96	999	4.97	4500	50.2	454	4.96	441	4.95
TPH by SW8015 Mod	Extracted:	Oct-09-18 09:00											
	Analyzed:	Oct-09-18 17:12		Oct-09-18 17:31		Oct-09-18 17:49		Oct-09-18 18:08		Oct-09-18 19:04		Oct-09-18 19:23	
	Units/RL:	mg/kg	RL										
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	1810	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	24.8	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		<15.0	15.0	<15.0	15.0	1830	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0

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fession kenner

Jessica Kramer Project Assistant






LT Environmental, Inc., Arvada, CO Project Name: JRU-17



Date Received in Lab: Fri Oct-05-18 10:50 am Report Date: 15-OCT-18 Project Manager: Jessica Kramer

	Lab Id:	601524-	013	601524-	014	601524-0	015	601524-	016	601524-	017	601524-0	018
Analysis Requested	Field Id:	SS07	,	SS074	4	SS08		SS084	4 A	SS09		SS09A	A
Analysis Kequesteu	Depth:	3- ft	3- ft		4- ft			4- ft		3- ft		4- ft	
	Matrix:	SOIL	_	SOIL		SOIL		SOIL	,	SOIL		SOIL	
	Sampled:	Oct-02-18			15:15	Oct-03-18	09:05	Oct-03-18	09:10	Oct-03-18	09:30	Oct-03-18	09:35
BTEX by EPA 8021B	Extracted:	Oct-12-18	12:00	Oct-12-18	12:00	Oct-12-18	12:00	Oct-12-18	12:00	Oct-12-18	12:00	Oct-12-18	12:00
	Analyzed:	Oct-13-18	Oct-13-18 02:29		02:49	Oct-13-18	03:09	Oct-13-18	03:29	Oct-13-18	03:49	Oct-13-18	04:09
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		< 0.00201	0.00201	< 0.00198	0.00198	< 0.00200	0.00200	< 0.00200	0.00200	< 0.00201	0.00201	< 0.00199	0.00199
Toluene		< 0.00201	0.00201	< 0.00198	0.00198	< 0.00200	0.00200	< 0.00200	0.00200	< 0.00201	0.00201	< 0.00199	0.00199
Ethylbenzene		< 0.00201	0.00201	< 0.00198	0.00198	< 0.00200	0.00200	< 0.00200	0.00200	< 0.00201	0.00201	< 0.00199	0.00199
m,p-Xylenes		< 0.00402	0.00402	< 0.00397	0.00397	< 0.00399	0.00399	< 0.00401	0.00401	< 0.00402	0.00402	< 0.00398	0.00398
o-Xylene		< 0.00201	0.00201	< 0.00198	0.00198	< 0.00200	0.00200	< 0.00200	0.00200	< 0.00201	0.00201	< 0.00199	0.00199
Total Xylenes		< 0.00201	0.00201	< 0.00198	0.00198	< 0.00200	0.00200	< 0.00200	0.00200	< 0.00201	0.00201	< 0.00199	0.00199
Total BTEX		< 0.00201	0.00201	< 0.00198	0.00198	< 0.00200	0.00200	< 0.00200	0.00200	< 0.00201	0.00201	< 0.00199	0.00199

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Jessica Kramer Project Assistant







LT Environmental, Inc., Arvada, CO Project Name: JRU-17



Date Received in Lab: Fri Oct-05-18 10:50 am Report Date: 15-OCT-18 Project Manager: Jessica Kramer

	Lab Id:	601524-0	13	601524-0	14	601524-0	15	601524-0	16	601524-0	17	601524-0	18
	Field Id:	SS07		SS07A		SS08		SS08A		SS09		SS09A	
Analysis Requested	Depth:	3- ft		4- ft		3- ft		4- ft		3- ft		4- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Oct-02-18 1	5:10	Oct-02-18 1	5:15	Oct-03-18 0	9:05	Oct-03-18 09:10		Oct-03-18 09:30		Oct-03-18 0	9:35
Inorganic Anions by EPA 300	Extracted:	Oct-09-18 1			Oct-09-18 17:15		Oct-10-18 09:00		9:00	Oct-10-18 0	9:00	Oct-10-18 0	9:00
	Analyzed:	Oct-10-18 (0-18 04:11 Oct-		4:16	Oct-10-18 1	0:39	Oct-10-18 1	0:45	Oct-10-18 1	0:50	Oct-10-18 1	0:56
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		1240	5.02	1370	25.0	33.7	4.99	86.3	4.95	449	4.96	680	25.0
TPH by SW8015 Mod	Extracted:	Oct-09-18 (9:00	Oct-09-18 0	9:00	Oct-09-18 0	9:00	Oct-09-18 0	9:00	Oct-09-18 0	9:00	Oct-09-18 0	9:00
	Analyzed:	Oct-09-18 1	9:41	Oct-09-18 2	0:00	Oct-09-18 2	0:19	Oct-09-18 2	0:38	Oct-09-18 2	0:56	Oct-09-18 2	1:15
	Units/RL:	mg/kg	RL	mg/kg	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	<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	<15.0	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	<15.0 15.0		14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		<15.0			14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0

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fession kramer

Jessica Kramer Project Assistant







LT Environmental, Inc., Arvada, CO Project Name: JRU-17



Date Received in Lab: Fri Oct-05-18 10:50 am Report Date: 15-OCT-18 Project Manager: Jessica Kramer

	Lab Id:	601524-0	019	601524-	020	601524-0	021	601524-	022	601524-	023	601524-	024
Analysis Requested	Field Id:	SS10	1	SS10/	4	SS11		SS114	4 A	SW01		SW02	2
Analysis Kequestea	Depth:	3- ft		4- ft		3- ft		4- ft		.5-2 f	t	.5-2 f	ť
	Matrix:	SOIL		SOIL		SOIL		SOIL	,	SOIL	,	SOIL	
	Sampled:	Oct-03-18			09:55	Oct-03-18	10:15	Oct-03-18	10:20	Oct-03-18	14:30	Oct-03-18	14:40
BTEX by EPA 8021B	Extracted:	Oct-12-18	12:00	Oct-12-18	12:00	Oct-12-18	16:20	Oct-12-18	16:20	Oct-12-18	16:20	Oct-12-18	16:20
	Analyzed:	Oct-13-18	Oct-13-18 04:29		04:49	Oct-13-18	07:48	Oct-13-18	08:09	Oct-13-18	08:29	Oct-13-18	08:49
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		< 0.00201	0.00201	< 0.00200	0.00200	< 0.00202	0.00202	< 0.00200	0.00200	< 0.00199	0.00199	< 0.00200	0.00200
Toluene		< 0.00201	0.00201	< 0.00200	0.00200	< 0.00202	0.00202	< 0.00200	0.00200	< 0.00199	0.00199	< 0.00200	0.00200
Ethylbenzene		< 0.00201	0.00201	< 0.00200	0.00200	< 0.00202	0.00202	< 0.00200	0.00200	< 0.00199	0.00199	< 0.00200	0.00200
m,p-Xylenes		< 0.00402	0.00402	< 0.00399	0.00399	< 0.00403	0.00403	< 0.00401	0.00401	< 0.00398	0.00398	< 0.00399	0.00399
o-Xylene		< 0.00201	0.00201	< 0.00200	0.00200	< 0.00202	0.00202	< 0.00200	0.00200	< 0.00199	0.00199	< 0.00200	0.00200
Total Xylenes		< 0.00201	0.00201	< 0.00200	0.00200	< 0.00202	0.00202	< 0.00200	0.00200	< 0.00199	0.00199	< 0.00200	0.00200
Total BTEX		< 0.00201	0.00201	< 0.00200	0.00200	< 0.00202	0.00202	< 0.00200	0.00200	< 0.00199	0.00199	< 0.00200	0.00200

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Jessica Kramer Project Assistant







LT Environmental, Inc., Arvada, CO Project Name: JRU-17



Date Received in Lab: Fri Oct-05-18 10:50 am Report Date: 15-OCT-18 Project Manager: Jessica Kramer

	Lab Id:	601524-0	19	601524-0	20	601524-02	21	601524-0	22	601524-0	23	601524-02	24
Analysis Requested	Field Id:	SS10		SS10A		SS11		SS11A		SW01		SW02	
Anulysis Kequesleu	Depth:	3- ft		4- ft		3- ft		4- ft		.5-2 ft		.5-2 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Oct-03-18 0	9:50	Oct-03-18 0	9:55	Oct-03-18 1	0:15	Oct-03-18 10:20		Oct-03-18 14:30		Oct-03-18 1	4:40
Inorganic Anions by EPA 300	Extracted:	Oct-09-18 1			Oct-10-18 09:00		Oct-10-18 09:00		9:00	Oct-10-18 0	9:00	Oct-10-18 0	9:00
	Analyzed:	Oct-09-18 2	9-18 21:05 Oct-		1:13	Oct-10-18 1	1:19	Oct-10-18 1	1:24	Oct-10-18 1	1:30	Oct-10-18 1	1:36
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		569	4.95	793	24.9	677	4.97	786	4.95	519	4.99	1390	4.98
TPH by SW8015 Mod	Extracted:	Oct-09-18 (9:00	Oct-09-18 0	9:00	Oct-08-18 0	8:00	Oct-08-18 0	8:00	Oct-08-18 0	8:00	Oct-08-18 0	8:00
	Analyzed:	Oct-09-18 2	21:34	Oct-09-18 2	1:52	Oct-08-18 1	1:59	Oct-08-18 1	2:54	Oct-08-18 1	3:13	Oct-08-18 1	3:32
	Units/RL:	mg/kg	RL	mg/kg	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	<14.9	14.9	<15.0	15.0	<14.9	14.9
Diesel Range Organics (DRO)		<15.0	15.0	<14.9	14.9	<15.0	15.0	<14.9	14.9	<15.0	15.0	1250	14.9
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<14.9	14.9	<15.0	15.0	<14.9	14.9	<15.0	15.0	18.2	14.9
Total TPH		<15.0	15.0	<14.9	14.9	<15.0	15.0	<14.9	14.9	<15.0	15.0	1270	14.9

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Jessica Kramer Project Assistant







LT Environmental, Inc., Arvada, CO Project Name: JRU-17



Date Received in Lab:Fri Oct-05-18 10:50 amReport Date:15-OCT-18Project Manager:Jessica Kramer

		(01504.0	25	(01504.0		(01524.0	27		
	Lab Id:	601524-0	-	601524-0		601524-0	127		
Analysis Requested	Field Id:	SW03		SW04		FS01			
Indiysis Requested	Depth:	.5-2 ft		.5-2 ft		3- ft			
	Matrix:	SOIL		SOIL		SOIL			
	Sampled:	Oct-03-18	14:45	Oct-03-18	14:20	Oct-03-18 ()9:05		
BTEX by EPA 8021B	Extracted:	Oct-12-18	16:20	Oct-12-18	16:20	Oct-12-18 1	6:20		
	Analyzed:	Oct-13-18 (09:09	Oct-13-18 (09:29	Oct-13-18 0	9:49		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzene		< 0.00201	0.00201	< 0.00201	0.00201	< 0.00199	0.00199		
Toluene		< 0.00201	0.00201	< 0.00201	0.00201	< 0.00199	0.00199		
Ethylbenzene		< 0.00201	0.00201	< 0.00201	0.00201	< 0.00199	0.00199		
m,p-Xylenes		< 0.00402	0.00402	< 0.00402	0.00402	< 0.00398	0.00398		
o-Xylene		< 0.00201	0.00201	< 0.00201	0.00201	< 0.00199	0.00199		
Total Xylenes		< 0.00201	0.00201	< 0.00201	0.00201	< 0.00199	0.00199		
Total BTEX		< 0.00201	0.00201	< 0.00201	0.00201	< 0.00199	0.00199		
Inorganic Anions by EPA 300	Extracted:	Oct-10-18	09:00	Oct-10-18 (09:00	Oct-10-18 0	09:00		
	Analyzed:	Oct-10-18	11:58	Oct-10-18	12:04	Oct-10-18 1	2:21		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		465	4.97	1160	4.98	1030	4.95		
TPH by SW8015 Mod	Extracted:	Oct-08-18	08:00	Oct-08-18 (08:00	Oct-08-18 0	08:00		
	Analyzed:	Oct-09-18	07:21	Oct-08-18	14:09	Oct-08-18 1	4:27		
	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)		<15.0	15.0	<15.0	15.0	16.4	15.0		
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0		
Total TPH		<15.0	15.0	<15.0	15.0	16.4	15.0		

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Jessica Kramer Project Assistant





LT Environmental, Inc., Arvada, CO

Sample Id:SS01Lab Sample Id:601524-001	nple Id: 601524-001		Soil cted: 10.02.18 12.10	Date Received:10.05.18 10.50 Sample Depth: 3 ft			
Analytical Method: Inorganic Anio	ns by EPA 300				Prep Method: E30	0P	
Tech: CHE					% Moisture:		
Analyst: CHE		Date Prep:	10.09.18 12.30		Basis: Wet	Weight	
Seq Number: 3065903		1				C	
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	996	4.96	mg/kg	10.09.18 21.10		1
Analytical Method: TPH by SW80	15 Mod				Prep Method: TX	1005P	
Tech: ARM					% Moisture:		
Analyst: ARM		Date Prep:	10.09.18 09.00		Basis: Wet	Weight	
Seq Number: 3065914		-					
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.09.18 14.44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.09.18 14.44	U	1

Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	10.09.18 14.44	U	1	
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0		mg/kg	10.09.18 14.44	U	1	
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0		mg/kg	10.09.18 14.44	U	1	
Total TPH	PHC635	<15.0	15.0		mg/kg	10.09.18 14.44	U	1	
Surrogate		Cas Number	% Recoverv	Units	Limits	Analysis Date	Flag		
1-Chlorooctane		111-85-3	92	%	70-135	10.09.18 14.44			
o-Terphenyl		84-15-1	91	%	70-135	10.09.18 14.44			





LT Environmental, Inc., Arvada, CO

Sample Id:SS01Lab Sample Id:601524-001	Matrix: Soil Date Collected: 10.02.18 12.10	Date Received:10.05.18 10.50 Sample Depth: 3 ft
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3066331	Date Prep: 10.12.18 12.00	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00201	0.00201		mg/kg	10.12.18 21.29	U	1
Toluene	108-88-3	< 0.00201	0.00201		mg/kg	10.12.18 21.29	U	1
Ethylbenzene	100-41-4	< 0.00201	0.00201		mg/kg	10.12.18 21.29	U	1
m,p-Xylenes	179601-23-1	< 0.00402	0.00402		mg/kg	10.12.18 21.29	U	1
o-Xylene	95-47-6	< 0.00201	0.00201		mg/kg	10.12.18 21.29	U	1
Total Xylenes	1330-20-7	< 0.00201	0.00201		mg/kg	10.12.18 21.29	U	1
Total BTEX		< 0.00201	0.00201		mg/kg	10.12.18 21.29	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	108	%	70-130	10.12.18 21.29		
4-Bromofluorobenzene		460-00-4	102	%	70-130	10.12.18 21.29		





LT Environmental, Inc., Arvada, CO

Sample Id:	SS01A		Matrix:	Soil		Date Received:10.0)5.18 10.50)
Lab Sample Id	: 601524-002		Date Colle	cted: 10.02.18 12.15		Sample Depth: 4 ft		
Analytical Me	thod: Inorganic Anions	by EPA 300				Prep Method: E30	00P	
Tech:	CHE					% Moisture:		
Analyst:	CHE		Date Prep:	10.09.18 12.30		Basis: We	t Weight	
Seq Number:	3065903							
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride		16887-00-6	1650	24.8	mg/kg	10.09.18 21.27		5

Analytical Method: TPH by SW	8015 Mod				P	Prep Method: TX	(1005P	
Tech: ARM					9	6 Moisture:		
Analyst: ARM		Date Pre	p: 10.09	.18 09.00	E	Basis: We	et Weight	
Seq Number: 3065914								
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	10.09.18 15.40	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0		mg/kg	10.09.18 15.40	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0		mg/kg	10.09.18 15.40	U	1
Total TPH	PHC635	<15.0	15.0		mg/kg	10.09.18 15.40	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	90	%	70-135	10.09.18 15.40		
o-Terphenyl		84-15-1	94	%	70-135	10.09.18 15.40		





LT Environmental, Inc., Arvada, CO

Sample Id:SS01ALab Sample Id:601524-002	Matrix: Soil Date Collected: 10.02	2.18 12.15	Date Received Sample Depth	:10.05.18 10.50 :4 ft
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3066331	Date Prep: 10.12	2.18 12.00	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	10.12.18 21.49	U	1
Toluene	108-88-3	< 0.00202	0.00202		mg/kg	10.12.18 21.49	U	1
Ethylbenzene	100-41-4	< 0.00202	0.00202		mg/kg	10.12.18 21.49	U	1
m,p-Xylenes	179601-23-1	< 0.00404	0.00404		mg/kg	10.12.18 21.49	U	1
o-Xylene	95-47-6	< 0.00202	0.00202		mg/kg	10.12.18 21.49	U	1
Total Xylenes	1330-20-7	< 0.00202	0.00202		mg/kg	10.12.18 21.49	U	1
Total BTEX		< 0.00202	0.00202		mg/kg	10.12.18 21.49	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	109	%	70-130	10.12.18 21.49		
4-Bromofluorobenzene		460-00-4	123	%	70-130	10.12.18 21.49		





LT Environmental, Inc., Arvada, CO

Sample Id: SS02 Lab Sample Id: 601524-003		Matrix: Date Collec	Soil cted: 10.02.18 12.30		Date Received:10.05.18 10 Sample Depth: 3 ft	0.50
Analytical Method:Inorganic AnionTech:CHEAnalyst:CHESeq Number:3065903	s by EPA 300	Date Prep:	10.09.18 12.30		Prep Method: E300P % Moisture: Basis: Wet Weight	t
Parameter	Cas Number	Result	RL	Units	Analysis Date Flag	Dil
Chloride	16887-00-6	1080	4.97	mg/kg	10.09.18 21.33	1
Analytical Method: TPH by SW801. Tech: ARM Analyst: ARM Seq Number: 3065914	5 Mod	Date Prep:	10.09.18 09.00		Prep Method: TX1005P % Moisture: Basis: Wet Weight	t
Parameter	Cas Number	Result	RL	Units	Analysis Date Flag	Dil

T at anieter	Cus Humber	Result	KL		Units	Analysis Date	Flag	Di
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	10.09.18 15.58	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0		mg/kg	10.09.18 15.58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0		mg/kg	10.09.18 15.58	U	1
Total TPH	PHC635	<15.0	15.0		mg/kg	10.09.18 15.58	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	91	%	70-135	10.09.18 15.58		
o-Terphenyl		84-15-1	93	%	70-135	10.09.18 15.58		





LT Environmental, Inc., Arvada, CO

Sample Id:SS02Lab Sample Id:601524-003	Matrix: Soil Date Collected: 10.02.18 12.30	Date Received:10.05.18 10.50 Sample Depth: 3 ft
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3066331	Date Prep: 10.12.18 12.00	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00199	0.00199		mg/kg	10.12.18 22.09	U	1
Toluene	108-88-3	< 0.00199	0.00199		mg/kg	10.12.18 22.09	U	1
Ethylbenzene	100-41-4	< 0.00199	0.00199		mg/kg	10.12.18 22.09	U	1
m,p-Xylenes	179601-23-1	< 0.00398	0.00398		mg/kg	10.12.18 22.09	U	1
o-Xylene	95-47-6	< 0.00199	0.00199		mg/kg	10.12.18 22.09	U	1
Total Xylenes	1330-20-7	< 0.00199	0.00199		mg/kg	10.12.18 22.09	U	1
Total BTEX		< 0.00199	0.00199		mg/kg	10.12.18 22.09	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	112	%	70-130	10.12.18 22.09		
4-Bromofluorobenzene		460-00-4	93	%	70-130	10.12.18 22.09		





LT Environmental, Inc., Arvada, CO

Sample Id:	SS02A		Matrix:	Soil	Γ	Date Received:10	0.05.18 10.50)
Lab Sample Id:	601524-004		Date Collect	ed: 10.02.18 12.45	S	ample Depth: 4	ft	
Analytical Mether	hod: Inorganic Anions	by EPA 300			Р	rep Method: E3	300P	
Tech:	CHE				%	6 Moisture:		
Analyst:	CHE		Date Prep:	10.09.18 12.30	B	Basis: W	et Weight	
Seq Number:	3065903							
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Parameter Chloride		Cas Number 16887-00-6	Result	RL 4.95	Units mg/kg	Analysis Date 10.09.18 21.39	Flag	Dil
						•	Flag	Dil
Chloride	hod: TPH by SW8015	16887-00-6			mg/kg	•		Dil

					,	, infoliotare.		
Analyst: ARM		Date Pre	p: 10.09.	18 09.00	В	asis: We	t Weight	
Seq Number: 3065914								
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9		mg/kg	10.09.18 16.17	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9		mg/kg	10.09.18 16.17	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9		mg/kg	10.09.18 16.17	U	1
Total TPH	PHC635	<14.9	14.9		mg/kg	10.09.18 16.17	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	92	%	70-135	10.09.18 16.17		
o-Terphenyl		84-15-1	92	%	70-135	10.09.18 16.17		





LT Environmental, Inc., Arvada, CO

Sample Id:SS02ALab Sample Id:601524-004	Matrix: Soil Date Collected: 10.02.18 12.45	Date Received:10.05.18 10.50 Sample Depth: 4 ft
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3066331	Date Prep: 10.12.18 12.00	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	10.12.18 22.29	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	10.12.18 22.29	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	10.12.18 22.29	U	1
m,p-Xylenes	179601-23-1	< 0.00399	0.00399		mg/kg	10.12.18 22.29	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	10.12.18 22.29	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	10.12.18 22.29	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	10.12.18 22.29	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	111	%	70-130	10.12.18 22.29		
4-Bromofluorobenzene		460-00-4	113	%	70-130	10.12.18 22.29		





LT Environmental, Inc., Arvada, CO

by EPA 300	Date Prep:	10.09.18 12.30	%	ep Method: E3 Moisture: sis: W	00P et Weight	
Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
16887-00-6	259	4.95	mg/kg	10.09.18 21.44		1
			D	an Mathada TX	2100 5 D	
				fed De	Iod Prep Method: TX	Iod Prep Method: TX1005P

marytical method. If filog 50000	10 10100				-	rep method. 17	110001	
Tech: ARM					9	6 Moisture:		
Analyst: ARM		Date Pre	p: 10.09.1	8 09.00	E	Basis: W	et Weight	
Seq Number: 3065914								
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	10.09.18 16.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0		mg/kg	10.09.18 16.35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0		mg/kg	10.09.18 16.35	U	1
Total TPH	PHC635	<15.0	15.0		mg/kg	10.09.18 16.35	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	85	%	70-135	10.09.18 16.35		
o-Terphenyl		84-15-1	87	%	70-135	10.09.18 16.35		





LT Environmental, Inc., Arvada, CO

Sample Id:SS03Lab Sample Id:601524-005	Matrix: Soil Date Collected: 10.02.18 13.10	Date Received:10.05.18 10.50 Sample Depth: 3 ft
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3066331	Date Prep: 10.12.18 12.00	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00202	0.00202		mg/kg	10.12.18 22.49	U	1
Toluene	108-88-3	< 0.00202	0.00202		mg/kg	10.12.18 22.49	U	1
Ethylbenzene	100-41-4	< 0.00202	0.00202		mg/kg	10.12.18 22.49	U	1
m,p-Xylenes	179601-23-1	< 0.00403	0.00403		mg/kg	10.12.18 22.49	U	1
o-Xylene	95-47-6	< 0.00202	0.00202		mg/kg	10.12.18 22.49	U	1
Total Xylenes	1330-20-7	< 0.00202	0.00202		mg/kg	10.12.18 22.49	U	1
Total BTEX		< 0.00202	0.00202		mg/kg	10.12.18 22.49	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	112	%	70-130	10.12.18 22.49		
4-Bromofluorobenzene		460-00-4	113	%	70-130	10.12.18 22.49		





LT Environmental, Inc., Arvada, CO

Sample Id:	SS03A		Matrix:	Soil		Date Received:10.0	05.18 10.5	C
Lab Sample I	d: 601524-006		Date Colle	cted: 10.02.18 13.15	5 Sample Depth: 4 ft			
Analytical M	ethod: Inorganic Anion	s by EPA 300				Prep Method: E30	00P	
Tech:	CHE					% Moisture:		
Analyst:	CHE		Date Prep:	10.09.18 12.30		Basis: We	t Weight	
Seq Number:	3065903							
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride		16887-00-6	378	4.95	mg/kg	10.09.18 21.50		1

Analytical Method: TPH by SW801	5 Mod				Р	rep Method: TX	1005P	
Tech: ARM					%	6 Moisture:		
Analyst: ARM		Date Pre	p: 10.09.	18 09.00	В	asis: We	et Weight	
Seq Number: 3065914								
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	10.09.18 16.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0		mg/kg	10.09.18 16.54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0		mg/kg	10.09.18 16.54	U	1
Total TPH	PHC635	<15.0	15.0		mg/kg	10.09.18 16.54	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	94	%	70-135	10.09.18 16.54		
o-Terphenyl		84-15-1	94	%	70-135	10.09.18 16.54		





LT Environmental, Inc., Arvada, CO

Sample Id:SS03ALab Sample Id:601524-006	Matrix: Soil Date Collected: 10.02.18 13.15	Date Received:10.05.18 10.50 Sample Depth: 4 ft			
Analytical Method: BTEX by EPA 8021B Tech: ALJ Analyst: ALJ	Date Prep: 10.12.18 12.00	Prep Method: SW5030B % Moisture: Basis: Wet Weight			
Seq Number: 3066331	Date Flep. 10.12.16 12.00	Dasis. Wet Weight			

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	10.12.18 23.09	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	10.12.18 23.09	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	10.12.18 23.09	U	1
m,p-Xylenes	179601-23-1	< 0.00401	0.00401		mg/kg	10.12.18 23.09	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	10.12.18 23.09	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	10.12.18 23.09	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	10.12.18 23.09	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	113	%	70-130	10.12.18 23.09		
1,4-Difluorobenzene		540-36-3	111	%	70-130	10.12.18 23.09		





