ENSOLUM

February 9, 2025

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

Re: Closure Request
James Ranch Unit 055
API Number 30-015-27589
Incident Number NAB1618836105
Eddy County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of XTO Energy, Inc. (XTO), has prepared the following *Closure Request* as a follow-up to the *Deferral Request* dated February 11, 2019, and *Deferral Request Addendum* dated June 28, 2023. The *Deferral Request Addendum* was approved by the New Mexico Oil Conservation Division (NMOCD) on July 3, 2023. This *Closure Request* documents the excavation and soil sampling activities completed at the James Ranch Unit 055 (Site) following final plugging and abandonment of the well and removal of the surface production equipment from the deferred area. Based on the additional remediation activities described below, XTO is submitting this *Closure Request* and requesting no further action and closure for Incident Number NAB1618836105.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit F, Section 17, Township 23 South, Range 31 East, in Eddy County, New Mexico (32.3062553°, -103.8019867°) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On June 22, 2016, external corrosion of a buried steel flowline resulted in the release of approximately 7 barrels (bbls) of produced water and 3 bbls of crude oil within the earthen containment. A vacuum truck was used to recover approximately 3 bbls of released fluid. XTO reported the release to the NMOCD on a Release Notification Form C-141 (Form C-141) on July 1, 2016. The release was assigned Remediation Permit (RP) Number 2RP-3761 and Incident Number NAB1618836105.

The release was 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.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized to determine the applicability of Table I Closure Criteria for Soils Impacted by a Release, of 19.15.29 NMAC. Results from the characterization desktop review were detailed in the *Deferral Request* and approved *Deferral Request Addendum*. 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

Since the well was been plugged and abandoned and the well pad will be reclaimed, a reclamation requirement of 600 mg/kg chloride and 100 mg/kg TPH applies to the top 4 feet of the Site per NMAC 19.15.29.13.D (1), for areas that will be reclaimed following remediation.

Between May 2018 and February 2019, delineation and excavation activities were conducted at the Site to address the impacted soil resulting from the June 22, 2016, crude oil and produced water release. Impacted soil was excavated to the extent possible; however, an estimated 10 cubic yards of impacted soil were left in place within the earthen containment berm to comply with XTO safety policy regarding earth-moving activities within 2-feet of active tanks and production equipment. 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 February 11, 2019, *Deferral Request*.

On March 24, 2023, NMOCD denied the *Deferral Request* for Incident Number NAB1618836105 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.*

On June 28, 2023, a *Deferral Request Addendum* confirming depth to groundwater greater than 100 feet, was submitted to the NMOCD. On July 3, 2023, the *Deferral Request Addendum* was approved by the NMOCD. The *Deferral Request Addendum*, which includes the original *Deferral Request* report, is included as an attachment to this report.

EXCAVATION ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

The James Ranch Unit 055 well was plugged and abandoned (P&A) on August 13, 2024, and all surface production equipment was removed from the Site.

During November 2024 and December 2024, Ensolum personnel were at the Site to oversee excavation activities to address the deferred impacted soil that was left in place around former production equipment and to address soil exceeding reclamation requirements, as indicated by December 2018 delineation soil samples SS04A, SS04B, SS06, and SS07 and excavation soil samples FS02, SW05, and SW06. The 2018 excavation extent and soil sample locations are presented on Figure 2 and detailed in the attached *Deferral Request*. The 2024 excavation activities were performed using a backhoe and transport vehicles. To direct excavation activities, soil was field screened for volatile organic compounds

(VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. The excavation was completed to depths ranging from 4 feet to 6 feet below ground surface (bgs).

Following removal of the impacted soil, 5-point composite soil samples were collected every 200 square feet from the floor and sidewalls of the excavation. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples FS01 through FS04, and FS01A were collected from the floor of the excavation at depths ranging from 4 feet to 6 feet bgs. Composite soil samples SW01 through SW03, and SW01A were collected from the sidewalls of the excavation at depths ranging from the ground surface to a maximum of 6 feet bgs. The excavation extent and soil sample locations are presented on Figure 2. Photographic documentation of the excavation activities is included in Appendix A.

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 Cardinal Laboratories (Cardinal) in Hobbs, 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 Standard Method SM 4500.

Laboratory analytical results for excavation floor samples FS01A, and FS02 through FS04 and excavation sidewall samples SW01A, SW02, and SW03, collected from the final excavation extent, indicated all COC concentrations were compliant with the Site Closure Criteria and reclamation requirements, where applicable. Laboratory analytical results for excavation floor sample FS01 and excavation sidewall sample SW01 initially exceeded the reclamation requirement for TPH; additional soil was removed from these areas and subsequent floor sample FS01A and sidewall sample SW01A were in compliance. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Appendix B.

The excavation area measured approximately 775 square feet. Approximately 130 cubic yards of impacted soil were removed during the excavation activities. The impacted soil was transported and properly disposed of at the R360 Facility in Hobbs, New Mexico.

RECLAMATION ACTIVITIES

Upon completion of excavation activities and receipt of final laboratory analytical results, the excavation was backfilled with locally procured soil. One representative 5-point composite sample (BF01) was collected from the topsoil backfill material. The backfill soil sample was handled and analyzed following the same procedures as described above. Laboratory analytical results for the backfill soil sample confirmed compliance with the NMOCD requirement for the reclaimed area to contain non-waste containing, uncontaminated, earthen material with chloride concentrations less than 600 mg/kg and TPH concentrations less than 100 mg/kg. The laboratory analytical results are summarized on the attached Table 1 and the complete laboratory analytical report is included as Appendix B.

Following backfill activities, the well pad was recontoured to match the surrounding topography and the surface was prepared for seeding. The well pad will be seeded during the spring of 2025 when temperatures and precipitation are more conducive to vegetation growth. The reclaimed well pad will be seeded with the BLM sandy sites seed mix #2 at the rate specified in pounds of pure live seed (PLS) per acre.

Species/Cultivar	PLS/Acre
Sand dropseed (Sporobolus cryptandrus)	1.0
Sand love grass (Eragrostis trichodes)	1.0
Plains bristlegrass (Setaria macrostachya)	2.0

The seed mix will be applied via drill seeding or broadcast seeding. If broadcast seeding is selected, the PLS/acre will be doubled and the seed will be raked in by chaining or dragging the Site. Photographs of the reclaimed excavation area are provided in Appendix A.

The Site will be monitored for vegetation growth to ensure that reclamation activities were successful. Focus for this phase will be to prevent erosion and site degradation, and to monitor for and treat invasive and noxious weed species.

- Erosion control of the newly reclaimed areas includes prompt revegetation and contouring of the surface to prevent concentrated surface water flow.
- Annual inspections will take place at the location to assess revegetation progress until vegetation is consistent with local natural vegetation density.
- If necessary, an additional application of the BLM seed mix will be applied.
- Noxious and invasive weeds will be identified and treated by a licensed contracted herbicide applicator or mechanically removed.

A *Revegetation Report* will be submitted to the NMOCD once vegetation growth in the reclaimed area has uniform vegetative cover that reflects a life-form ratio of plus or minus fifty percent of pre-disturbance levels and a total percent plant cover of at least seventy percent of pre-disturbance levels, excluding noxious weeds, per NMAC 19.15.29.13 D.(3).

CLOSURE REQUEST

Excavation activities were conducted at the Site to address the impacted soil resulting from the June 22, 2016, crude oil and produced water release. Laboratory analytical results for the excavation soil samples, collected from the final excavation extent, indicated all COCs were compliant with the Site Closure Criteria and reclamation requirements, where applicable. Based on the soil sample analytical results, no further remediation is required. A copy of the *Deferral Request and Deferral Request Addendum,* detailing the 2018 excavation activities, is included as Appendix C.

Initial response efforts, natural attenuation, and excavation of impacted soil have mitigated impacts at this Site. XTO believes the remedial actions completed are protective of human health, the environment, and groundwater. As such, XTO respectfully requests closure for Incident Number NAB1618836105.

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

Tacoma Morrissey
Senior Managing Geologist

cc: Colton Brown, XTO
Kaylan Dirkx, XTO
BLM

Appendices:

Figure 1	Site Receptor Map
Figure 2	Excavation Soil Sample Locations
Table 1	Soil Sample Analytical Results
Appendix A	Photographic Log
Appendix B	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix C	June 28, 2023, *Deferral Request Addendum*

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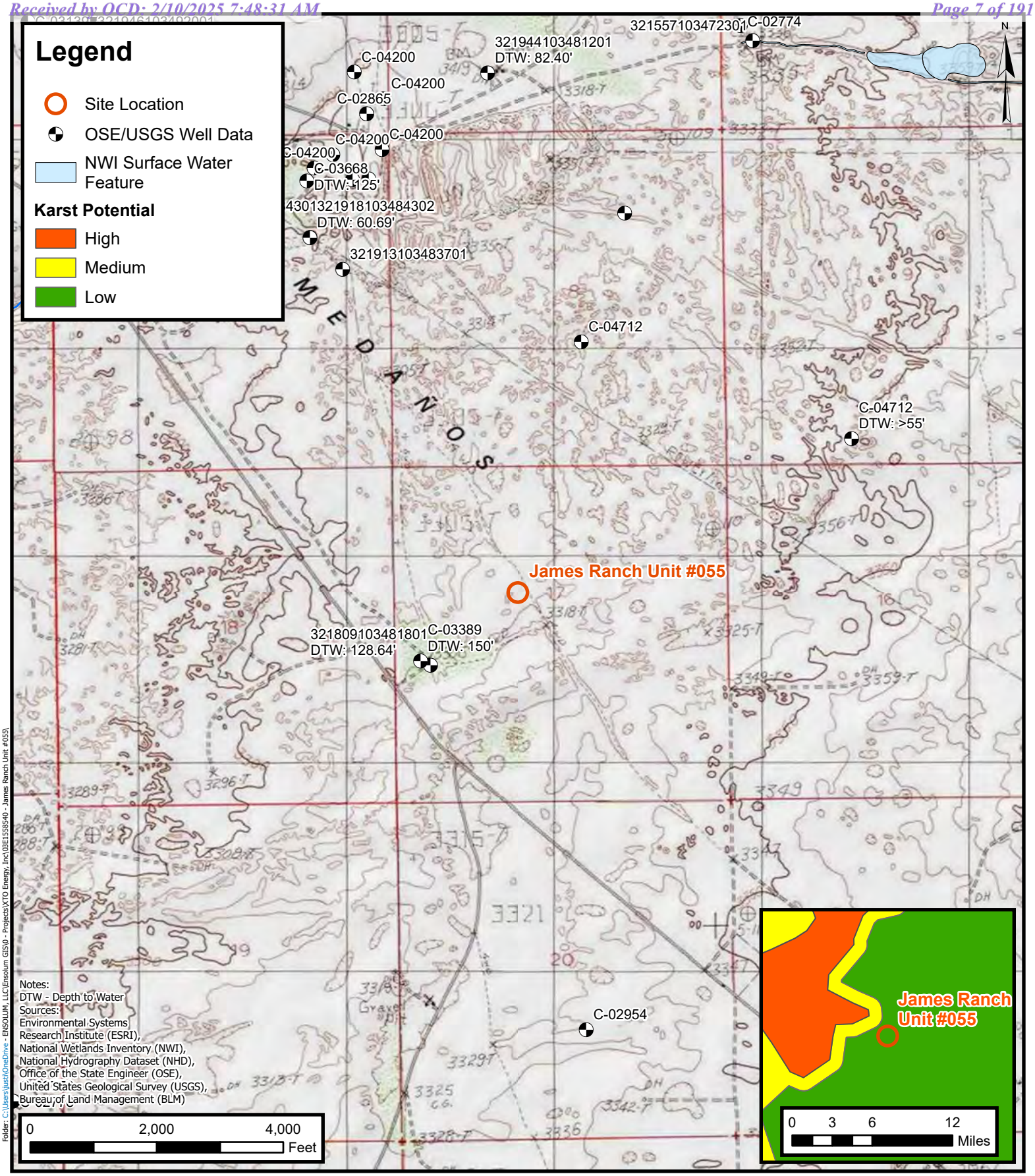
FIGURES



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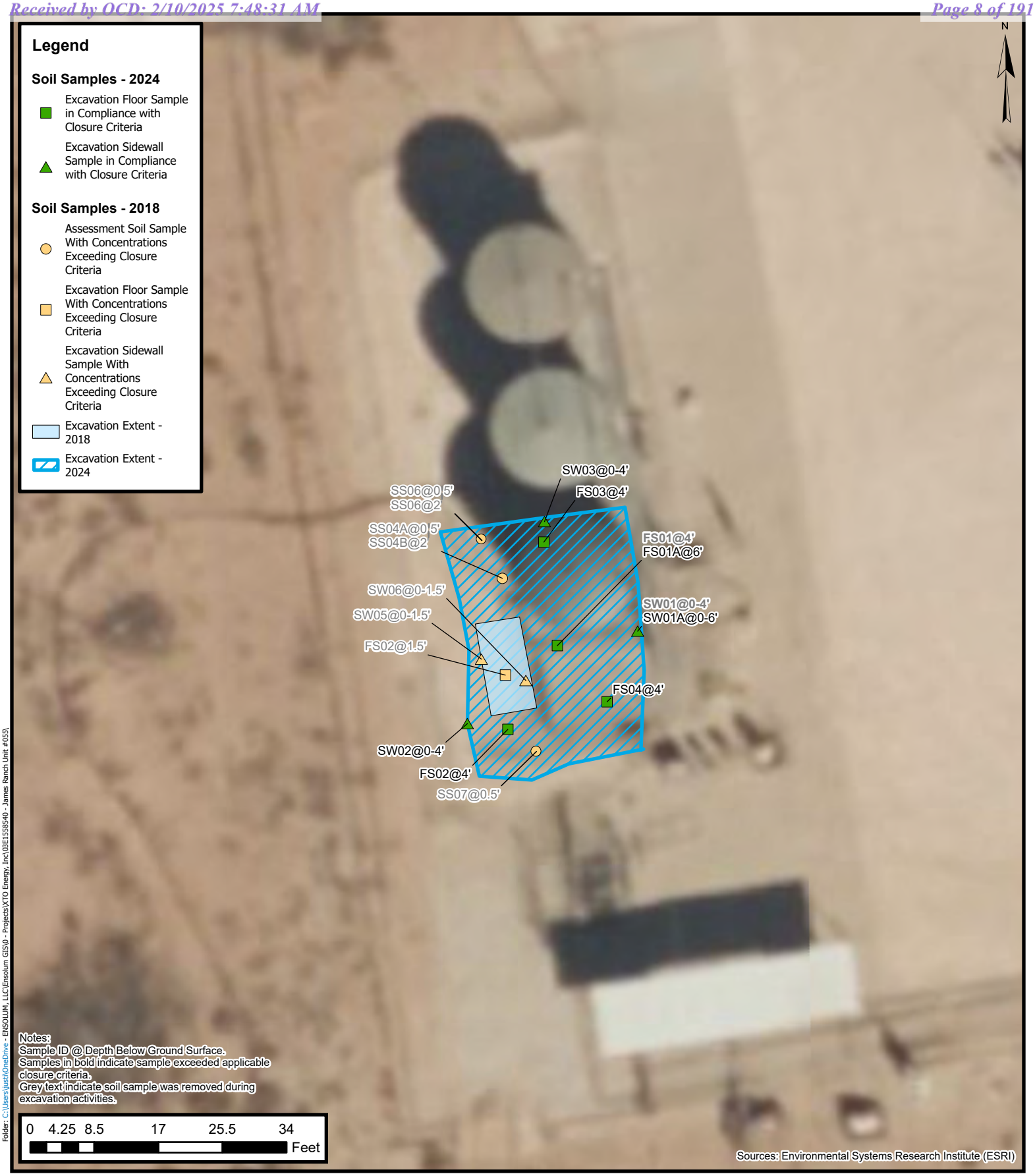
ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

XTO Energy, Inc.
James Ranch Unit #055
Incident Number: NAB1618836105
Unit F, Section 17, T 23S, R 31E
Eddy County, New Mexico

FIGURE 1



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ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Excavation Soil Sample Locations

XTO Energy, Inc.
James Ranch Unit #055
Incident Number: NAB1618836105
Unit F, Section 17, T 23S, R 31E
Eddy County, New Mexico

FIGURE 2

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
JAMES RANCH UNIT 055
XTO 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 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
NMOCD Reclamation Requirement for the top four feet			NE	NE	NE	NE	NE	NE	100	600
2018 - Excavation Soil Samples										
SS04A	5/24/2018	0.5	<0.00197	<0.00197	<15.0	1,810	53	**1,810**	**1,860**	491
SS04B	12/14/2018	2	<0.00202	<0.00202	<15.0	531	181	531	**712**	36.3
SS06	12/4/2018	0.5	<0.00200	<0.00200	<15.0	3,240	109	**2,240**	**3,350**	18.7
SS06	12/14/2018	2	<0.00201	<0.00201	46.6	632	208	679	**887**	29.8
SS07	12/4/2018	0.5	<0.00200	<0.00200	<15.0	153	28.9	153	**182**	327
SW05	12/4/2018	0-1.5	<0.00199	<0.00199	<15.0	990	78.6	**990**	**1,070**	**717**
SW06	12/4/2018	0-1.5	<0.00201	0.0685	124	12,000	390	**12,100**	**12,500**	**1,490**
FS02	12/4/2018	1.5	<0.00200	<0.00200	<15.0	2,390	85.1	2,390	**2,480**	397
2024 - Excavation Soil Samples										
FS01	11/25/2024	4	<0.050	<0.300	<10.0	1,130	439	**1,569**	**1,569**	112
FS01A	12/02/2024	6	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	240
FS02	11/25/2024	4	<0.050	<0.300	<10.0	365	154	519	519	320
FS03	11/25/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	112
FS04	12/02/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	592
SW01	11/25/2024	0 - 4	<0.050	<0.300	<10.0	271	78.5	350	**350**	352
SW01A	12/02/2024	0 - 6	<0.050	<0.300	<10.0	11.2	<10.0	11.2	11.2	112
SW02	11/25/2024	0 - 4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	144
SW03	12/02/2024	0 - 4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
Backfill Soil Sample										
BF01	12/10/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	144