LT Environmental, Inc., Arvada, CO

Sample Id: SS04 Lab Sample Id: 601524-007		Matrix: Date Collec	Soil cted: 10.02.18 13.35	Date Received:10.05.18 10.50 Sample Depth: 3 ft			0
Analytical Method: Inorganic Anic	ns by EPA 300				Prep Method: E30	00P	
Tech: CHE					% Moisture:		
Analyst: CHE		Date Prep:	10.09.18 12.30		Basis: We	t Weight	
Seq Number: 3065903							
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	126	5.00	mg/kg	10.09.18 21.56		1
Analytical Method: TPH by SW80 Tech: ARM	15 Mod				Prep Method: TX % Moisture:	1005P	
Analyst: ARM		Date Prep:	10.09.18 09.00		Basis: We	t Weight	
Seq Number: 3065914							
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.09.18 17.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.09.18 17.12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.09.18 17.12	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.09.18 17.12	U	1

otal T	TPH	PHC635	<15.0	15.0		mg/kg	10.09.18 17.12	U	1
S	Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1	-Chlorooctane		111-85-3	91	%	70-135	10.09.18 17.12		
C	o-Terphenyl		84-15-1	90	%	70-135	10.09.18 17.12		





LT Environmental, Inc., Arvada, CO

Sample Id:SS04Lab Sample Id:601524-007	Matrix: Soil Date Collected: 10.02.18 13.35	Date Received:10.05.18 10.50 Sample Depth: 3 ft
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3066331	Date Prep: 10.12.18 12.00	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00198	0.00198		mg/kg	10.12.18 23.29	U	1
Toluene	108-88-3	< 0.00198	0.00198		mg/kg	10.12.18 23.29	U	1
Ethylbenzene	100-41-4	< 0.00198	0.00198		mg/kg	10.12.18 23.29	U	1
m,p-Xylenes	179601-23-1	< 0.00397	0.00397		mg/kg	10.12.18 23.29	U	1
o-Xylene	95-47-6	< 0.00198	0.00198		mg/kg	10.12.18 23.29	U	1
Total Xylenes	1330-20-7	< 0.00198	0.00198		mg/kg	10.12.18 23.29	U	1
Total BTEX		< 0.00198	0.00198		mg/kg	10.12.18 23.29	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	112	%	70-130	10.12.18 23.29		
1,4-Difluorobenzene		540-36-3	111	%	70-130	10.12.18 23.29		





LT Environmental, Inc., Arvada, CO

Sample Id: SS04A		Matrix:	Soil]	Date Received:10.	05.18 10.5	0
Lab Sample Id: 601524-008		Date Collec	cted: 10.02.18 13.40	Sample Depth: 4 ft			
Analytical Method: Inorganic	Anions by EPA 300]	Prep Method: E30	00P	
Tech: CHE				Q	% Moisture:		
Analyst: CHE		Date Prep:	10.09.18 12.30]	Basis: We	t Weight	
Seq Number: 3065903							
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	281	4.96	mg/kg	10.09.18 22.01		1

Analytical Method: TPH by SW801Tech:ARMAnalyst:ARMSeq Number:3065914	5 Mod	Date Pre	p: 10.09	.18 09.00	%	rep Method: TX 6 Moisture: 8asis: We	1005P t Weight	
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	10.09.18 17.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0		mg/kg	10.09.18 17.31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0		mg/kg	10.09.18 17.31	U	1
Total TPH	PHC635	<15.0	15.0		mg/kg	10.09.18 17.31	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	85	%	70-135	10.09.18 17.31		
o-Terphenyl		84-15-1	86	%	70-135	10.09.18 17.31		





LT Environmental, Inc., Arvada, CO

Sample Id:SS04ALab Sample Id:601524-008	Matrix: Soil Date Collected: 10.02.18 13.40	Date Received:10.05.18 10.50 Sample Depth: 4 ft		
Analytical Method: BTEX by EPA 8021B Tech: ALJ Analyst: ALJ	Date Prep: 10.12.18 12.00	Prep Method: SW5030B % Moisture: Basis: Wet Weight		
Seq Number: 3066331				

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00201	0.00201		mg/kg	10.12.18 23.50	U	1
Toluene	108-88-3	< 0.00201	0.00201		mg/kg	10.12.18 23.50	U	1
Ethylbenzene	100-41-4	< 0.00201	0.00201		mg/kg	10.12.18 23.50	U	1
m,p-Xylenes	179601-23-1	< 0.00402	0.00402		mg/kg	10.12.18 23.50	U	1
o-Xylene	95-47-6	< 0.00201	0.00201		mg/kg	10.12.18 23.50	U	1
Total Xylenes	1330-20-7	< 0.00201	0.00201		mg/kg	10.12.18 23.50	U	1
Total BTEX		< 0.00201	0.00201		mg/kg	10.12.18 23.50	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	110	%	70-130	10.12.18 23.50		
1,4-Difluorobenzene		540-36-3	111	%	70-130	10.12.18 23.50		





LT Environmental, Inc., Arvada, CO

JRU-17

Sample Id: SS05 Lab Sample Id: 601524-009		Matrix: Date Colle	Soil cted: 10.02.18 13.55		Date Received:10.0 Sample Depth: 1 ft		0
Analytical Method: Inorganic Anio	ns by EPA 300				Prep Method: E30)0P	
Tech: SCM					% Moisture:		
Analyst: SCM		Date Prep:	10.09.18 17.15		Basis: We	t Weight	
Seq Number: 3065911							
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	999	4.97	mg/kg	10.10.18 03.48		1
Analytical Method: TPH by SW80 Tech: ARM	15 Widd				Prep Method: TX	10051	
Analyst: ARM Seq Number: 3065914		Date Prep:	10.09.18 09.00		% Moisture: Basis: We	t Weight	
Analyst:ARMSeq Number:3065914	Cas Number	Date Prep: Result	10.09.18 09.00 RL			t Weight Flag	Dil
Analyst: ARM Seq Number: 3065914 Parameter	Cas Number PHC610	ľ			Basis: We	U	Dil
Analyst: ARM Seq Number: 3065914 Parameter Gasoline Range Hydrocarbons (GRO)		Result	RL	Units	Basis: We Analysis Date	Flag	
Analyst: ARM	PHC610	Result <15.0	RL 15.0	Units mg/kg	Basis: Wet Analysis Date 10.09.18 17.49	Flag	
Analyst: ARM Seq Number: 3065914 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO)	PHC610 C10C28DRO	Result <15.0 1810	RL 15.0 15.0	Units mg/kg mg/kg	Basis: West Analysis Date 10.09.18 17.49 10.09.18 17.49	Flag	

%

%

86

99

70-135

70-135

10.09.18 17.49

10.09.18 17.49

111-85-3

84-15-1

1-Chlorooctane

o-Terphenyl





LT Environmental, Inc., Arvada, CO

Sample Id:SS05Lab Sample Id:601524-009	Matrix: Soil Date Collected: 10.02.18 13.55	Date Received:10.05.18 10.50 Sample Depth: 1 ft
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3066331	Date Prep: 10.12.18 12.00	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00202	0.00202		mg/kg	10.13.18 00.10	U	1
Toluene	108-88-3	< 0.00202	0.00202		mg/kg	10.13.18 00.10	U	1
Ethylbenzene	100-41-4	< 0.00202	0.00202		mg/kg	10.13.18 00.10	U	1
m,p-Xylenes	179601-23-1	< 0.00404	0.00404		mg/kg	10.13.18 00.10	U	1
o-Xylene	95-47-6	< 0.00202	0.00202		mg/kg	10.13.18 00.10	U	1
Total Xylenes	1330-20-7	< 0.00202	0.00202		mg/kg	10.13.18 00.10	U	1
Total BTEX		< 0.00202	0.00202		mg/kg	10.13.18 00.10	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	125	%	70-130	10.13.18 00.10		
1,4-Difluorobenzene		540-36-3	101	%	70-130	10.13.18 00.10		





LT Environmental, Inc., Arvada, CO

Sample Id:SS05ALab Sample Id:601524-010		Matrix: Date Collec	Soil ted: 10.02.18 14.10		Date Received:10.05.18 10.50 Sample Depth: 4 ft Prep Method: E300P		
Analytical Method:Inorganic AnioTech:SCMAnalyst:SCMSeq Number:3065911	ons by EPA 300	Date Prep:	10.09.18 17.15		Prep Method: E30 % Moisture: Basis: We	00P et Weight	
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	4500	50.2	mg/kg	10.10.18 03.54		10
Analytical Method: TPH by SW80 Tech: ARM Analyst: ARM Seq Number: 3065914	015 Mod	Date Prep:	10.09.18 09.00		Prep Method: TX % Moisture: Basis: We	1005P et Weight	

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	10.09.18 18.08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0		mg/kg	10.09.18 18.08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0		mg/kg	10.09.18 18.08	U	1
Total TPH	PHC635	<15.0	15.0		mg/kg	10.09.18 18.08	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	86	%	70-135	10.09.18 18.08		
o-Terphenyl		84-15-1	91	%	70-135	10.09.18 18.08		





LT Environmental, Inc., Arvada, CO

Sample Id:SS05ALab Sample Id:601524-010	Matrix: Soil Date Collected: 10.02.18 14.10	Date Received:10.05.18 10.50 Sample Depth: 4 ft
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3066331	Date Prep: 10.12.18 12.00	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00199	0.00199		mg/kg	10.13.18 00.30	U	1
Toluene	108-88-3	< 0.00199	0.00199		mg/kg	10.13.18 00.30	U	1
Ethylbenzene	100-41-4	< 0.00199	0.00199		mg/kg	10.13.18 00.30	U	1
m,p-Xylenes	179601-23-1	< 0.00398	0.00398		mg/kg	10.13.18 00.30	U	1
o-Xylene	95-47-6	< 0.00199	0.00199		mg/kg	10.13.18 00.30	U	1
Total Xylenes	1330-20-7	< 0.00199	0.00199		mg/kg	10.13.18 00.30	U	1
Total BTEX		< 0.00199	0.00199		mg/kg	10.13.18 00.30	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	102	%	70-130	10.13.18 00.30		
4-Bromofluorobenzene		460-00-4	108	%	70-130	10.13.18 00.30		





LT Environmental, Inc., Arvada, CO

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Seq Number: 3065914							
Analyst: ARM		Date Prep:	10.09.18 09.00		Basis: We	et Weight	
Tech: ARM					% Moisture:		
Analytical Method: TPH by SW801	15 Mod				Prep Method: TX	1005P	
Chloride	16887-00-6	454	4.96	mg/kg	10.10.18 03.59		1
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	
Seq Number: 3065911							
Analyst: SCM		Date Prep:	10.09.18 17.15		Basis: We	t Weight	
Tech: SCM					% Moisture:		
Analytical Method: Inorganic Anio	ns by EPA 300				Prep Method: E3	90P	
Lab Sample Id: 601524-011		Date Collec	cted: 10.02.18 14.20		Sample Depth: 1 ft		

Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0		mg/kg	10.09.18 19.04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0		mg/kg	10.09.18 19.04	U	1
Total TPH	PHC635	<15.0	15.0		mg/kg	10.09.18 19.04	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	89	%	70-135	10.09.18 19.04		





LT Environmental, Inc., Arvada, CO

Sample Id:SS06Lab Sample Id:601524-011	Matrix: Soil Date Collected: 10.02.18 14.20	Date Received:10.05.18 10.50 Sample Depth: 1 ft
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3066331	Date Prep: 10.12.18 12.00	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	10.13.18 01.49	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	10.13.18 01.49	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	10.13.18 01.49	U	1
m,p-Xylenes	179601-23-1	< 0.00399	0.00399		mg/kg	10.13.18 01.49	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	10.13.18 01.49	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	10.13.18 01.49	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	10.13.18 01.49	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	92	%	70-130	10.13.18 01.49		
1,4-Difluorobenzene		540-36-3	109	%	70-130	10.13.18 01.49		





LT Environmental, Inc., Arvada, CO

Sample Id:	SS06A		Matrix:	Soil		Date Received:10.0	Received:10.05.18 10.5		
Lab Sample I	d: 601524-012		Date Colle	ected: 10.02.18 14.35	Sample Depth: 4 ft				
Analytical M	ethod: Inorganic Anio	ons by EPA 300				Prep Method: E30)0P		
Tech:	SCM					% Moisture:			
Analyst:	SCM		Date Prep:	10.09.18 17.15		Basis: We	t Weight		
Seq Number:	3065911								
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil	
Chloride		16887-00-6	441	4.95	mg/kg	10.10.18 04.05		1	

Analytical Method: TPH by SW801	5 Mod				P	rep Method: TX	(1005P	
Tech: ARM					9	6 Moisture:		
Analyst: ARM		Date Pre	p: 10.09	.18 09.00	E	Basis: We	et Weight	
Seq Number: 3065914								
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	10.09.18 19.23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0		mg/kg	10.09.18 19.23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0		mg/kg	10.09.18 19.23	U	1
Total TPH	PHC635	<15.0	15.0		mg/kg	10.09.18 19.23	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	88	%	70-135	10.09.18 19.23		
o-Terphenyl		84-15-1	91	%	70-135	10.09.18 19.23		





LT Environmental, Inc., Arvada, CO

Sample Id:SS06ALab Sample Id:601524-012	Matrix: Soil Date Collected: 10.02.18 14.35	Date Received:10.05.18 10.50 Sample Depth:4 ft
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3066331	Date Prep: 10.12.18 12.00	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00201	0.00201		mg/kg	10.13.18 02.09	U	1
Toluene	108-88-3	< 0.00201	0.00201		mg/kg	10.13.18 02.09	U	1
Ethylbenzene	100-41-4	< 0.00201	0.00201		mg/kg	10.13.18 02.09	U	1
m,p-Xylenes	179601-23-1	< 0.00402	0.00402		mg/kg	10.13.18 02.09	U	1
o-Xylene	95-47-6	< 0.00201	0.00201		mg/kg	10.13.18 02.09	U	1
Total Xylenes	1330-20-7	< 0.00201	0.00201		mg/kg	10.13.18 02.09	U	1
Total BTEX		< 0.00201	0.00201		mg/kg	10.13.18 02.09	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	99	%	70-130	10.13.18 02.09		
1,4-Difluorobenzene		540-36-3	108	%	70-130	10.13.18 02.09		





LT Environmental, Inc., Arvada, CO

Sample Id: SS07 Lab Sample Id: 601524-013		Matrix: Soil Date Collected: 10.02.18 15.10)		
Analytical Method: Inorganic A Tech: SCM Analyst: SCM Seq Number: 3065911	nions by EPA 300	Date Prep:	10.09.18 17.15		Prep Method: % Moisture: Basis:	E300P Wet Weight	
Parameter	Cas Number	Result	RL	Units	Analysis Da	ate Flag	Dil
Chloride	16887-00-6	1240	5.02	mg/kg	10.10.18 04.	11	1
Analytical Method: TPH by SW Tech: ARM Analyst: ARM Seq Number: 3065914	78015 Mod	Date Prep:	10.09.18 09.00		Prep Method: % Moisture: Basis:	TX1005P Wet Weight	

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	10.09.18 19.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0		mg/kg	10.09.18 19.41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0		mg/kg	10.09.18 19.41	U	1
Total TPH	PHC635	<15.0	15.0		mg/kg	10.09.18 19.41	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	99	%	70-135	10.09.18 19.41		
o-Terphenyl		84-15-1	103	%	70-135	10.09.18 19.41		





LT Environmental, Inc., Arvada, CO

Sample Id:SS07Lab Sample Id:601524-013	Matrix: Soil Date Collected: 10.02.18 15.10	Date Received:10.05.18 10.50 Sample Depth: 3 ft
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3066331	Date Prep: 10.12.18 12.00	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00201	0.00201		mg/kg	10.13.18 02.29	U	1
Toluene	108-88-3	< 0.00201	0.00201		mg/kg	10.13.18 02.29	U	1
Ethylbenzene	100-41-4	< 0.00201	0.00201		mg/kg	10.13.18 02.29	U	1
m,p-Xylenes	179601-23-1	< 0.00402	0.00402		mg/kg	10.13.18 02.29	U	1
o-Xylene	95-47-6	< 0.00201	0.00201		mg/kg	10.13.18 02.29	U	1
Total Xylenes	1330-20-7	< 0.00201	0.00201		mg/kg	10.13.18 02.29	U	1
Total BTEX		< 0.00201	0.00201		mg/kg	10.13.18 02.29	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	108	%	70-130	10.13.18 02.29		
1,4-Difluorobenzene		540-36-3	112	%	70-130	10.13.18 02.29		





LT Environmental, Inc., Arvada, CO

	SS07A		Matrix:	Soil		Date Received:10.0	05.18 10.5	0
Lab Sample Id	: 601524-014		Date Coll	lected: 10.02.18 15.15	Sample Depth: 4 ft			
Analytical Met	thod: Inorganic Anion	s by EPA 300				Prep Method: E30)0P	
Tech:	SCM					% Moisture:		
Analyst:	SCM		Date Prep	p: 10.09.18 17.15		Basis: We	t Weight	
Seq Number:	3065911							
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride		16887-00-6	1370	25.0	mg/kg	10.10.18 04.16		5

Analytical Method: TPH by SW801	5 Mod				P	Prep Method: TX1005P			
Tech: ARM					9	6 Moisture:			
Analyst: ARM		Date Pre	p: 10.09	.18 09.00	E	Basis: We	et Weight		
Seq Number: 3065914									
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil	
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9		mg/kg	10.09.18 20.00	U	1	
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9		mg/kg	10.09.18 20.00	U	1	
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9		mg/kg	10.09.18 20.00	U	1	
Total TPH	PHC635	<14.9	14.9		mg/kg	10.09.18 20.00	U	1	
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
1-Chlorooctane		111-85-3	89	%	70-135	10.09.18 20.00			
o-Terphenyl		84-15-1	93	%	70-135	10.09.18 20.00			





LT Environmental, Inc., Arvada, CO

Sample Id:SS07ALab Sample Id:601524-014	Matrix: Soil Date Collected: 10.02.18 15.15	Date Received:10.05.18 10.50 Sample Depth: 4 ft
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3066331	Date Prep: 10.12.18 12.00	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00198	0.00198		mg/kg	10.13.18 02.49	U	1
Toluene	108-88-3	< 0.00198	0.00198		mg/kg	10.13.18 02.49	U	1
Ethylbenzene	100-41-4	< 0.00198	0.00198		mg/kg	10.13.18 02.49	U	1
m,p-Xylenes	179601-23-1	< 0.00397	0.00397		mg/kg	10.13.18 02.49	U	1
o-Xylene	95-47-6	< 0.00198	0.00198		mg/kg	10.13.18 02.49	U	1
Total Xylenes	1330-20-7	< 0.00198	0.00198		mg/kg	10.13.18 02.49	U	1
Total BTEX		< 0.00198	0.00198		mg/kg	10.13.18 02.49	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	112	%	70-130	10.13.18 02.49		
4-Bromofluorobenzene		460-00-4	109	%	70-130	10.13.18 02.49		





LT Environmental, Inc., Arvada, CO

Chloride		16887-00-6	33.7	4.99	mg/kg	10.10.18 10.39		1
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Seq Number:	3066048							
Analyst:	SCM		Date Prep:	10.10.18 09.00]	Basis: We	et Weight	
Tech:	SCM					% Moisture:		
Analytical Me	ethod: Inorganic Anio	ns by EPA 300]	Prep Method: E3	00P	
Lab Sample Id	d: 601524-015		Date Colle	ected: 10.03.18 09.05		Sample Depth: 3 ft		
Sample Id:	SS08		Matrix:	Soil]	Date Received:10.	05.18 10.5	0

Analytical Method: TPH by SW801				Р	rep Method: TX	1005P		
Tech: ARM					%	6 Moisture:		
Analyst: ARM		Date Pre	p: 10.09	.18 09.00	В	asis: We	t Weight	
Seq Number: 3065914								
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	10.09.18 20.19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0		mg/kg	10.09.18 20.19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0		mg/kg	10.09.18 20.19	U	1
Total TPH	PHC635	<15.0	15.0		mg/kg	10.09.18 20.19	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	92	%	70-135	10.09.18 20.19		
o-Terphenyl		84-15-1	92	%	70-135	10.09.18 20.19		





LT Environmental, Inc., Arvada, CO

Sample Id:SS08Lab Sample Id:601524-015	Matrix: Soil Date Collected: 10.03.18 09.05	Date Received:10.05.18 10.50 Sample Depth: 3 ft
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3066331	Date Prep: 10.12.18 12.00	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	10.13.18 03.09	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	10.13.18 03.09	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	10.13.18 03.09	U	1
m,p-Xylenes	179601-23-1	< 0.00399	0.00399		mg/kg	10.13.18 03.09	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	10.13.18 03.09	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	10.13.18 03.09	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	10.13.18 03.09	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	109	%	70-130	10.13.18 03.09		
4-Bromofluorobenzene		460-00-4	112	%	70-130	10.13.18 03.09		





LT Environmental, Inc., Arvada, CO

Sample Id:	SS08A		Matrix:	Soil]	Date Received:10.	05.18 10.5	0	
Lab Sample Id: 601524-016			Date Coll	ected: 10.03.18 09.10	Sample Depth: 4 ft				
Analytical M	ethod: Inorganic Anior	s by EPA 300]	Prep Method: E3	90P		
Tech:	SCM				(% Moisture:			
Analyst:	SCM		Date Prep	: 10.10.18 09.00]	Basis: We	t Weight		
Seq Number:	3066048								
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil	
Chloride		16887-00-6	86.3	4.95	mg/kg	10.10.18 10.45		1	

Analytical Method: TPH by SW801				Р	rep Method: TX	1005P		
Tech: ARM					%	6 Moisture:		
Analyst: ARM		Date Pre	p: 10.09	.18 09.00	В	asis: We	t Weight	
Seq Number: 3065914								
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	10.09.18 20.38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0		mg/kg	10.09.18 20.38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0		mg/kg	10.09.18 20.38	U	1
Total TPH	PHC635	<15.0	15.0		mg/kg	10.09.18 20.38	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	91	%	70-135	10.09.18 20.38		
o-Terphenyl		84-15-1	96	%	70-135	10.09.18 20.38		




LT Environmental, Inc., Arvada, CO

Sample Id:SS08ALab Sample Id:601524-016	Matrix: Soil Date Collected: 10.03.18 09.10	Date Received:10.05.18 10.50 Sample Depth:4 ft
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3066331	Date Prep: 10.12.18 12.00	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	10.13.18 03.29	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	10.13.18 03.29	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	10.13.18 03.29	U	1
m,p-Xylenes	179601-23-1	< 0.00401	0.00401		mg/kg	10.13.18 03.29	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	10.13.18 03.29	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	10.13.18 03.29	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	10.13.18 03.29	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	111	%	70-130	10.13.18 03.29		
4-Bromofluorobenzene		460-00-4	110	%	70-130	10.13.18 03.29		





LT Environmental, Inc., Arvada, CO

Sample Id: SS09 Lab Sample Id: 601524-(017	Matrix: Date Collec	Soil ted: 10.03.18 09.30		Date Received:10 Sample Depth: 3 f		0
Analytical Method: Inor Tech: SCM Analyst: SCM Seq Number: 3066048	ganic Anions by EPA 300	Date Prep:	10.10.18 09.00		Prep Method: E3 % Moisture: Basis: Wo	00P et Weight	
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	449	4.96	mg/kg	10.10.18 10.50		1
Analytical Method: TPF	H by SW8015 Mod				Prep Method: TX	(1005P	
Tech: ARM	- ,				% Moisture:		
Analyst: ARM		Data Dram	10.00.18.00.00			at Weight	

Analyst: ARM Seq Number: 3065914		Date Pre	p: 10.09	.18 09.00	В	asis: Wet	Weight	
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	10.09.18 20.56	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0		mg/kg	10.09.18 20.56	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0		mg/kg	10.09.18 20.56	U	1
Total TPH	PHC635	<15.0	15.0		mg/kg	10.09.18 20.56	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	87	%	70-135	10.09.18 20.56		
o-Terphenyl		84-15-1	91	%	70-135	10.09.18 20.56		





LT Environmental, Inc., Arvada, CO

Sample Id:SS09Lab Sample Id:601524-017	Matrix: Soil Date Collected: 10.03.18 09.30	Date Received:10.05.18 10.50 Sample Depth: 3 ft
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3066331	Date Prep: 10.12.18 12.00	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00201	0.00201		mg/kg	10.13.18 03.49	U	1
Toluene	108-88-3	< 0.00201	0.00201		mg/kg	10.13.18 03.49	U	1
Ethylbenzene	100-41-4	< 0.00201	0.00201		mg/kg	10.13.18 03.49	U	1
m,p-Xylenes	179601-23-1	< 0.00402	0.00402		mg/kg	10.13.18 03.49	U	1
o-Xylene	95-47-6	< 0.00201	0.00201		mg/kg	10.13.18 03.49	U	1
Total Xylenes	1330-20-7	< 0.00201	0.00201		mg/kg	10.13.18 03.49	U	1
Total BTEX		< 0.00201	0.00201		mg/kg	10.13.18 03.49	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	118	%	70-130	10.13.18 03.49		
1,4-Difluorobenzene		540-36-3	110	%	70-130	10.13.18 03.49		





LT Environmental, Inc., Arvada, CO

Sample Id:	SS09A		Matrix:	Soil	Ι	Date Received:10	05.18 10.5	0	
Lab Sample I	Lab Sample Id: 601524-018			ected: 10.03.18 09.35	Sample Depth: 4 ft				
Analytical Me	ethod: Inorganic Anic	ons by EPA 300			I	Prep Method: E3	00P		
Tech:	SCM				ç	% Moisture:			
Analyst:	SCM		Date Prep	: 10.10.18 09.00	I	Basis: We	et Weight		
Seq Number:	3066048								
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil	
Chloride		16887-00-6	680	25.0	mg/kg	10.10.18 10.56		5	