Notes:
bgs: below ground surface
mg/kg: milligrams per kilogram
NMOCD: New Mexico Oil Conservation Division
NMAC: New Mexico Administrative Code
BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes
< : Indicates result less than the stated laboratory reporting limit
NE: Not Established

GRO: Gasoline Range Organics
DRO: Diesel Range Organics
ORO: Oil Range Organics
TPH: Total Petroleum Hydrocarbon
*Concentrations in **bold** exceed the NMOCD Table I Closure Criteria or reclamation standard where applicable.*
Grey text represents samples that have been excavated

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APPENDIX A

Photographic Log

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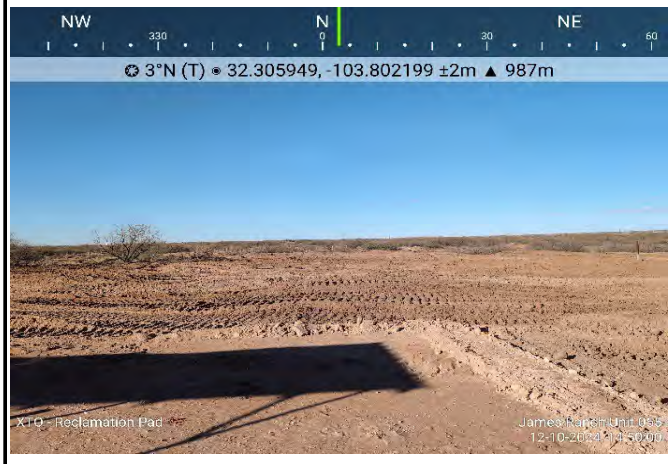
Photographic Log
XTO Energy, Inc.
James Ranch Unit 055
NAB1618836105

Photograph: 1 Date: 11/25/2024
Description: Excavation activities
View: Southeast

Photograph: 2 Date: 11/25/2025
Description: Excavation activities
View: Northwest

Photograph: 3 Date: 12/2/2024
Description: Excavation activities
View: Southwest



Photograph: 4 Date: 12/10/2024
Description: Backfilled excavation
View: North

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APPENDIX B

Laboratory Analytical Reports & Chain of Custody Documentation

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

November 27, 2024

AIMEE COLE

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: JAMES RANCH UNIT 055

Enclosed are the results of analyses for samples received by the laboratory on 11/26/24 12:47.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Mike Snyder For Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
AIMEE COLE
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	11/26/2024	Sampling Date:	11/25/2024
Reported:	11/27/2024	Sampling Type:	Soil
Project Name:	JAMES RANCH UNIT 055	Sampling Condition:	Cool & Intact
Project Number:	03E15585540	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.30615, -103.80152		

Sample ID: FS 01 4' (H247249-01)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/26/2024	ND	2.16	108	2.00	0.515	
Toluene*	<0.050	0.050	11/26/2024	ND	2.07	103	2.00	0.462	
Ethylbenzene*	<0.050	0.050	11/26/2024	ND	2.08	104	2.00	0.845	
Total Xylenes*	<0.150	0.150	11/26/2024	ND	6.19	103	6.00	0.819	
Total BTEX	<0.300	0.300	11/26/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.7 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: CT

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**112**	16.0	11/27/2024	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/26/2024	ND	192	95.9	200	0.294	
DRO >C10-C28*	**1130**	10.0	11/26/2024	ND	188	94.2	200	1.67	
EXT DRO >C28-C36	**439**	10.0	11/26/2024	ND					

Surrogate: 1-Chlorooctane *92.7 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *127 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
AIMEE COLE
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	11/26/2024	Sampling Date:	11/25/2024
Reported:	11/27/2024	Sampling Type:	Soil
Project Name:	JAMES RANCH UNIT 055	Sampling Condition:	Cool & Intact
Project Number:	03E15585540	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.30615, -103.80152		

Sample ID: FS 02 4' (H247249-02)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/26/2024	ND	2.16	108	2.00	0.515	
Toluene*	<0.050	0.050	11/26/2024	ND	2.07	103	2.00	0.462	
Ethylbenzene*	<0.050	0.050	11/26/2024	ND	2.08	104	2.00	0.845	
Total Xylenes*	<0.150	0.150	11/26/2024	ND	6.19	103	6.00	0.819	
Total BTEX	<0.300	0.300	11/26/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *96.9 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: CT

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**320**	16.0	11/27/2024	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/26/2024	ND	192	95.9	200	0.294	
DRO >C10-C28*	**365**	10.0	11/26/2024	ND	188	94.2	200	1.67	
EXT DRO >C28-C36	**154**	10.0	11/26/2024	ND					

Surrogate: 1-Chlorooctane *109 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *126 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
AIMEE COLE
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	11/26/2024	Sampling Date:	11/25/2024
Reported:	11/27/2024	Sampling Type:	Soil
Project Name:	JAMES RANCH UNIT 055	Sampling Condition:	Cool & Intact
Project Number:	03E15585540	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.30615, -103.80152		

Sample ID: FS 03 4' (H247249-03)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/26/2024	ND	2.16	108	2.00	0.515	
Toluene*	<0.050	0.050	11/26/2024	ND	2.07	103	2.00	0.462	
Ethylbenzene*	<0.050	0.050	11/26/2024	ND	2.08	104	2.00	0.845	
Total Xylenes*	<0.150	0.150	11/26/2024	ND	6.19	103	6.00	0.819	
Total BTEX	<0.300	0.300	11/26/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.7 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: CT

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**112**	16.0	11/27/2024	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/26/2024	ND	192	95.9	200	0.294	
DRO >C10-C28*	<10.0	10.0	11/26/2024	ND	188	94.2	200	1.67	
EXT DRO >C28-C36	<10.0	10.0	11/26/2024	ND					

Surrogate: 1-Chlorooctane *83.6 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *85.9 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
AIMEE COLE
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	11/26/2024	Sampling Date:	11/25/2024
Reported:	11/27/2024	Sampling Type:	Soil
Project Name:	JAMES RANCH UNIT 055	Sampling Condition:	Cool & Intact
Project Number:	03E15585540	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.30615, -103.80152		

Sample ID: SW 01 0-4' (H247249-04)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/27/2024	ND	2.16	108	2.00	0.515	
Toluene*	<0.050	0.050	11/27/2024	ND	2.07	103	2.00	0.462	
Ethylbenzene*	<0.050	0.050	11/27/2024	ND	2.08	104	2.00	0.845	
Total Xylenes*	<0.150	0.150	11/27/2024	ND	6.19	103	6.00	0.819	
Total BTEX	<0.300	0.300	11/27/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.5 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: CT

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**352**	16.0	11/27/2024	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/26/2024	ND	192	95.9	200	0.294	
DRO >C10-C28*	**271**	10.0	11/26/2024	ND	188	94.2	200	1.67	
EXT DRO >C28-C36	**78.5**	10.0	11/26/2024	ND					

Surrogate: 1-Chlorooctane *95.1 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *105 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
AIMEE COLE
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	11/26/2024	Sampling Date:	11/25/2024
Reported:	11/27/2024	Sampling Type:	Soil
Project Name:	JAMES RANCH UNIT 055	Sampling Condition:	Cool & Intact
Project Number:	03E15585540	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.30615, -103.80152		

Sample ID: SW 02 0-4' (H247249-05)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/26/2024	ND	2.16	108	2.00	0.515	
Toluene*	<0.050	0.050	11/26/2024	ND	2.07	103	2.00	0.462	
Ethylbenzene*	<0.050	0.050	11/26/2024	ND	2.08	104	2.00	0.845	
Total Xylenes*	<0.150	0.150	11/26/2024	ND	6.19	103	6.00	0.819	
Total BTEX	<0.300	0.300	11/26/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *96.5 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: CT

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**144**	16.0	11/27/2024	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/26/2024	ND	192	95.9	200	0.294	
DRO >C10-C28*	<10.0	10.0	11/26/2024	ND	188	94.2	200	1.67	
EXT DRO >C28-C36	<10.0	10.0	11/26/2024	ND					

Surrogate: 1-Chlorooctane *83.4 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *84.7 %* *49.1-148*

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

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Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Company Name: Ensolum, LLC	**BILL TO**
Project Manager: Aimee Cole	P.O. #:
Address: 3122 National Parks Hwy	Company: XTO Energy Inc.
City: Carlsbad State: NM Zip: 88220	Attn: Amy Ruth
Phone #: 720-384-7365 Fax #:	Address: 3104 E. Greene St.
Project #: 03E15585540 Project Owner: XTO	City: Carlsbad
Project Name: James Ranch Unit 055	State: NM Zip: 88220
Project Location: 32.30615, -103.80152	Phone #:
Sampler Name: Azad Vojdani	Fax #:

FOR LAB USE ONLY Lab I.D.	Sample I.D.	Sample Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	BTEX	TPH	CHLORIDE
H247249-1	FS01	4'	C	1			✓					✓		11-25-24	1217	✓	✓	✓
-2	FS02	4'	C	1			✓					✓			1236	✓	✓	✓
-3	FS03	4'	C	1			✓					✓			1435	✓	✓	✓
-4	SW01	0-4'	C	1			✓					✓			1525	✓	✓	✓
-5	SW02	0-4'	C	1			✓					✓			1330	✓	✓	✓

ANALYSIS REQUEST

Relinquished By:	Date: 11.26.24	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 1247		All Results are emailed. Please provide Email address: TMorrissey@ensolum.com, Acole@ensolum.com
Relinquished By:	Date:	Received By:	REMARKS: API: 30-015-27589 AFE: PA.2024.07102.EXP.01 Incident #: Nab1618836105
	Time:		
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 2.1 Corrected Temp. °C 1.6	Sample Condition Cool: ☑ Yes ☐ No Intact: ☐ Yes ☐ No	CHECKED BY: (Initials) RD

Turnaround Time: Standard ☐ Rush ☑ 24HR
Thermometer ID #113 #140
Correction Factor -0.5°C -0.6
Bacteria (only) Sample Condition: Cool ☐ Yes ☐ No Intact ☐ Yes ☐ No
Observed Temp. °C
Corrected Temp. °C

FORM-006 R 3.2 10/07/21

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

December 05, 2024

AIMEE COLE

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: JAMES RANCH UNIT 055

Enclosed are the results of analyses for samples received by the laboratory on 12/03/24 13:49.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Total Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: JAMES RANCH UNIT 055 Project Number: 03E15585540 Project Manager: AIMEE COLE Fax To:	Reported: 05-Dec-24 15:08

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FS 01A 6'	H247330-01	Soil	02-Dec-24 11:30	03-Dec-24 13:49
SW 01A 0-6'	H247330-02	Soil	02-Dec-24 11:35	03-Dec-24 13:49
FS 04 4'	H247330-03	Soil	02-Dec-24 11:36	03-Dec-24 13:49
SW 03 0-6'	H247330-04	Soil	02-Dec-24 11:55	03-Dec-24 13:49

12/05/24 - Client changed the sample IDs of -01 and -02 (see COC). This is the revised report and will replace the one sent on 12/04/24.

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: JAMES RANCH UNIT 055 Project Number: 03E15585540 Project Manager: AIMEE COLE Fax To:	Reported: 05-Dec-24 15:08

FS 01A 6'

H247330-01 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**240**		16.0	mg/kg	4	4120419	CT	04-Dec-24	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	4120314	JH	04-Dec-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4120314	JH	04-Dec-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4120314	JH	04-Dec-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4120314	JH	04-Dec-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4120314	JH	04-Dec-24	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*103 %*	*71.5-134*		*4120314*	JH	*04-Dec-24*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	4120312	MS	03-Dec-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4120312	MS	03-Dec-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4120312	MS	03-Dec-24	8015B	
Surrogate: 1-Chlorooctane			*100 %*	*48.2-134*		*4120312*	MS	*03-Dec-24*	*8015B*	
Surrogate: 1-Chlorooctadecane			*105 %*	*49.1-148*		*4120312*	MS	*03-Dec-24*	*8015B*	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: JAMES RANCH UNIT 055 Project Number: 03E15585540 Project Manager: AIMEE COLE Fax To:	Reported: 05-Dec-24 15:08

SW 01A 0-6'

H247330-02 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**112**		16.0	mg/kg	4	4120419	CT	04-Dec-24	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	4120314	JH	04-Dec-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4120314	JH	04-Dec-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4120314	JH	04-Dec-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4120314	JH	04-Dec-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4120314	JH	04-Dec-24	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*103 %*	*71.5-134*		*4120314*	JH	*04-Dec-24*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	4120312	MS	03-Dec-24	8015B	
DRO >C10-C28*	**11.2**		10.0	mg/kg	1	4120312	MS	03-Dec-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4120312	MS	03-Dec-24	8015B	
Surrogate: 1-Chlorooctane			*106 %*	*48.2-134*		*4120312*	MS	*03-Dec-24*	*8015B*	
Surrogate: 1-Chlorooctadecane			*111 %*	*49.1-148*		*4120312*	MS	*03-Dec-24*	*8015B*	

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: JAMES RANCH UNIT 055 Project Number: 03E15585540 Project Manager: AIMEE COLE Fax To:	Reported: 05-Dec-24 15:08

FS 04 4'

H247330-03 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**592**		16.0	mg/kg	4	4120419	CT	04-Dec-24	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	4120314	JH	04-Dec-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4120314	JH	04-Dec-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4120314	JH	04-Dec-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4120314	JH	04-Dec-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4120314	JH	04-Dec-24	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*103 %*	*71.5-134*		*4120314*	JH	*04-Dec-24*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	4120312	MS	03-Dec-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4120312	MS	03-Dec-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4120312	MS	03-Dec-24	8015B	
Surrogate: 1-Chlorooctane			*101 %*	*48.2-134*		*4120312*	MS	*03-Dec-24*	*8015B*	
Surrogate: 1-Chlorooctadecane			*106 %*	*49.1-148*		*4120312*	MS	*03-Dec-24*	*8015B*	

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: JAMES RANCH UNIT 055 Project Number: 03E15585540 Project Manager: AIMEE COLE Fax To:	Reported: 05-Dec-24 15:08

SW 03 0-6'

H247330-04 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**64.0**		16.0	mg/kg	4	4120419	CT	04-Dec-24	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	4120328	JH	03-Dec-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4120328	JH	03-Dec-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4120328	JH	03-Dec-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4120328	JH	03-Dec-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4120328	JH	03-Dec-24	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*104 %*	*71.5-134*		*4120328*	JH	*03-Dec-24*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	4120312	MS	03-Dec-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4120312	MS	03-Dec-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4120312	MS	03-Dec-24	8015B	
Surrogate: 1-Chlorooctane			*100 %*	*48.2-134*		*4120312*	MS	*03-Dec-24*	*8015B*	
Surrogate: 1-Chlorooctadecane			*104 %*	*49.1-148*		*4120312*	MS	*03-Dec-24*	*8015B*	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: JAMES RANCH UNIT 055 Project Number: 03E15585540 Project Manager: AIMEE COLE Fax To:	Reported: 05-Dec-24 15:08

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4120419 - 1:4 DI Water										
Blank (4120419-BLK1)				Prepared & Analyzed: 04-Dec-24						
Chloride	ND	16.0	mg/kg							
LCS (4120419-BS1)				Prepared & Analyzed: 04-Dec-24						
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (4120419-BSD1)				Prepared & Analyzed: 04-Dec-24						
Chloride	416	16.0	mg/kg	400		104	80-120	0.00	20	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: JAMES RANCH UNIT 055 Project Number: 03E15585540 Project Manager: AIMEE COLE Fax To:	Reported: 05-Dec-24 15:08

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4120314 - Volatiles										
Blank (4120314-BLK1)				Prepared & Analyzed: 03-Dec-24						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*0.0516*		mg/kg	*0.0500*		*103*	*71.5-134*			
LCS (4120314-BS1)				Prepared & Analyzed: 03-Dec-24						
Benzene	2.19	0.050	mg/kg	2.00		109	82.8-130			
Toluene	2.26	0.050	mg/kg	2.00		113	86-128			
Ethylbenzene	2.21	0.050	mg/kg	2.00		111	85.9-128			
m,p-Xylene	4.66	0.100	mg/kg	4.00		117	89-129			
o-Xylene	2.25	0.050	mg/kg	2.00		112	86.1-125			
Total Xylenes	6.91	0.150	mg/kg	6.00		115	88.2-128			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0514*		mg/kg	*0.0500*		*103*	*71.5-134*			
LCS Dup (4120314-BSD1)				Prepared & Analyzed: 03-Dec-24						
Benzene	2.20	0.050	mg/kg	2.00		110	82.8-130	0.450	15.8	
Toluene	2.23	0.050	mg/kg	2.00		112	86-128	1.23	15.9	
Ethylbenzene	2.17	0.050	mg/kg	2.00		109	85.9-128	1.69	16	
m,p-Xylene	4.60	0.100	mg/kg	4.00		115	89-129	1.30	16.2	
o-Xylene	2.21	0.050	mg/kg	2.00		111	86.1-125	1.58	16.7	
Total Xylenes	6.81	0.150	mg/kg	6.00		114	88.2-128	1.39	16.3	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0506*		mg/kg	*0.0500*		*101*	*71.5-134*			
Batch 4120328 - Volatiles										
Blank (4120328-BLK1)				Prepared & Analyzed: 03-Dec-24						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: JAMES RANCH UNIT 055 Project Number: 03E15585540 Project Manager: AIMEE COLE Fax To:	Reported: 05-Dec-24 15:08