Analytical Method: TPH by SW801	5 Mod				Р	rep Method: TX	1005P	
Tech: ARM					%	6 Moisture:		
Analyst: ARM		Date Pre	p: 10.09	.18 09.00	В	asis: We	t Weight	
Seq Number: 3065914								
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	10.09.18 21.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0		mg/kg	10.09.18 21.15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0		mg/kg	10.09.18 21.15	U	1
Total TPH	PHC635	<15.0	15.0		mg/kg	10.09.18 21.15	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	88	%	70-135	10.09.18 21.15		
o-Terphenyl		84-15-1	89	%	70-135	10.09.18 21.15		





LT Environmental, Inc., Arvada, CO

Sample Id:SS09ALab Sample Id:601524-018	Matrix: Soil Date Collected: 10.03.18 09.35	Date Received:10.05.18 10.50 Sample Depth: 4 ft
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3066331	Date Prep: 10.12.18 12.00	Prep Method:SW5030B% Moisture:Basis:Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00199	0.00199		mg/kg	10.13.18 04.09	U	1
Toluene	108-88-3	< 0.00199	0.00199		mg/kg	10.13.18 04.09	U	1
Ethylbenzene	100-41-4	< 0.00199	0.00199		mg/kg	10.13.18 04.09	U	1
m,p-Xylenes	179601-23-1	< 0.00398	0.00398		mg/kg	10.13.18 04.09	U	1
o-Xylene	95-47-6	< 0.00199	0.00199		mg/kg	10.13.18 04.09	U	1
Total Xylenes	1330-20-7	< 0.00199	0.00199		mg/kg	10.13.18 04.09	U	1
Total BTEX		< 0.00199	0.00199		mg/kg	10.13.18 04.09	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	112	%	70-130	10.13.18 04.09		
4-Bromofluorobenzene		460-00-4	108	%	70-130	10.13.18 04.09		





LT Environmental, Inc., Arvada, CO

Sample Id: SS10		Matrix:	Soil		Date Received:10.05.18 10.50 Sample Depth: 3 ft		
Lab Sample Id: 601524-019 Analytical Method: Inorganic Anio Tech: CHE Analyst: CHE Seq Number: 3065903	ns by EPA 300	Date Collec Date Prep:	2009.18 12.30 10.09.18 12.30		Prep Method: E3 % Moisture:		
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	569	4.95	mg/kg	10.09.18 21.05		1
Analytical Method: TPH by SW80	15 Mod				Prep Method: TX	(1005P	
Tech: ARM Analyst: ARM		Data Bran	10.09.18 09.00		% Moisture: Basis: We	et Weight	
Seq Number: 3065914		Date Prep:	10.07.18 07.00		Dasis. WC	A Weight	
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.09.18 21.34	U	1

Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0		mg/kg	10.09.18 21.34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0		mg/kg	10.09.18 21.34	U	1
Total TPH	PHC635	<15.0	15.0		mg/kg	10.09.18 21.34	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	92	%	70-135	10.09.18 21.34		
o-Terphenyl						10.09.18 21.34		





LT Environmental, Inc., Arvada, CO

Sample Id:SS10Lab Sample Id:601524-019	Matrix: Soil Date Collected: 10.03.18 09.50	Date Received:10.05.18 10.50 Sample Depth: 3 ft
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3066331	Date Prep: 10.12.18 12.00	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00201	0.00201		mg/kg	10.13.18 04.29	U	1
Toluene	108-88-3	< 0.00201	0.00201		mg/kg	10.13.18 04.29	U	1
Ethylbenzene	100-41-4	< 0.00201	0.00201		mg/kg	10.13.18 04.29	U	1
m,p-Xylenes	179601-23-1	< 0.00402	0.00402		mg/kg	10.13.18 04.29	U	1
o-Xylene	95-47-6	< 0.00201	0.00201		mg/kg	10.13.18 04.29	U	1
Total Xylenes	1330-20-7	< 0.00201	0.00201		mg/kg	10.13.18 04.29	U	1
Total BTEX		< 0.00201	0.00201		mg/kg	10.13.18 04.29	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	99	%	70-130	10.13.18 04.29		
1,4-Difluorobenzene		540-36-3	83	%	70-130	10.13.18 04.29		





LT Environmental, Inc., Arvada, CO

Chloride		16887-00-6	793	24.9	mg/kg	10.10.18 11.13		5
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Seq Number:	3066048							
Analyst:	SCM		Date Prep:	10.10.18 09.00		Basis: We	et Weight	
Tech:	SCM					% Moisture:		
Analytical Me	ethod: Inorganic Anion	s by EPA 300				Prep Method: E3	00P	
Lab Sample Id	d: 601524-020		Date Colle	cted: 10.03.18 09.55		Sample Depth: 4 ft		
Sample Id:	SS10A		Matrix:	Soil		Date Received:10.	05.18 10.5	0

Analytical Method: TPH by SW801: Tech: ARM Analyst: ARM Seq Number: 3065914	5 Mod	Date Pre	p: 10.09	18 09.00	%	Prep Method: TX 6 Moisture: Basis: We	1005P t Weight	
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9		mg/kg	10.09.18 21.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9		mg/kg	10.09.18 21.52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9		mg/kg	10.09.18 21.52	U	1
Total TPH	PHC635	<14.9	14.9		mg/kg	10.09.18 21.52	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane o-Terphenyl		111-85-3 84-15-1	88 90	% %	70-135 70-135	10.09.18 21.52 10.09.18 21.52		
o reiphenyi		04 15 1	70	/0	70 155	10.09.10 21.52		





LT Environmental, Inc., Arvada, CO

Sample Id:SS10ALab Sample Id:601524-020	Matrix: Soil Date Collected: 10.03.18 09.55	Date Received:10.05.18 10.50 Sample Depth: 4 ft
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3066331	Date Prep: 10.12.18 12.00	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	10.13.18 04.49	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	10.13.18 04.49	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	10.13.18 04.49	U	1
m,p-Xylenes	179601-23-1	< 0.00399	0.00399		mg/kg	10.13.18 04.49	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	10.13.18 04.49	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	10.13.18 04.49	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	10.13.18 04.49	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	124	%	70-130	10.13.18 04.49		
1,4-Difluorobenzene		540-36-3	130	%	70-130	10.13.18 04.49		





LT Environmental, Inc., Arvada, CO

Sample Id:	SS11		Matrix:	Soil]	Date Received:10.	05.18 10.5	0
Lab Sample I	d: 601524-021		Date Colle	cted: 10.03.18 10.15	10.15Sample Depth: 3 ft			
Analytical Me	ethod: Inorganic Anions	s by EPA 300]	Prep Method: E30)0P	
Tech:	SCM				(% Moisture:		
Analyst:	SCM		Date Prep:	10.10.18 09.00]	Basis: We	t Weight	
Seq Number:	3066048							
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride		16887-00-6	677	4.97	mg/kg	10.10.18 11.19		1

Analytical Method: TPH by SW801 Tech: ARM Analyst: ARM Seq Number: 3065804	5 Mod	Date Pre	p: 10.08	.18 08.00	%	rep Method: TX 6 Moisture: Basis: We	1005P et Weight	
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	10.08.18 11.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0		mg/kg	10.08.18 11.59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0		mg/kg	10.08.18 11.59	U	1
Total TPH	PHC635	<15.0	15.0		mg/kg	10.08.18 11.59	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	91	%	70-135	10.08.18 11.59		
o-Terphenyl		84-15-1	93	%	70-135	10.08.18 11.59		





LT Environmental, Inc., Arvada, CO

Sample Id:SS11Lab Sample Id:601524-021	Matrix:	Soil	Date Receiv	ed:10.05.18 10.50
	Date Collecte	ed: 10.03.18 10.15	Sample Dep	th: 3 ft
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3066343	Date Prep:	10.12.18 16.20	Prep Methor % Moisture Basis:	d: SW5030B Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00202	0.00202		mg/kg	10.13.18 07.48	U	1
Toluene	108-88-3	< 0.00202	0.00202		mg/kg	10.13.18 07.48	U	1
Ethylbenzene	100-41-4	< 0.00202	0.00202		mg/kg	10.13.18 07.48	U	1
m,p-Xylenes	179601-23-1	< 0.00403	0.00403		mg/kg	10.13.18 07.48	U	1
o-Xylene	95-47-6	< 0.00202	0.00202		mg/kg	10.13.18 07.48	U	1
Total Xylenes	1330-20-7	< 0.00202	0.00202		mg/kg	10.13.18 07.48	U	1
Total BTEX		< 0.00202	0.00202		mg/kg	10.13.18 07.48	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	119	%	70-130	10.13.18 07.48		
1,4-Difluorobenzene		540-36-3	125	%	70-130	10.13.18 07.48		





LT Environmental, Inc., Arvada, CO

	Matrix:	Soil		Date Received:10.05.18 10.5				
	Date Collected: 10.03.18 10.20			Sample Depth: 4 ft				
e Anions by EPA 300				Prep Method: E30)0P			
				% Moisture:				
	Date Prep:	10.10.18 09.00		Basis: We	t Weight			
Cas Number	Result	RL	Units	Analysis Date	Flag	Dil		
16887-00-6	786	4.95	mg/kg	10.10.18 11.24		1		
		Date Collec c Anions by EPA 300 Date Prep: Cas Number Result	Date Collected: 10.03.18 10.20 c Anions by EPA 300 Date Prep: 10.10.18 09.00 Cas Number Result RL	Date Collected: 10.03.18 10.20 c Anions by EPA 300 Date Prep: 10.10.18 09.00 Cas Number Result RL Units	Date Collected: 10.03.18 10.20 Sample Depth: 4 ft c Anions by EPA 300 Prep Method: E30 Date Prep: 10.10.18 09.00 Basis: We Cas Number Result RL Units Analysis Date	Date Collected: 10.03.18 10.20 Sample Depth: 4 ft e Anions by EPA 300 Prep Method: E300P Basis: Wet Weight Date Prep: 10.10.18 09.00 Cas Number Result Result RL Units Analysis Date Flag		

Analytical Method: TPH by SW801 Tech: ARM Analyst: ARM Seq Number: 3065804	5 Mod	Date Pre	р: 10.08	.18 08.00	%	rep Method: TX 6 Moisture: 8asis: We	1005P t Weight	
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9		mg/kg	10.08.18 12.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9		mg/kg	10.08.18 12.54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9		mg/kg	10.08.18 12.54	U	1
Total TPH	PHC635	<14.9	14.9		mg/kg	10.08.18 12.54	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	95	%	70-135	10.08.18 12.54		
o-Terphenyl		84-15-1	97	%	70-135	10.08.18 12.54		





LT Environmental, Inc., Arvada, CO

Sample Id:SS11ALab Sample Id:601524-022	Matrix: Soil Date Collected: 10.03.18	Date Received:10.05.18 10.5010.20Sample Depth: 4 ft
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3066343	Date Prep: 10.12.18	Prep Method: SW5030B % Moisture: 16.20 Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	10.13.18 08.09	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	10.13.18 08.09	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	10.13.18 08.09	U	1
m,p-Xylenes	179601-23-1	< 0.00401	0.00401		mg/kg	10.13.18 08.09	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	10.13.18 08.09	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	10.13.18 08.09	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	10.13.18 08.09	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	121	%	70-130	10.13.18 08.09		
1,4-Difluorobenzene		540-36-3	126	%	70-130	10.13.18 08.09		





LT Environmental, Inc., Arvada, CO

Sample Id:SW01Lab Sample Id:601524	-023	Matrix: Date Collec	Soil ted: 10.03.18 14.30		5.18 10.50 ft	
Analytical Method: In Tech: SCM Analyst: SCM Seq Number: 306604	organic Anions by EPA 300 3	Date Prep:	10.10.18 09.00	Q	Prep Method: E300 % Moisture: Basis: Wet V	P Weight
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag Dil
Chloride	16887-00-6	519	4.99	mg/kg	10.10.18 11.30	1
Analytical Method: TH	2H by SW8015 Mod			1	Prep Method: TX10	005P

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U 1
U 1
U 1
U 1
flag





LT Environmental, Inc., Arvada, CO

Sample Id:SW01Lab Sample Id:601524-023	Matrix: Soil Date Collected: 10.03.18 14.30	Date Received:10.05.18 10.50 Sample Depth: .5 - 2 ft
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3066343	Date Prep: 10.12.18 16.20	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00199	0.00199		mg/kg	10.13.18 08.29	U	1
Toluene	108-88-3	< 0.00199	0.00199		mg/kg	10.13.18 08.29	U	1
Ethylbenzene	100-41-4	< 0.00199	0.00199		mg/kg	10.13.18 08.29	U	1
m,p-Xylenes	179601-23-1	< 0.00398	0.00398		mg/kg	10.13.18 08.29	U	1
o-Xylene	95-47-6	< 0.00199	0.00199		mg/kg	10.13.18 08.29	U	1
Total Xylenes	1330-20-7	< 0.00199	0.00199		mg/kg	10.13.18 08.29	U	1
Total BTEX		< 0.00199	0.00199		mg/kg	10.13.18 08.29	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	122	%	70-130	10.13.18 08.29		
1,4-Difluorobenzene		540-36-3	128	%	70-130	10.13.18 08.29		





LT Environmental, Inc., Arvada, CO

Sample Id: SW02 Lab Sample Id: 601524-024		Matrix: Date Colle	Soil cted: 10.03.18 14.40		Date Received:10.05.18 10.50 Sample Depth: .5 - 2 ft		
Analytical Method: Inorganic Anio	ns by EPA 300				Prep Method: E30	00P	
Tech: SCM					% Moisture:		
Analyst: SCM		Date Prep:	10.10.18 09.00		Basis: We	t Weight	
Seq Number: 3066048							
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1390	4.98	mg/kg	10.10.18 11.36		1
Analytical Method: TPH by SW80	15 Mod				Prep Method: TX	1005P	
Tech: ARM					% Moisture:		
Analyst: ARM		Date Prep:	10.08.18 08.00		Basis: We	t Weight	
Seq Number: 3065804							
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	10.08.18 13.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	1250	14.9	mg/kg	10.08.18 13.32		1

Diesel Range Organics (DRO)	CI0C28DRO	1250	14.9		mg/kg	10.08.18 13.32		1	
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	18.2	14.9		mg/kg	10.08.18 13.32		1	
Total TPH	PHC635	1270	14.9		mg/kg	10.08.18 13.32		1	
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
1-Chlorooctane		111-85-3	93	%	70-135	10.08.18 13.32			
o-Terphenyl		84-15-1	103	%	70-135	10.08.18 13.32			





LT Environmental, Inc., Arvada, CO

Sample Id:SW02Lab Sample Id:601524-024	Matrix: Soil Date Collected: 10.03.18 14.40	Date Received:10.05.18 10.50 Sample Depth: .5 - 2 ft
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3066343	Date Prep: 10.12.18 16.20	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	10.13.18 08.49	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	10.13.18 08.49	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	10.13.18 08.49	U	1
m,p-Xylenes	179601-23-1	< 0.00399	0.00399		mg/kg	10.13.18 08.49	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	10.13.18 08.49	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	10.13.18 08.49	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	10.13.18 08.49	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	121	%	70-130	10.13.18 08.49		
4-Bromofluorobenzene		460-00-4	129	%	70-130	10.13.18 08.49		





LT Environmental, Inc., Arvada, CO

Sample Id: SW03 Lab Sample Id: 601524-025		Matrix: Date Collect	Soil ed: 10.03.18 14.45		Date Received:10 Sample Depth: .5)
Analytical Method: Inorganic Anio Tech: SCM Analyst: SCM Seq Number: 3066048	ons by EPA 300	Date Prep:	10.10.18 09.00		Prep Method: E3 % Moisture: Basis: W	300P et Weight	
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	465	4.97	mg/kg	10.10.18 11.58		1
Analytical Method: TPH by SW80 Tech: ARM Analyst: ARM Seq Number: 3065804)15 Mod	Date Prep:	10.08.18 08.00		Prep Method: TX % Moisture: Basis: We	K1005P et Weight	
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil

Parameter	Cas Number	Kesuit	KL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	10.09.18 07.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0		mg/kg	10.09.18 07.21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0		mg/kg	10.09.18 07.21	U	1
Total TPH	PHC635	<15.0	15.0		mg/kg	10.09.18 07.21	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	98	%	70-135	10.09.18 07.21		
o-Terphenyl		84-15-1	100	%	70-135	10.09.18 07.21		





LT Environmental, Inc., Arvada, CO

Sample Id:SW03Lab Sample Id:601524-025	Matrix: Soil Date Collected: 10.03.18 14.45	Date Received:10.05.18 10.50 Sample Depth: .5 - 2 ft
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3066343	Date Prep: 10.12.18 16.20	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter Cas Number		Result RL			Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00201	0.00201		mg/kg	10.13.18 09.09	U	1
Toluene	108-88-3	< 0.00201	0.00201		mg/kg	10.13.18 09.09	U	1
Ethylbenzene	100-41-4	< 0.00201	0.00201		mg/kg	10.13.18 09.09	U	1
m,p-Xylenes	179601-23-1	< 0.00402	0.00402		mg/kg	10.13.18 09.09	U	1
o-Xylene	95-47-6	< 0.00201	0.00201		mg/kg	10.13.18 09.09	U	1
Total Xylenes	1330-20-7	< 0.00201	0.00201		mg/kg	10.13.18 09.09	U	1
Total BTEX		< 0.00201	0.00201		mg/kg	10.13.18 09.09	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	127	%	70-130	10.13.18 09.09		
4-Bromofluorobenzene		460-00-4	124	%	70-130	10.13.18 09.09		





LT Environmental, Inc., Arvada, CO

Sample Id:SW04Lab Sample Id:601524-026		Matrix: Date Collec	Soil ted: 10.03.18 14.20		Date Received:10.05.18 10.50 Sample Depth: .5 - 2 ft			
Analytical Method:Inorganic AnioTech:SCMAnalyst:SCMSeq Number:3066048	ns by EPA 300	Date Prep:	10.10.18 09.00		Prep Method: % Moisture: Basis:	E300P Wet Weight		
Parameter	Cas Number	Result	RL	Units	Analysis Da	ite Flag	Dil	
Chloride	16887-00-6	1160	4.98	mg/kg	10.10.18 12.0	04	1	
Analytical Method: TPH by SW80 Tech: ARM	15 Mod				Prep Method: % Moisture:	TX1005P		

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	10.08.18 14.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0		mg/kg	10.08.18 14.09	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0		mg/kg	10.08.18 14.09	U	1
Total TPH	PHC635	<15.0	15.0		mg/kg	10.08.18 14.09	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	88	%	70-135	10.08.18 14.09		
o-Terphenyl		84-15-1	87	%	70-135	10.08.18 14.09		





LT Environmental, Inc., Arvada, CO

Sample Id:SW04Lab Sample Id:601524-026	Matrix: Soil Date Collected: 10.03.18 14.20	Date Received:10.05.18 10.50 Sample Depth: .5 - 2 ft
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3066343	Date Prep: 10.12.18 16.20	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter Cas Number		Result RL			Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00201	0.00201		mg/kg	10.13.18 09.29	U	1
Toluene	108-88-3	< 0.00201	0.00201		mg/kg	10.13.18 09.29	U	1
Ethylbenzene	100-41-4	< 0.00201	0.00201		mg/kg	10.13.18 09.29	U	1
m,p-Xylenes	179601-23-1	< 0.00402	0.00402		mg/kg	10.13.18 09.29	U	1
o-Xylene	95-47-6	< 0.00201	0.00201		mg/kg	10.13.18 09.29	U	1
Total Xylenes	1330-20-7	< 0.00201	0.00201		mg/kg	10.13.18 09.29	U	1
Total BTEX		< 0.00201	0.00201		mg/kg	10.13.18 09.29	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	152	%	70-130	10.13.18 09.29	**	
1,4-Difluorobenzene		540-36-3	124	%	70-130	10.13.18 09.29		





LT Environmental, Inc., Arvada, CO

Sample Id: FS01			Matrix:	Soil		Date Received:10.05.18 10.50			
Lab Sample I	ld: 601524-027		Date Collec	ted: 10.03.18 09.05		ft			
Analytical M	ethod: Inorganic Anion	s by EPA 300				Prep Method: E3	800P		
Tech:	SCM					% Moisture:			
Analyst:	SCM		Date Prep:	10.10.18 09.00		Basis: W	et Weight		
Seq Number:	3066048								
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil	
Parameter Chloride		Cas Number 16887-00-6	Result 1030	RL 4.95	Units mg/kg	•	Flag	Dil 1	
						•	Flag	Dil	

Tech: ARM					%	Moisture:		
Analyst: ARM		Date Pre	Date Prep: 10.08.18 08.00			asis: We	t Weight	
Seq Number: 3065804								
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	10.08.18 14.27	U	1
Diesel Range Organics (DRO)	C10C28DRO	16.4	15.0		mg/kg	10.08.18 14.27		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0		mg/kg	10.08.18 14.27	U	1
Total TPH	PHC635	16.4	15.0		mg/kg	10.08.18 14.27		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	96	%	70-135	10.08.18 14.27		
o-Terphenyl		84-15-1	98	%	70-135	10.08.18 14.27		





LT Environmental, Inc., Arvada, CO

Sample Id:FS01Lab Sample Id:601524-027	Matrix: Soil Date Collected: 10.03.18 09.05	Date Received:10.05.18 10.50 Sample Depth: 3 ft			
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3066343	Date Prep: 10.12.18 16.20	Prep Method: SW5030B % Moisture: Basis: Wet Weight			

Parameter Cas Number		Result		Units	Analysis Date	Flag	Dil	
Benzene	71-43-2	< 0.00199	0.00199		mg/kg	10.13.18 09.49	U	1
Toluene	108-88-3	< 0.00199	0.00199		mg/kg	10.13.18 09.49	U	1
Ethylbenzene	100-41-4	< 0.00199	0.00199		mg/kg	10.13.18 09.49	U	1
m,p-Xylenes	179601-23-1	< 0.00398	0.00398		mg/kg	10.13.18 09.49	U	1
o-Xylene	95-47-6	< 0.00199	0.00199		mg/kg	10.13.18 09.49	U	1
Total Xylenes	1330-20-7	< 0.00199	0.00199		mg/kg	10.13.18 09.49	U	1
Total BTEX		< 0.00199	0.00199		mg/kg	10.13.18 09.49	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	128	%	70-130	10.13.18 09.49		
1,4-Difluorobenzene		540-36-3	125	%	70-130	10.13.18 09.49		



LABORATORIES

Flagging Criteria



Page 276 of 303

- 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	ent Sample	BLK	Method Blank					
BKS/LCS	S Blank Spike/Laboratory Control Sample	BKSD/LCSD	Blank Spike Duplicate/Labo	ratory 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 601524

LT Environmental, Inc.

JRU-17

Analytical Method:	Inorganic Anions b	y EPA 300						Pı	rep Method	l: E30	90P	
Seq Number:	3065903			Matrix:	rix: Solid			Date Prep: 10.09.18				
MB Sample Id:	7663790-1-BLK		LCS Sar	nple Id:	7663790-2	I-BKS		LCS	D Sample l	d: 766	53790-1-BSD	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	250	100	250	100	90-110	0	20	mg/kg	10.09.18 19:17	

Analytical Method:	Inorganic Anions b	y EPA 300						Pre	ep Methoo	l: E30	0P	
Seq Number:	3065911			Matrix:	Solid				Date Prep	p: 10.0	9.18	
MB Sample Id:	7663857-1-BLK		LCS Sar	nple Id:	7663857-	I-BKS		LCSE	Sample 3	ld: 766	3857-1-BSD	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD I	RPD Limit	Units	Analysis Date	Flag
Chloride	< 5.00	250	270	108	262	105	90-110	3	20	mg/kg	10.10.18 01:37	

Analytical Method:	Inorganic Anions b	y EPA 300						P	rep Meth	od: E30	0P	
Seq Number:	3066048			Matrix:	Solid				Date Pr	rep: 10.1	0.18	
MB Sample Id:	7663866-1-BLK		LCS Sar	nple Id:	7663866-	1-BKS		LCS	D Sampl	e Id: 766	3866-1-BSD	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Lim	it Units	Analysis Date	Flag
Chloride	< 5.00	250	254	102	254	102	90-110	0	20	mg/kg	10.10.18 10:11	

Analytical Method:	Inorganic Anions b	y EPA 300						Pr	ep Meth	od: E30	OP	
Seq Number:	3065903			Matrix:	Soil				Date Pr	ep: 10.0	9.18	
Parent Sample Id:	601518-028	01518-028			601518-02	28 S		MS	D Sample	e Id: 6015	518-028 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Lim	it Units	Analysis Date	Flag
Chloride	634	248	851	88	852	88	90-110	0	20	mg/kg	10.09.18 19:34	Х

Analytical Method:	Inorganic Anions b	y EPA 300						P	rep Meth	od: E30	0P	
Seq Number:	3065903			Matrix:	Soil				Date Pr	ep: 10.0	9.18	
Parent Sample Id:	601518-037		MS Sar	nple Id:	601518-03	37 S		MS	D Sample	e Id: 601	518-037 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Lim	it Units	Analysis Date	Flag
Chloride	259	248	499	97	497	96	90-110	0	20	mg/kg	10.09.18 20:53	

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

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

Received by OCD: 6/27/2023 12:54:22 PM



QC Summary 601524

LT Environmental, Inc.