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4120328 - Volatiles										
Blank (4120328-BLK1)				Prepared & Analyzed: 03-Dec-24						
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*0.0517*		mg/kg	*0.0500*		*103*	*71.5-134*			
LCS (4120328-BS1)				Prepared & Analyzed: 03-Dec-24						
Benzene	2.05	0.050	mg/kg	2.00		103	82.8-130			
Toluene	2.11	0.050	mg/kg	2.00		106	86-128			
Ethylbenzene	2.10	0.050	mg/kg	2.00		105	85.9-128			
m,p-Xylene	4.23	0.100	mg/kg	4.00		106	89-129			
o-Xylene	2.02	0.050	mg/kg	2.00		101	86.1-125			
Total Xylenes	6.25	0.150	mg/kg	6.00		104	88.2-128			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0520*		mg/kg	*0.0500*		*104*	*71.5-134*			
LCS Dup (4120328-BSD1)				Prepared & Analyzed: 03-Dec-24						
Benzene	2.11	0.050	mg/kg	2.00		106	82.8-130	2.99	15.8	
Toluene	2.18	0.050	mg/kg	2.00		109	86-128	3.00	15.9	
Ethylbenzene	2.16	0.050	mg/kg	2.00		108	85.9-128	2.88	16	
m,p-Xylene	4.35	0.100	mg/kg	4.00		109	89-129	2.88	16.2	
o-Xylene	2.08	0.050	mg/kg	2.00		104	86.1-125	2.80	16.7	
Total Xylenes	6.43	0.150	mg/kg	6.00		107	88.2-128	2.85	16.3	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0516*		mg/kg	*0.0500*		*103*	*71.5-134*			

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: JAMES RANCH UNIT 055 Project Number: 03E15585540 Project Manager: AIMEE COLE Fax To:	Reported: 05-Dec-24 15:08

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4120312 - General Prep - Organics										
Blank (4120312-BLK1)				Prepared & Analyzed: 03-Dec-24						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*43.1*		mg/kg	*50.0*		*86.2*	*48.2-134*			
Surrogate: 1-Chlorooctadecane	*43.8*		mg/kg	*50.0*		*87.7*	*49.1-148*			
LCS (4120312-BS1)				Prepared & Analyzed: 03-Dec-24						
GRO C6-C10	196	10.0	mg/kg	200		98.2	81.5-123			
DRO >C10-C28	201	10.0	mg/kg	200		101	77.7-122			
Total TPH C6-C28	398	10.0	mg/kg	400		99.4	80.9-121			
Surrogate: 1-Chlorooctane	*50.2*		mg/kg	*50.0*		*100*	*48.2-134*			
Surrogate: 1-Chlorooctadecane	*50.0*		mg/kg	*50.0*		*100*	*49.1-148*			
LCS Dup (4120312-BSD1)				Prepared & Analyzed: 03-Dec-24						
GRO C6-C10	195	10.0	mg/kg	200		97.3	81.5-123	0.832	13	
DRO >C10-C28	204	10.0	mg/kg	200		102	77.7-122	1.44	15.6	
Total TPH C6-C28	399	10.0	mg/kg	400		99.8	80.9-121	0.323	18.5	
Surrogate: 1-Chlorooctane	*48.4*		mg/kg	*50.0*		*96.9*	*48.2-134*			
Surrogate: 1-Chlorooctadecane	*47.4*		mg/kg	*50.0*		*94.8*	*49.1-148*			

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Company Name:	Ensolum, LLC
Project Manager:	Aimee Cole
Address:	3122 National Parks Hwy
City:	Carlsbad
State:	NM
Zip:	88220
Phone #:	720-384-7365
Fax #:	
Project #:	03E15585540
Project Owner:	XTO
Project Name:	James Ranch Unit 055
Project Location:	32.30615, -103.80152
Sampler Name:	Azad Vojdani

BILL TO

P.O. #:	
Company:	XTO Energy Inc.
Attn:	Amy Ruth
Address:	3104 E. Greene St.
City:	Carlsbad
State:	NM
Zip:	88220
Phone #:	
Fax #:	

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	Sample Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	BTEX	TPH	CHLORIDE
H247330	*																	
1	FS01A	6'	C	1			✓					✓		12-02-24	1130	X	✓	X
2	SW01A	0-6'	C	1			✓					✓			1135	✓	X	X
3	FS04	4'	C	1			✓					✓			1136	X	X	X
4	SW03	0-6'	C	1			✓					✓		↓	1155	X	X	X

Relinquished By:	Date: 12-04-24	Received By:	
	Time: 1349		
Relinquished By:	Date:	Received By:	
	Time:		

Verbal Result: ☐ Yes ☒ No Add'l Phone #:

All Results are emailed. Please provide Email address:

TMorrissey@ensolum.com, Acole@ensolum.com

REMARKS: * Customer requested ID Changes 12/4/24

API:30-015-27589 AFE: PA.2024.07102.EXP.01 Incident #: Nab1618836105

Delivered By: (Circle One)	Observed Temp. °C 0.6	Sample Condition Cool ☑ Yes ☐ No	Intact ☑ Yes ☐ No	CHECKED BY: (Initials)	Turnaround Time: ☐ Standard ☒ Rush #140
Sampler - UPS - Bus - Other:	Corrected Temp. °C 0.0				Thermometer ID #113 Correction Factor -0.6°C

Bacteria (only) Sample Condition: Cool ☐ Yes ☐ No Intact ☐ Yes ☐ No Observed Temp. °C

Corrected Temp. °C

2d TAT 12/3/24

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

FORM-006 R 3.2 10/07/21

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

December 13, 2024

WES WEICHERT

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: JAMES RANCH UNIT 055

Enclosed are the results of analyses for samples received by the laboratory on 12/12/24 14:10.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
WES WEICHERT
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	12/12/2024	Sampling Date:	12/10/2024
Reported:	12/13/2024	Sampling Type:	Soil
Project Name:	JAMES RANCH UNIT 055	Sampling Condition:	Cool & Intact
Project Number:	03E1558540	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.30615, -103.80152		

Sample ID: BF 01 0.5 (H247530-01)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/12/2024	ND	2.11	105	2.00	4.29	
Toluene*	<0.050	0.050	12/12/2024	ND	2.00	100	2.00	2.42	
Ethylbenzene*	<0.050	0.050	12/12/2024	ND	2.02	101	2.00	4.78	
Total Xylenes*	<0.150	0.150	12/12/2024	ND	6.00	99.9	6.00	5.11	
Total BTEX	<0.300	0.300	12/12/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: CT

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**144**	16.0	12/13/2024	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2024	ND	183	91.7	200	3.28	
DRO >C10-C28*	<10.0	10.0	12/12/2024	ND	183	91.6	200	4.53	
EXT DRO >C28-C36	<10.0	10.0	12/12/2024	ND					

Surrogate: 1-Chlorooctane *125 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *126 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Company Name:	Ensolum, LLC
Project Manager:	Aimee Cole
Address:	3122 National Parks Hwy
City:	Carlsbad **State:** NM **Zip:** 88220
Phone #:	720-384-7365 **Fax #:**
Project #:	03E1558540 **Project Owner:** XTO
Project Name:	James Ranch Unit 055
Project Location:	32.30615, -103.80152
Sampler Name:	Azad Vojdani

BILL TO

P.O. #:	
Company:	XTO Energy Inc.
Attn:	Amy Ruth
Address:	3104 E. Greene St.
City:	Carlsbad
State:	NM **Zip:** 88220
Phone #:	
Fax #:	

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	Sample Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	BTEX	TPH	CHLORIDE
1184758 1	BF01	0.5	C	1			✓					✓		12-10-24	1424	✓	✓	✓

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequental damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:	**Date:** 12-12-24	**Received By:**	
	Time: 1410		
Relinquished By:	**Date:**	**Received By:**	
	Time:		

Verbal Result: ☐ Yes ☒ No **Add'l Phone #:**

All Results are emailed. Please provide Email address:
TMorrissey@ensolum.com, Acole@ensolum.com

REMARKS:
API:30-015-27589 AFE: PA.2024.07102.EXP.01 incident #:Nab1618836105

Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 3.8	Sample Condition Cool: ☑ Yes ☐ No	Intact: ☐ Yes ☐ No	CHECKED BY: (Initials)	Turnaround Time: Standard ☐ Rush ☒ 24 TAT
	Corrected Temp. °C 2.4				Thermometer ID #113 #140 Correction Factor -0.5°C -0.4

Bacteria (only) Sample Condition: Cool ☐ Yes ☐ No; Intact ☐ Yes ☐ No; Observed Temp. °C; Corrected Temp. °C

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

12-12-24

FORM-006 R 3.2 10/07/21

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APPENDIX C

June 28, 2023, *Deferral Request Addendum*

ENSOLUM

June 28, 2023

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

Re: Deferral Request Addendum
JRU #55 Battery
Incident Number NAB1618836105
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 completed at the JRU #55 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 Number NAB1618836105.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit Letter F, Section 17, Township 23 South, Range 31 East, in Eddy County, New Mexico (32.306040°, -103.802369°) and is associated with oil and gas exploration and production operations on Federal land managed by the Bureau of Land Management (BLM).

On June 22, 2016, a release occurred due to external corrosion of the steel flowline that was buried in the earthen storage tank containment. Approximately 7 barrels (bbls) of produced water and 3 bbls of crude oil were released within the containment berm. A vacuum truck was dispatched to the Site and recovered approximately 2 bbls of produced water and 1 bbl of crude oil. The former operator reported the release to the NMOCD on a Release Notification and Corrective Action Form C-141 (Form C-141) on July 1, 2016. The release was assigned Remediation Permit (RP) Number 2RP-3761 and Incident Number NAB1618836105.