JRU-17

Analytical Method: Seq Number: Parent Sample Id:	Inorganic Anions b 3065911 601779-001	oy EPA 300		Matrix: nple Id:	Soil 601779-00	01 S			rep Meth Date Pr D Sample	ep: 10.0		
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Lim	it Units	Analysis Date	Flag
Chloride	< 0.850	248	265	107	262	106	90-110	1	20	mg/kg	10.10.18 01:54	
Analytical Method:	0	oy EPA 300						Pi	rep Meth			
Seq Number:	3065911			Matrix:					Date Pr			
Parent Sample Id:	601780-001		MS Sar	nple Id:	601780-0	01 S		MS	D Sample	e Id: 6017	780-001 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Lim	it Units	Analysis Date	Flag
Chloride	<0.853	249	256	103	254	102	90-110	1	20	mg/kg	10.10.18 03:08	

Analytical Method:	Inorganic Anions b	y EPA 300						Pr	ep Metho	od: E30	0P	
Seq Number:	3066048			Matrix:	Soil				Date Pre	ep: 10.1	0.18	
Parent Sample Id:	601538-003		MS San	nple Id:	601538-00)3 S		MSI	O Sample	Id: 601	538-003 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limi	t Units	Analysis Date	Flag
Chloride	804	250	1060	102	1060	102	90-110	0	20	mg/kg	10.10.18 10:28	

Analytical Method:	Inorganic Anions b	y EPA 300						P	rep Metho	od: E30)P	
Seq Number:	3066048			Matrix:	Soil				Date Pro	ep: 10.1	0.18	
Parent Sample Id:	601546-001		MS Sar	nple Id:	601546-00	01 S		MS	D Sample	e Id: 6015	546-001 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Lim	it Units	Analysis Date	Flag
Chloride	< 0.850	248	261	105	264	106	90-110	1	20	mg/kg	10.10.18 11:47	

Analytical Method: Seq Number: MB Sample Id:	TPH by S 3065804 7663747-1		od	LCS Sar	Matrix: nple Id:	Solid 7663747-	1-BKS			Prep Methoc Date Prep SD Sample I	p: 10.0	1005P 98.18 3747-1-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	oons (GRO)	<8.00	1000	936	94	948	95	70-135	1	20	mg/kg	10.08.18 11:22	
Diesel Range Organics	(DRO)	<8.13	1000	983	98	966	97	70-135	2	20	mg/kg	10.08.18 11:22	
Surrogate		MB %Rec	MB Flag		CS Rec	LCS Flag	LCSI %Re			Limits	Units	Analysis Date	
1-Chlorooctane		92		9) 7		128		7	0-135	%	10.08.18 11:22	
o-Terphenyl		97		1	01		104		7	0-135	%	10.08.18 11:22	

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



BORATORIES



LT Environmental, Inc.

JRU-17

Analytical Method: Seq Number:	TPH by S 3065914	W8015 M	od		Matrix:	Solid			F	rep Methoo Date Prep		005P 9.18	
MB Sample Id:	7663874-2	I-BLK		LCS Sar	nple Id:	7663874-	1-BKS		LCS	SD Sample	ld: 7663	3874-1-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	oons (GRO)	<8.00	1000	995	100	933	93	70-135	6	20	mg/kg	10.09.18 14:07	
Diesel Range Organics	(DRO)	<8.13	1000	1020	102	939	94	70-135	8	20	mg/kg	10.09.18 14:07	
Surrogate		MB %Rec	MB Flag		CS Rec	LCS Flag	LCSI %Re		_	limits	Units	Analysis Date	
1-Chlorooctane		105		1	07		124		7	0-135	%	10.09.18 14:07	
o-Terphenyl		110		ç	98		100		7	0-135	%	10.09.18 14:07	

Analytical Method:	v	W8015 M	lod			G 'I				Prep Method		005P	
Seq Number:	3065804				Matrix:	Soil				Date Prep	p: 10.0	8.18	
Parent Sample Id:	1					601524-02	21 S		Μ	SD Sample	[d: 6015	524-021 SD	
Parameter		Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPI) RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarb	ons (GRO)	<7.98	997	903	91	915	92	70-135	1	20	mg/kg	10.08.18 12:17	
Diesel Range Organics	(DRO)	<8.10	997	947	95	957	96	70-135	1	20	mg/kg	10.08.18 12:17	
Surrogate					1S Rec	MS Flag	MSD %Re			Limits	Units	Analysis Date	
1-Chlorooctane				1	25		126			70-135	%	10.08.18 12:17	
o-Terphenyl				9	96		96			70-135	%	10.08.18 12:17	

Analytical Method: Seq Number:	TPH by SV 3065914	W8015 M	od		Matrix:	Soil			Ι	Prep Method Date Prer		.005P 9.18	
Parent Sample Id:	601524-00	1			nple Id:		01 S		M	SD Sample I		524-001 SD	
i arent Sample iu.	001524-00		~ •		1								
Parameter		Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarb	ons (GRO)	8.88	999	884	88	886	88	70-135	0	20	mg/kg	10.09.18 15:02	
Diesel Range Organics	(DRO)	<8.12	999	916	92	923	93	70-135	1	20	mg/kg	10.09.18 15:02	
Surrogate					AS Rec	MS Flag	MSD %Re			Limits	Units	Analysis Date	
1-Chlorooctane				1	20		114		7	0-135	%	10.09.18 15:02	
o-Terphenyl				9	91		90		7	0-135	%	10.09.18 15:02	

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



ORATORIES

QC Summary 601524

LT Environmental, Inc.

JRU-17

Analytical Method: Seq Number: MB Sample Id:	BTEX by EPA 802 3066331 7664143-1-BLK	1B	LCS Sar		Solid 7664143-	1-BKS			Prep Methoe Date Prej SD Sample	p: 10.1	5030B 2.18 4143-1-BSD	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPI	ORPD Limit	Units	Analysis Date	Flag
Benzene	< 0.00200	0.0998	0.0950	95	0.0976	98	70-130	3	35	mg/kg	10.12.18 19:29	
Toluene	< 0.00200	0.0998	0.0952	95	0.0978	98	70-130	3	35	mg/kg	10.12.18 19:29	
Ethylbenzene	< 0.00200	0.0998	0.0970	97	0.100	100	70-130	3	35	mg/kg	10.12.18 19:29	
m,p-Xylenes	< 0.00399	0.200	0.193	97	0.200	100	70-130	4	35	mg/kg	10.12.18 19:29	
o-Xylene	< 0.00200	0.0998	0.0974	98	0.101	101	70-130	4	35	mg/kg	10.12.18 19:29	
Surrogate	MB %Rec	MB Flag			LCS Flag	LCSD %Rec		-	Limits	Units	Analysis Date	
1,4-Difluorobenzene	108		9	96		98		,	70-130	%	10.12.18 19:29	
4-Bromofluorobenzene	99		(€7		100			70-130	%	10.12.18 19:29	

Analytical Method:	BTEX by EPA 802	1B				5030B											
Seq Number:	3066343			Matrix:	Solid		Date Prep: 10.12.18										
MB Sample Id:	7664149-1-BLK		LCS San	nple Id:	7664149-	1-BKS		4149-1-BSD									
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPI) RPD Limi	t Units	Analysis Date	Flag					
Benzene	< 0.00200	0.100	0.0990	0.0990 99		97	70-130	2	35	mg/kg	10.13.18 05:49						
Toluene	< 0.00200	0.100	0.0966	97	0.0898	90	70-130	7	35	mg/kg	10.13.18 05:49						
Ethylbenzene	< 0.00200	0.100	0.0902	90	0.0827	83	70-130	9	35	mg/kg	10.13.18 05:49						
m,p-Xylenes	< 0.00400	0.200	0.180	90	0.166	83	70-130	8	35	mg/kg	10.13.18 05:49						
o-Xylene	< 0.00200	0.100	0.0924	92	0.0861	86	70-130	7 35		mg/kg	10.13.18 05:49						
Surrogate	MB %Rec	MB Flag			LCS Flag	LCSD %Rec			Limits	Units	Analysis Date						
1,4-Difluorobenzene	122		ç	97		105			70-130	%	10.13.18 05:49						
4-Bromofluorobenzene	114		8	37		90			70-130	%	10.13.18 05:49						

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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



BORATORIES



Flag

LT Environmental, Inc.

JRU-17

Analytical Method:	BTEX by EPA 802	1B						Prep Metho	od: SW3	5030B				
Seq Number:	3066343			Matrix:	Soil			Date Prep: 10.12.18						
Parent Sample Id:	601524-021		MS San	nple Id:	601524-02	21 S		Μ	SD Sample	e Id: 601	524-021 SD			
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPI	D RPD Lim	it Units	Analysis Date			
Benzene	< 0.00201	0.100	0.0916	92	0.0924	91	70-130	1	35	mg/kg	10.13.18 06:29			
Toluene	< 0.00201	0.100	0.0873	87	0.0859	85	70-130	2	35	mg/kg	10.13.18 06:29			
Ethylbenzene	< 0.00201	0.100	0.0784	78	0.0784	78	70-130	0	35	mg/kg	10.13.18 06:29			
m,p-Xylenes	< 0.00402	0.201	0.157	78	0.158	79	70-130	1	35	mg/kg	10.13.18 06:29			
o-Xylene	< 0.00201	0.100	0.0798	80	0.0805	80	70-130	1	35	mg/kg	10.13.18 06:29			
Surrogate				1S Rec	MS Flag	MSD %Rec			Limits	Units	Analysis Date			
1,4-Difluorobenzene			ç) 9		100			70-130	%	10.13.18 06:29			
4-Bromofluorobenzene			ç	97		94			70-130	%	10.13.18 06:29			

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

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Released to Imaging: 7/3/2023 10:56:35 AM



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Final 1.000

SAMPLE RECEIPT	Sampler's Name: Fabria	P.O. Number: ZRP	Project Number:	Project Name: JRU - VT	Phone: (432) 704 - 5178	City, State ZIP: Midland	Address: 33 00 '\ +	Company Name: LT EM	Project Manager: Adrran Baker	LABORATORIES
Temp Blank: Yes No W	tabran Unbarei	2RP-2850		- V7		Midland, Tx 79705 V	33 00 '4' street, Building 1 / 4 103	LT Environmental	Barker	
Wet Icer Yes No	Due Date:	Rush:	Routine	Turn Around	Email: ABaker®	City, State ZIP:	3 Address:	Company Name:	Bill to: (if different)	C) uston,TX (281) 240-4200 Dal lidland,TX (432-704-5440) EL 5-392-7550) Phoenix,AZ (480
<u>STE</u> <u>GRO</u> 0~(x))(^ 20)		·)	ANALYSIS REQUEST	ABakerelteniacom			570	Kyle Littrell	Chain of Custody Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334 Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296 Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-20
				UEST	Delive	Repor	Sta	Progr		34 6 313-620-20

Revised Date 051418 Rev. 2018.1	6			5
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by: (Signature) Received by: (Signature) Date/Time	Date/Time Relinquished by: (Sig	Received by: (Signature)		Relinquished by: (Signature)
contractors. It assigns standard terms and conditions uch losses are due to circumstances beyond the control rms will be enforced unless previously negotiated.	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the contro of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	stitutes a valid purchase order from (ot assume any responsibility for any and a charge of \$5 for each sample s	his document and relinquishment of samples con be liable only for the cost of samples and shall n charge of \$75.00 will be applied to each project a	Notice: Signature of th of service. Xenco will of Xenco. A minimum
u Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn Mn Mo Ni Se Ag Ti U 1631/245.1/7470 /7471 : Hg	Sb As Ba Be B Cd Ca Cr Co Cl Sb As Ba Be Cd Cr Co Cu Pb	13PPM Texas 11 AI P / SPLP 6010: 8RCR/	200.8 / 6020: 8RC nd Metal(s) to be analyzed	Total 200.7 / 6010 Circle Method(s) a
		0955 4, 1	A 5 10/3/18	
	<	0935 4' 1		3
			10(3)18	
	x /	0910 41 1	5 10(3)18	
	X	4	81/2/01 5 A	
		1510 3' 1	81/2101 5 1002	
		1435 41 1	\$502B 5 10/2/18	
		1420 11 1	\$12 M S A S 022	
Sample Comments	BTE TPH CLA	Sampled Depth Number	ntification Matrix Sampled	Sample Identification
TAT starts the day received by the lab, if received by 4:30pm) XE 1) J 6 ()		s: Yes No (N/A)	Sample Custody Seals
	<u> </u> <u> </u> <u> </u> <u></u>	Correction Factor:	Yes No (N/A)	Cooler Custody Seals:
	<u>y</u>))(.30	Thermometer ID DC2 ainer		Temperature (°C):
	5TE 6RC 0 ~ (Wet Ice	EIPT Temp Blank: Yes No	SAMPLE RECEIPT
	(00) (00)	Due Date:	tabran Unbarri	Sampler's Name:
			220-2850	P.O. Number:
)	Routine V		Project Number:
QUEST Work Order Notes	ANALYSIS REQUEST	Turn Around	JRU-V7	Project Name:
Deliverables: EDD ADaPT C Other:	LIENACOM	Email: ABaker@	(432) 704-5178	Phone:
Reporting:Level III Level III PST/UST TRRP Level IV				City, State ZIP:
י ן ן		HUC3 Address:	mal	Address:
Program: UST/PST PRP Brownfields RRC Superfund	×	Company Name:	LT Environmental	Company Name:
Comments	kule Littrell	Bill to: (if different)	Adrian Barker	Project Manager:
16)/94-1296 Fampa,FL (813-620-2000) www.xenco.com Page 2 of 3	winulariu, ۱۸ (۲۰۵۲-۲۰۷۰) در ۲۵۵۵ (۲۵۱۵) ۲۵۵۵-۲۹۹۶ در ۲۵۵۵) ۲۵۵۹-۲296 Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (8	M (575-392-7550) Phoenix,AZ (48	Hobbs,N	