The release was 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.

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-141, Site Assessment/Characterization.

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

Between May 2018 and February 2019, delineation and excavation activities were conducted at the Site to address the impacted soil resulting from the June 22, 2016, crude oil and produced water release. Impacted soil was excavated to the extent possible; however, an estimated 10 cubic yards of impacted soil were left in place within the earthern containment berm to comply with XTO safety policies regarding earth-moving activities within 2-feet of tanks and processing equipment. 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 24, 2023, NMOCD denied the *Deferral Request* for Incident Number NAB1618836105 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 soil sampling 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.).

ADDITIONAL DEPTH TO GROUNDWATER DETERMINATION

Upon review of the NMOCD denial and available water well records, depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs). The closest permitted groundwater well with recent depth to groundwater data is United States Geological Survey (USGS) well 321809103481801, located approximately 0.31 miles southwest of the Site. The well was drilled to a depth of 354 feet bgs. Groundwater was most recently measured during January 2013 with a recorded depth to groundwater of 128.64 feet. All wells used for depth to groundwater determination are depicted on Figure 1 and the referenced well records are included in Appendix A.

Based on confirmed depth to groundwater greater than 100 feet bgs within 0.5 miles of the Site, the Table 1 Closure Criteria identified in the original *Deferral Request* are applicable and appropriate for protection of groundwater at this Site.

DEFFERAL REQUEST

A total of approximately 29 cubic yards of impacted soil were excavated from the Site; however, residual impacted soil was left in place within the earthen containment berm to comply with XTO safety policy regarding earth-moving activities within 2-feet of tanks and processing equipment. The impacted soil remaining in-place is delineated vertically and laterally to below the confirmed Site Closure Criteria. The release occurred within the containment berm, free-standing fluids were recovered during initial response activities, depth to groundwater is greater than 100 feet, and no other sensitive receptors were identified near the release extent. 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 as presented in this addendum and the excavation and delineation data presented in the original February 11, 2019, *Deferral Request*, included as Appendix B, XTO respectfully requests deferral of final remediation for Incident Number NAB1618836105 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 Ager, P.G.
Program Director

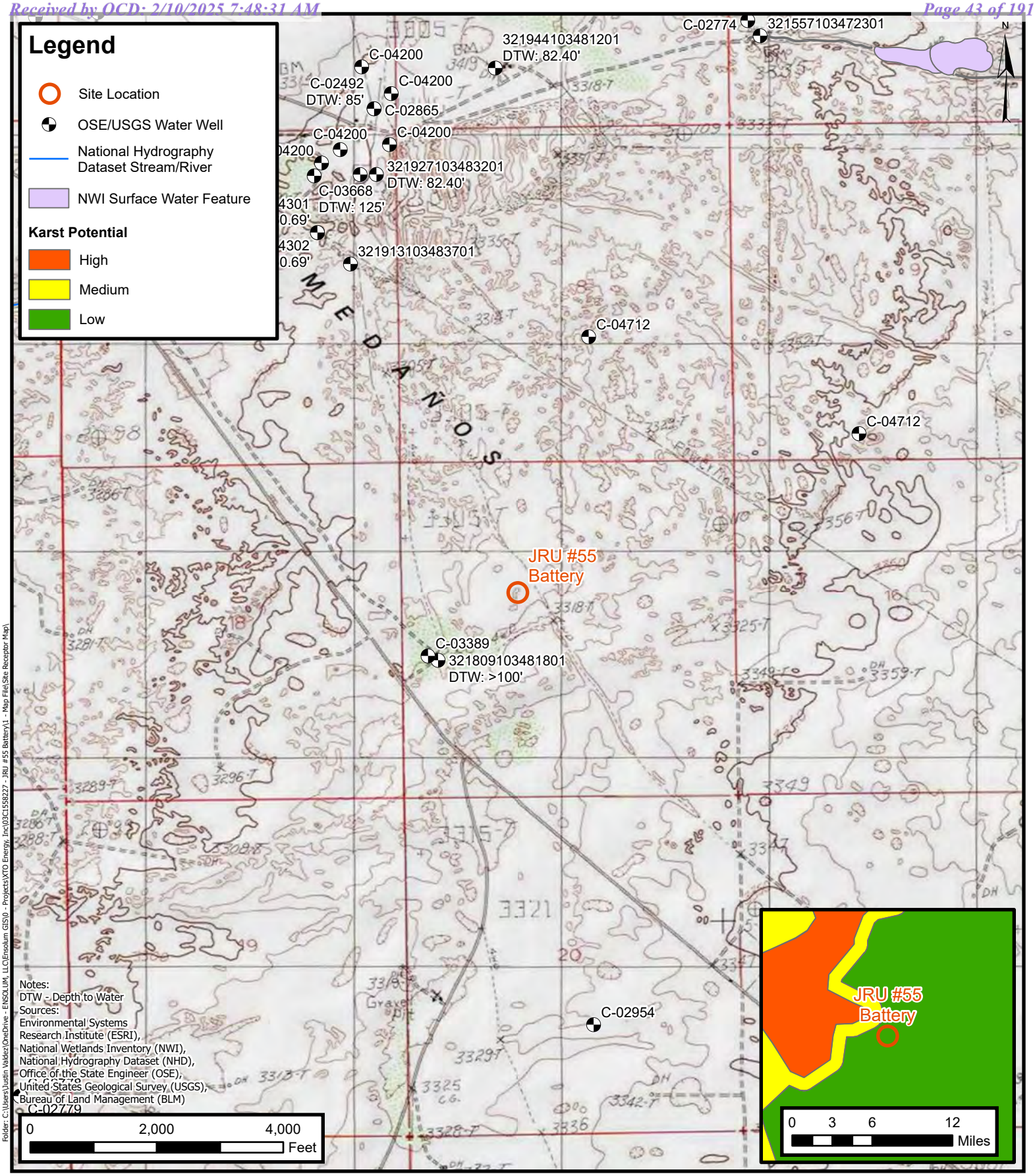
cc: Garrett Green, XTO
Shelby Pennington, XTO
Bureau of Land Management

Appendices:

Figure 1 Site Receptor Map
Appendix A Referenced Well Records
Appendix B February 11, 2019 Deferral Request

ENSOLUM

FIGURES



Folder: C:\Users\Justin Valdez\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\XTO Energy, Inc\03C1558227 - JRU #55 Battery\1 - Map File\Site Receptor Map\

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

XTO Energy, Inc
JRU #55 Battery
Incident Number: NAB1618836105
Unit F, Sec 17, T23S, R31E
Eddy County, New Mexico

FIGURE 1

ENSOLUM

APPENDIX A

Referenced Well Records

Click to hideNews Bulletins

- Explore the *NEW* USGS National Water Dashboard interactive map to access real-time water data from over 13,500 stations nationwide.
- Full News

USGS 321809103481801 23S.31E.17.31141

Available data for this site SUMMARY OF ALL AVAILABLE DATA GO

Well Site

DESCRIPTION:

Latitude 32°18'11.3", Longitude 103°48'23.4" NAD83
Eddy County, New Mexico , Hydrologic Unit 13060011
Well depth: 354 feet
Land surface altitude: 3,326.00 feet above NGVD29.
Well completed in "Other aquifers" (N9999OTHER) national aquifer.
Well completed in "Rustler Formation" (312RSLR) local aquifer

AVAILABLE DATA:

Data Type	Begin Date	End Date	Count
Field groundwater-level measurements	1959-02-04	2013-01-16	4
Field/Lab water-quality samples	1972-09-20	1972-09-20	1
Revisions	Unavailable (site:0) (timeseries:0)		

OPERATION:

Record for this site is maintained by the USGS New Mexico Water Science Center
Email questions about this site to New Mexico Water Science Center Water-Data Inquiries

---

Subscribe for system changes
News

Title: NWIS Site Information for USA: Site Inventory
URL: https://waterdata.usgs.gov/nwis/inventory?agency_code=USGS&site_no=321809103481801

Page Contact Information: New Mexico Water Data Support Team
Page Last Modified: 2023-05-15 19:43:02 EDT
0.31 0.29 sdww01

Click to hideNews Bulletins

- Explore the *NEW* USGS National Water Dashboard interactive map to access real-time water data from over 13,500 stations nationwide.
- Full News

Groundwater levels for the Nation

Important: Next Generation Monitoring Location Page

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 321809103481801

Minimum number of levels = 1
Save file of selected sites to local disk for future upload

USGS 321809103481801 23S.31E.17.31141

Eddy County, New Mexico
Latitude 32°18'11.3", Longitude 103°48'23.4" NAD83
Land-surface elevation 3,326.00 feet above NGVD29
The depth of the well is 354 feet below land surface.
This well is completed in the Other aquifers (N9999OTHER) national aquifer.
This well is completed in the Rustler Formation (312RSLR) local aquifer.