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Work Order No: 605

5	1 Marth	of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred within a more subcontractions in easily a structure within a more control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated. Relinquished by: (Signature) Received by: (Signature) Date/Time Relinquished by: (Signature) Received by: (S	Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed Notice: Signature of this document and relinquishment of same			7						Sample Identification	Sample Custody Seals	Cooler Custody Seals:	Received Intact:	Temperature (°C):	SAMPLE RECEIPT	Sampler's Name:	P.O. Number:	Project Number:	Project Name:	Phone: (City, State ZIP:		Company Name: (Project Manager:		
		lable only for the co rge of \$75.00 will be (Signature)	and Metal(s) to be			1201	Swoy	5003	5002	Swot	7 2155	ĥ	: Yes No	1	<u>(res)</u>	A		Intra L	222-285		JRU-17	432 704-5178	Widland, T	3300'A' Street	IT ENVIRON	Adrian Br	RATORIES	
		st of samples and s applied to each pro Receiv	D20: D be analyzed uishment of sample			2 10/3/	5 10(3/18			8115/01 5	5 10/2/18	v ix		NIA C	No		Temp Blank: Yes 🌈	Wipard	50			5178		set Building	Environmental	Bakker		
		es and shall not assume any res each project and a charge of \$5 Received by: (Signature)	8RCRA 13PPM TCLP / SPLF			18 1420	18 1445	_	-	<u> </u>	8 1010 01010		otal Co	Correction Factor:	83	Thermometer ID	No Wet Ice:	Due Date:	Rush:	Routine	2	Email:		(上103			Houston,T Midland, bs,NM (575-392-7	
		y responsibility for of \$5 for each sampl Ure)	CRA 13PPM Texas 11 Al TCLP / SPLP 6010: 8RCRA			31	12-5'	12-51	12-5	12-3	2,5.	Depth		0,0		rib ((Yes) No	Date:	1:		Turn Around	A Balcer	City, State ZIP:	Address:	Company Name:	Bill to: (if different)	X (281) 240-4200 TX (432-704-5440 '550) Phoenix,AZ	
	1/ 2102 /2/01	e submitted to Xenco Date/Time	Al Sb As Ba E RA Sb As Ba		N	- X R		- × × ×	5		 > \ \ X	101	\overline{EX}	1		ners 	0	ге. .)(л	r) nri	J)		@ LTENVicom			e: XX	ky le	Chain of Custody Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-333 Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296 Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (8	
6	715 2 (Jung)	but not analyzed	Be B Cd Ca C a Be Cd Cr Co		5/3	X	x	5 ð		κ κ 	×	CL	lori	Zc		30	0.1	00)	-		Me				Liffreu	2-0300 San Anto)585-3443 Lubbo anta,GA (770-449	
	2 Pulo	he client if such losses are due to nalyzed. These terms will be enforced Relinquished by: (Signature)	Cr Co Cu Fe So Cu Pb Mn		2018																ANALYSIS REQUEST						() () () ()	
		are due to circum enforced unless j	r Co Cu Fe Pb Mg Mn Mo Ni Cu Pb Mn Mo Ni Se Ag Tl U										,				-				QUEST	Deliverables: EDD	Reporting:Level II	State o	Program:		(210) 509-3334 306)794-1296 Tampa,FL (813-620-2000)	
		stances beyond the	MoNiK Se g Ti∪																			es: EDD	Level II CLeve	State of Project:	UST/PST PR	Wor	www.x	
	- A	nces beyond the control nously negotiated. Acusty negotiated.							22	<u>}</u>				ТАТ								ADaPT	IIII PST/UST	[P Brownfield	ğ	Work Order No:	
	2/01	Date	D2 Na Sr TI Sn U V Zn 1631/245.1/7470 /7471 : Hg			11	11	11 12 Defection				Sample Comments	lab, if received by 4:30pm	starts the day rec							Work Order Notes	Other:	Level III 🗍 PST/UST 🗍 TRRP 🗍 Level IV 🗍	[Program: UST/PST PRP Brownfields RRC Superfund	nents	Page 3	
	<u>ol 81</u>	Date/Time	/ Zn 7471 : Hg	NAT TRED LANDAGED CONTRACT OF DESIGNATION				Sandra	Sample	-		ments	-4:30pm	evied hv the							Notes			l	verfund		of N	

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Work Order No: (001524)

Received by OCD: 6/27/2023 12:54:22 PM



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: 10/05/2018 10:50:00 AM Temperature Measuring device used : R8 Work Order #: 601524 Sample Receipt Checklist Comments #1 *Temperature of cooler(s)? 4.1 #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 relinguished/ 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)?

#18 Water VOC samples have zero headspace?

* 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: 10/05/2018

No

N/A

Checklist reviewed by: Jession Vramer

Jessica Kramer

Date: 10/05/2018

Released to Imaging: 7/3/2023 10:56:35 AM

Received by OCD: 6/27/2023 12:54:22 PM

Released to Imaging: 7/3/2023 10:56:35 AM








ATTACHMENT 4: SOIL SAMPLE LOGS (2RP-1657 and 2RP-2850)

	LT Environmental, 508 West Stevens S Carlsbad, New Mexico Compliance · Engineering ·	Identifier: SS01 Project Name: JRU 17	Date: 10/4/2018 RP Number: 2RP-1657	
LITHOLO Lat/Long: 32.33518, -103.81928	DGIC / SOIL SAMPLI		Logged By: Hole Diameter:	Method: Total Depth:
Comments:	PID	-	NA	2 feet bgs
Comments:				
Moisture Content Chloride (ppm) Vapor (ppm)	I Sam Sam Stair.	Soil/Rock Type	Litholog	y/Remarks
62.3	0 1 SS01 1 SS01A 1 SS01B 2 3 4 4 5 6 7 8 9 10 11 11 11 12 12	gray	AVEL, berm fill, 20% sand, n ish brown, moderate odor, sta ID, moist, brown/gray, poorly I, staining, moderate odor	aning

.

Co	LT Environmenta 508 West Stevens Carlsbad, New Mexic ompliance · Engineering		Identifier: SS02 Project Name: JRU 17	Date: 10/4/2018 RP Number: 2RP-1657	
Lat/Long: 32.33518, -103.81928	Field Screer			Logged By: Hole Diameter:	Method: Total Depth:
Comments:	PID			NA	2 feet bgs
Comments.					
Moisture Content Chloride (ppm) Vapor (ppm) Staining		Sample South		Lithology/l	Remarks
4.7	0 SS02 SS02A 1 SS02B 2 3 4 5 6 7 8 9 10 11 12		grayish bi SAND, re	L, berm fill, 20% sand, m-f rown strong odor, staining eddish brown, poorly grade strong odor, stain	

LT Environin LT Environin Z	mental, Inc.		Com	LT Envi 508 Wes arlsbad, N pliance · E	t Steven Iew Mex ingineerin		Identifier: SS03 Project Name: JRU 17	Date: 10/4/2018 RP Number: 2RP-1657		
Lat/Long:		, -103.8192			Field Scree	LING LC	յե		Logged By: Hole Diameter:	Method: Total Depth:
Lat/Long.	52.55510	, -105.017.	20		PID	anng.			NA	2 feet bgs
Comment	s:									
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type		Litholc	ogy/Remarks
	0.6	3.6		SS03 SS03A SS03B	0 1 2 3 4 5 6 7 8 9 10 11 12		GP SP	grayish b SAND, r	L, berm fill, 20% sand, rown strong odor, stain eddish brown, poorly g strong odor, stain	ning

LI Environmental, Inc.	LT Environmer 508 West Stever Carlsbad, New Me; Compliance · Engineerii OGIC / SOIL SAMI		Identifier: SS04 Project Name: JRU 17 Logged By:	Date: 10/4/2018 RP Number: 2RP-1657 Method:		
Lat/Long: 32.33518, -103.81928			/0		Hole Diameter:	Total Depth:
Comments:	PID				NA	2 feet bgs
Comments.						
Moisture Content Chloride (ppm) Vapor (ppm)	Staining Staining Staining (ft. bgs.)	Sample Depth	Soil/Rock Type		Lithology	y/Remarks
860.1 843.3	0 SS04 1 SS04A SS04B 2 3 4 5 6 7 8 9 10 11 12		GP SP	grayish b SAND, re	2, berm fill, 20% sand, m rown strong odor, stainir eddish brown, poorly gra strong odor, stain	ng

Com	LT Environmental, Inc. 508 West Stevens Street arlsbad, New Mexico 8822 oliance · Engineering · Remed C / SOIL SAMPLING LO Field Screening: PID	Identifier: SS05 Project Name: JRU 17 Logged By: Hole Diameter: NA	Date: 10/4/2018 RP Number: 2RP-1657 Method: Total Depth: 2 feet bgs	
Moisture Content Chloride (ppm) Vapor (ppm) Staining	# o tDepth (ft. bgs.)Sample Depth	Soil/Rock Type	Lithology/F	Remarks
875.1	0 1 SS05 1 SS05A 1 SS05B 2 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10 - 11 - 12 -	grayish b dark gray SP SAND, r	L, berm fill, 20% sand, m-f rrown, moderate odor, stani y staining visible noist, brown/gray, poorly g ining, strong odor	ng

Advancin	mental, Inc.		Ca Comp	508 Wes Irlsbad, N Iliance · E	ronment st Steven New Mexi ingineering		Identifier: SS06 Project Name: JRU 17		Date: 10/2/2018 RP Number: 2RP-2850		
Lat/Long	: 32.33518				Field Scree	LING LO)G		Logged By: Hole Diameter:		Method:
		, -103.819.	28		PID	ening:			NA		Total Depth: 4 feet bgs
Commen	ts:										
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type			Lithology/Ren	narks
	6.2	2.6		SS06A				SAND/P	EA GRAVEL		

			Comp	oliance · E	ronment st Steven: Jew Mexi ingineering SAMP		Identifier: SS07 Project Name: JRU 17 Logged By:		Date: 10/2/2018 RP Number: 2RP-2850 Method:		
Lat/Long:	32.33518	, -103.8192	28		Field Scree PID	ning:			Hole Diameter: NA		Total Depth: 4 feet bgs
Comment	s:										11000 050
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type			Lithology/Ren	narks
	2.0	5.0		SS07 SS07A	0 1 2 3 4 5 6 7 8 9 10 11 11 12			SAND/P	EA GRAVEL		

Contract of Contract	promental, Inc.	LITHO	Ca Comp	508 Wes Irlsbad, N Iliance · E	ronment st Steven New Mexi Ingineering		Identifier: SS08 Project Name: JRU 17		Date: 10/3/2018 RP Number: 2RP-2850 Method:		
Lat/Long	: 32.33518				Field Scree		G		Logged By: Hole Diameter:		Total Depth:
					PID	-			NA		4 feet bgs
Commen	its:										
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type			Lithology/Rem	narks
	0.6	4.7	S	0.5 SS08 SS08A				SAND/P	EA GRAVEL		

LT Environmental, Inc.		508 Wes Carlsbad, N Compliance · E .OGIC / SOII	ronmental, Inc. it Stevens Street lew Mexico 88220 ingineering · Remed SAMPLING LO Field Screening:	Identifier: SS09 Project Name: JRU 17 Logged By: Hole Diameter:	Date: 10/3/2018 RP Number: 2RP-2850 Method: Total Depth:	
	5, -105.81720		PID		NA	4 feet bgs
Comments:						
Moisture Content Chloride (ppm)	Vapor (ppm)	Staining Sample #	Depth (ft. bgs.) Sample Depth	Soil/Rock Type	Litholo	ogy/Remarks
5.7 6.0	3.6	SS09 SS09A	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$			

LT Environm Acarage		LITHO , -103.8192	Ca Comp LOGIC	LT Envi. 508 Wes Irlsbad, N Iniance · E C / SOII	t Steven Iew Mexi Ingineering		Identifier: SS10 Project Name: JRU 17 Logged By: Hole Diameter:		Date: 10/3/2018 RP Number: 2RP-2850 Method:		
		, -105.819.	28		PID	ennig.			NA		Total Depth: 4 feet bgs
Comment	s:										
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type			Lithology/Rem	narks
	0.4	6.92.63.1		SS010 SS10A	0 1 2 3 4 5 6 7 8 9 10 11 12			SAND/P	EA GRAVEL		

	32.33518	LITHO , -103.8192	Ca Comp LOGIC	508 Wes rlsbad, N liance · E C / SOII	ronment t Steven lew Mex ingineerin SAMP Field Scree PID	Identifier: SS11 Project Name: JRU 17 Logged By: Hole Diameter: NA		Date: 10/3/2018 RP Number: 2RP-2850 Method: Total Depth: 4 feet bgs				
Comment	Comments:											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type		Litho	ology/Rem	arks	
	2.7	3.9		SS11 SS11A	0 1 2 3 4 5 6 7 8 9 10 11 12							

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

811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

District IV

1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division 1220 S. St Francis Dr. Santa Fe, NM 87505

CONDITIONS

Operator: 0	OGRID:
XTO ENERGY, INC	5380
6401 Holiday Hill Road	Action Number:
Midland, TX 79707	233374
	Action Type:
	[C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
amaxwell	The Deferral Request and C-141 will be accepted for record and marked accordingly. The release will remain open in OCD database files and reflect an open environmental issue.	7/3/2023
amaxwell	Remediation is to occur during any future major construction/alteration or final plugging and abandonment, whichever occurs first.	7/3/2023

CONDITIONS

Action 233374