Output formats

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

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source measur
1959-02-04		D	62610		3215.16	NGVD29	P	Z		
1959-02-04		D	62611		3216.80	NAVD88	P	Z		
1959-02-04		D	72019	110.84			P	Z		
1987-10-15		D	62610		3214.80	NGVD29	1	Z		
1987-10-15		D	62611		3216.44	NAVD88	1	Z		
1987-10-15		D	72019	111.20			1	Z		
1992-11-04		D	62610		3216.32	NGVD29	1	S		
1992-11-04		D	62611		3217.96	NAVD88	1	S		
1992-11-04		D	72019	109.68			1	S		
2013-01-16	23:30 UTC	m	62610		3197.36	NGVD29	P	S	USGS	
2013-01-16	23:30 UTC	m	62611		3199.00	NAVD88	P	S	USGS	
2013-01-16	23:30 UTC	m	72019	128.64			P	S	USGS	

Explanation

Section	Code	Description

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level date-time accuracy	m	Date is accurate to the Minute
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	1	Static
Status	P	Pumping
Method of measurement	S	Steel-tape measurement.
Method of measurement	Z	Other.
Measuring agency		Not determined
Measuring agency	USGS	U.S. Geological Survey
Source of measurement		Not determined
Source of measurement	S	Measured by personnel of reporting agency.
Water-level approval status	A	Approved for publication -- Processing and review completed.

ENSOLUM

APPENDIX B

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, NM 87505

RE: Deferral Request
JRU #55 Battery
Remediation Permit Number 2RP-3761
Eddy County, New Mexico

Dear Mr. Billings:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following report detailing the excavation of impacted soil and confirmation soil sampling activities at the JRU #55 Battery (Site) in Unit Letter F, Section 17, Township 23 South, Range 31 East, in Eddy County, New Mexico (Figure 1). The purpose of the soil sampling and excavation activities was to address impacts to soil after a release occurred within the tank battery earthen berm on the western edge of the well pad.

On June 22, 2016, a leak occurred from the oil circulating steel flowline that was buried in the earthen containment for the storage tanks, due to external corrosion. The leak caused a release of approximately 7 barrels (bbls) of produced water and 3 bbls of crude oil. Approximately 347 square feet of caliche well pad within the earthen berm was affected by the release. A vacuum truck was dispatched to the Site and approximately 2 bbls of produced water and 1 bbl of crude oil 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 July 1, 2016, and was assigned Remediation Permit (RP) Number 2RP-3761 (Attachment 1).

This release is 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 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. This release is 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 excavation activities and soil sampling conducted, XTO is submitting this deferral request.

BACKGROUND

According to Section 12 of 19.15.29 NMAC, LTE applied Table 1, *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 is C 02492 POD2, located approximately 1,794 feet southwest of the Site, with a depth to groundwater of 150 feet bgs and a total depth of 300 feet bgs. The elevation of the water well is 10 feet below the elevation of 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 1.52 miles northwest of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. 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.

DELINEATION AND EXCAVATION ACTIVITIES

On May 24, 2018, LTE personnel was on site to investigate horizontal impacts to soil in the area within the tank battery near the source of the release. Two soil sample locations (SS1A and SS4A) were selected based on information provided on the initial Form C-141 and field observations (Figure 2). The 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 samples were shipped at 4 degrees Celsius (°C) under strict chain-of-custody procedures to Xenco Analytical 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. Results are presented on Figure 2 and summarized in Table 1, and the complete analytical reports are included as Attachment 2.

LTE returned to the Site on December 4 and 14, 2018 to collect additional discrete soil samples (SS04B@2', SS06@0.5', SS06@2', SS07@0.5', SS07@1', SS08@1', SS08@3') to further investigate horizontal and vertical impacts. Additionally, LTE oversaw excavation near the source of the release via hydro-vacuum due to presence of subsurface lines and production equipment. To direct excavation activities, LTE screened soil using a PID and Hach® chloride QuanTab® test strips. The excavation measured approximately 171 square feet and was completed to a depth

of 2 feet bgs. Approximately 29 cubic yards of impacted soil was removed from the excavation. The impacted soil was taken to Lea Land Landfill located in Hobbs, New Mexico.

Upon completion of excavation activities, LTE collected 5-point composite samples, each representing a 200 square foot area, from the excavation floor and sidewalls. The 5-point composite samples were collected by depositing 5 aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thorough mixing. Composite soil samples SW05 and SW06 were collected from the walls of the excavation at depths ranging from 0 to 1.5 feet bgs. Composite soil sample FS02 was collected from the excavation floor at a depth of 1.5 feet bgs and contained concentrations that exceeded the NMOCD Table 1 Closure Criteria for GRO/DRO. The excavation was deepened to 2 feet bgs and composite sample FS02A was collected. Analytical results indicated that composite sample FS02A was in compliance with NMOCD Table 1 Closure Criteria. The hydro-vacuum was unable to address impacted soil north of the excavation (as represented by soil sample SS4A@0.5') due to the density of existing pipelines and production equipment and soft sand surrounding the earthen berm that prohibited truck and heavy equipment access. XTO safety policy restricts soil disturbing activities to a 2-foot radius of any surface lines or tanks. These XTO safety policies are established to protect workers and to reduce the likelihood of compromising equipment and equipment foundations.

On February 2, 2019, LTE personnel returned to the Site to collect site characterizations samples inside and outside the earthen containment berm using a hand auger. Discrete soil samples BH01 through BH04 were collected at 1 foot bgs and BH01A through BH04A were collected at 2 feet bgs (Figure 2). Samples were collected, handled, and analyzed as previously described.

ANALYTICAL RESULTS

Laboratory analytical results indicated that composite soil sample FS02 exceeded the NMOCD Table 1 Closure Criteria for GRO/DRO. The excavation was deepened and the subsequent sample was below the NMOCD Table 1 Closure Criteria. Composite soil sample SW06 exceeded the NMOCD Table 1 Closure Criteria for GRO/DRO and TPH. The east wall of the excavation was limited due to XTO's safety policy which prohibits excavating within 2 feet of equipment.

Discrete soil sample SS4A@0.5' exceeded the NMOCD Table 1 Closure Criteria for GRO/DRO. A subsequent sample, SS04B, was collected at 2 feet bgs and was in compliance with NMOCD Table 1 Closure Criteria. Discrete soil sample SS06@0.5' exceeded NMOCD Table 1 Closure Criteria for GRO/DRO and TPH. Subsequent soil sample SS06@2' was in compliance with NMOCD Table 1 Closure Criteria. Due to the proximity of pipelines and processing equipment and the inability to safely get the hydro-vacuum equipment in the vicinity of the samples, the impacted soil was left in place. Discrete soil samples were collected below and in each cardinal direction around the containment area to delineate the impacted soil.

Laboratory analytical results for all other soil samples collected were compliant with the NMOCD Table 1 closure criteria for benzene, BTEX, TPH, GRO/DRO, and chloride. Results are presented on Figure 2 and summarized in Table 1, and the complete laboratory reports are shown as Attachment 2. Benzene and BTEX results are not presented on Figure 2 because concentrations were below laboratory detection levels in all of the samples.

DEFERRAL REQUEST

A total of approximately 29 cubic yards of impacted soil were excavated from the Site; however, residual impacted soil was left in place within the earthern containment berm to comply with XTO safety policies regarding earth-moving activities within 2-feet of tanks and processing equipment.

Laboratory analytical results for excavation sidewall sample SW06 indicated that soil with GRO/DRO and TPH concentrations exceeding the NMOCD Table 1 Closure Criteria was left in place within 2 feet of a tank. An estimated 5 cubic yards of impacted soil remains in place, assuming a maximum 2-foot depth based on the excavation floor sample collected from 2 feet bgs that was compliant with the NMOCD Table 1 closure criteria. Laboratory analytical results indicate that SS4A and SS06@0.5' exceeded NMOCD Table 1 Closure Criteria for GRO/DRO and TPH, respectively. An estimated 5 cubic yards of impacted soil remains in place around soil samples SS4A and SS06@0.5' assuming a maximum depth of 2 feet bgs based on subsequent delineation samples. All impacted soil left in place is within the earthen containment and has been delineated vertically and laterally.

XTO requests to backfill the existing excavation 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 excavation 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, and the soil sample logs are included as Attachment 4.

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

Sincerely,
LT ENVIRONMENTAL, INC.

Adrian Baker

Ashley L. Ager

Adrian Baker
Project Geologist

Ashley L. Ager, P.G.
Senior Geologist

cc: Kyle Littrell, XTO
Deborah McKinney, BLM
Jim Amos, BLM

Attachments:

Figure 1	Site Location Map
Figure 2	Soil Sample Locations
Table 1	Soil Analytical Results
Attachment 1	Initial/Final NMOCD Form C-141 (2RP-3761)
Attachment 2	Laboratory Analytical Reports
Attachment 3	Photographic Log
Attachment 4	Soil Sample Log

FIGURES

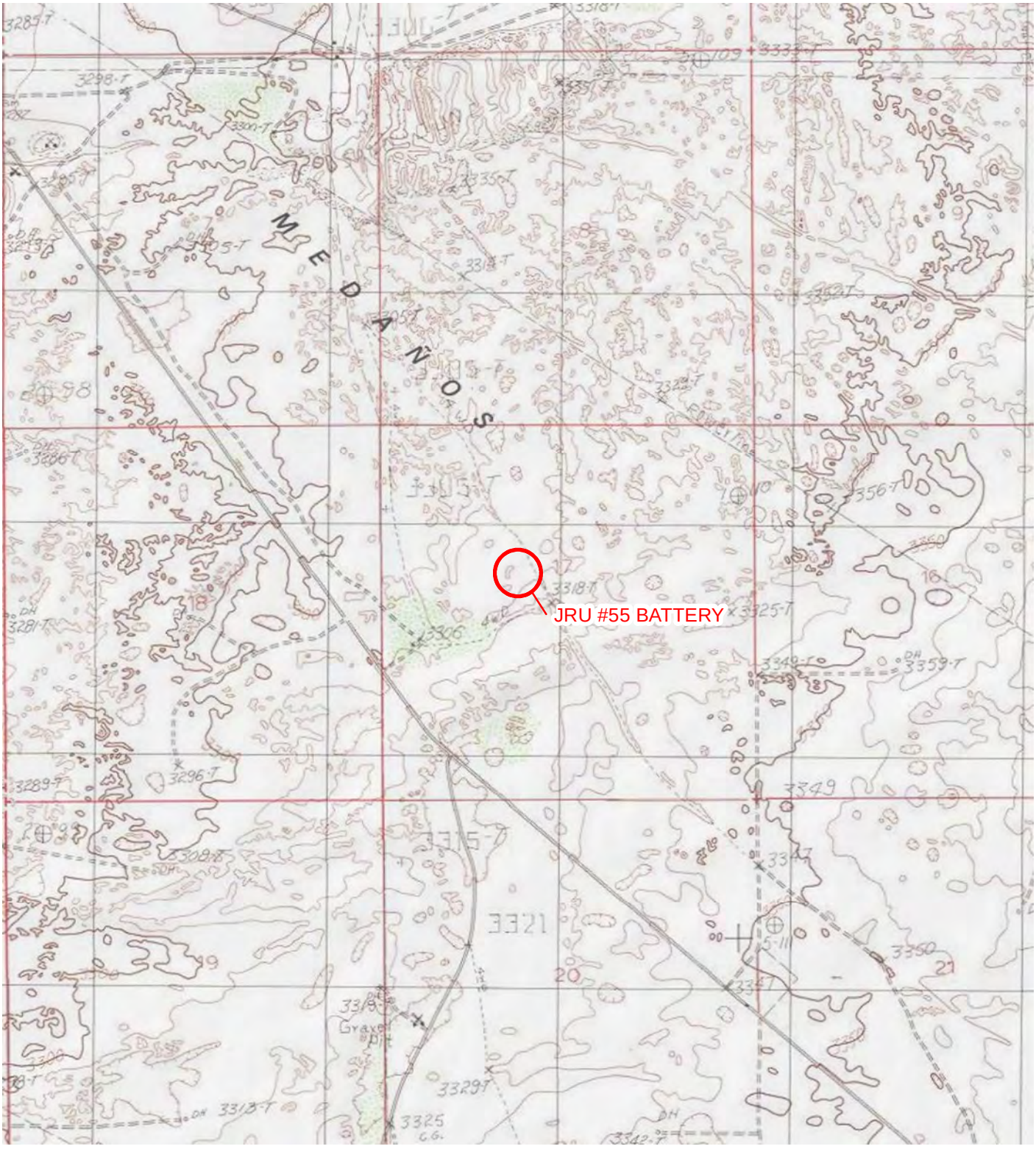


IMAGE COURTESY OF ESRI/USGS

LEGEND

SITE LOCATION

0 2,000 4,000

Feet

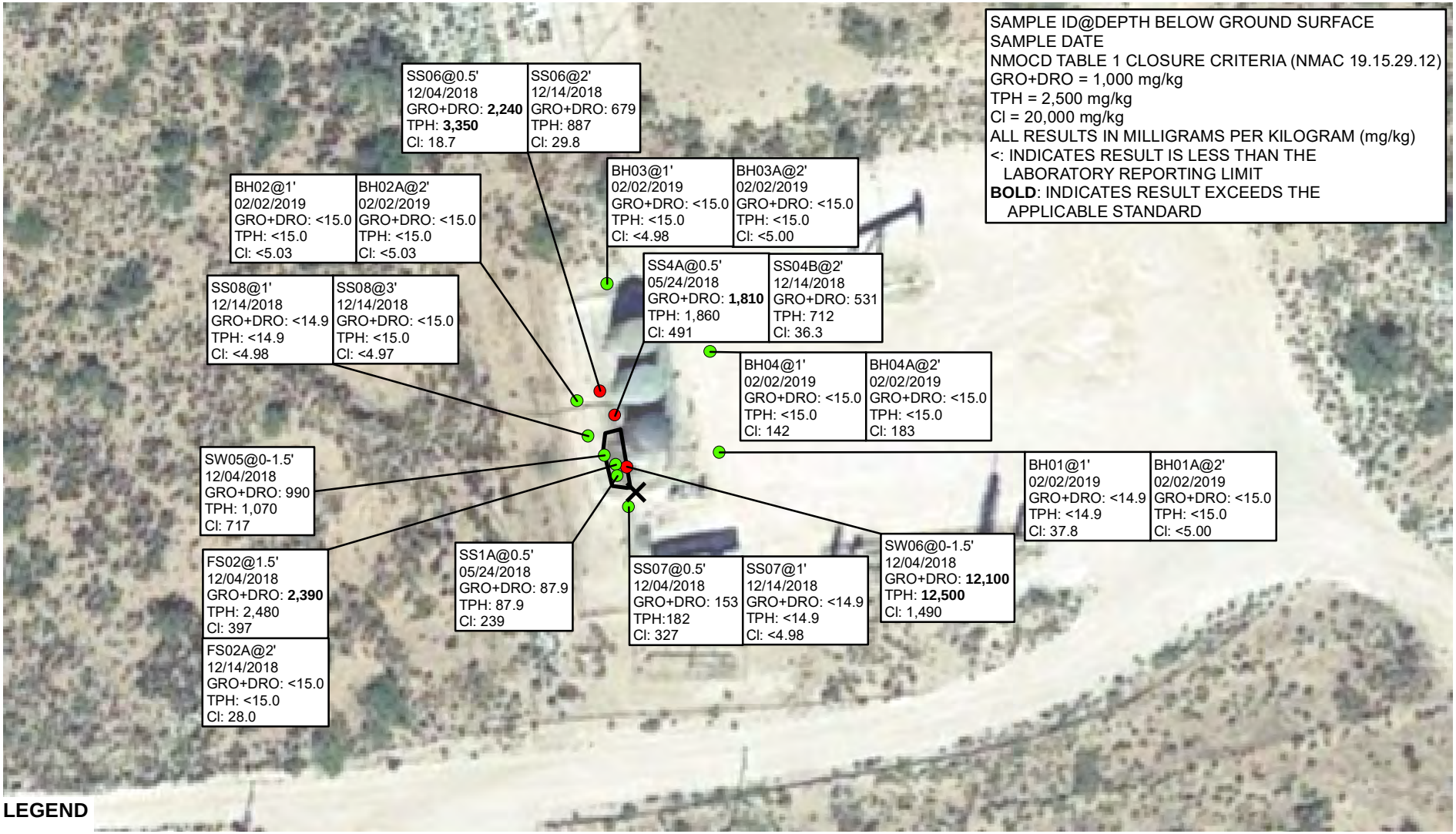
N

NEW MEXICO

NOTE: REMEDIATION PERMIT NUMBER 2RP-3761.

FIGURE 1
SITE LOCATION MAP
JRU #55 BATTERY
UNIT F SEC 17 T23S R31E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012918027_JRU 55 TANK BATTERY\012918027_FIG01_SL_2018_3863.mxd



LEGEND

- RELEASE LOCATION
- SOIL SAMPLE WITH CONCENTRATIONS EXCEEDING APPLICABLE STANDARDS
- FINAL SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE STANDARDS
- EXCAVATION EXTENT

GRO – GASOLINE RANGE ORGANICS
DRO – DIESEL RANGE ORGANICS
TPH – TOTAL PETROLEUM HYDROCARBONS
Cl - CHLORIDE
NMAC – NEW MEXICO ADMINISTRATIVE CODE
NMOCD – NEW MEXICO OIL CONSERVATION DIVISION

NOTE: BENZENE AND BTEX CONCENTRATIONS IN ALL SAMPLES WERE BELOW LABORATORY DETECTION LIMITS.
NOTE: REMEDIATION PERMIT NUMBER 2RP-3761

IMAGE COURTESY OF GOOGLE EARTH 2017

0 60 120
Feet

N

FIGURE 2
SOIL SAMPLE LOCATIONS
JRU #55 BATTERY
UNIT F SEC 17 T23S R31E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012918027_JRU 55 TANK BATTERY\012918027_FIG02_FINAL SS_2018_3761.mxd

TABLE

TABLE 1
SOIL ANALYTICAL RESULTS

JRU #55 BATTERY
REMEDIATION PERMIT NUMBER 2RP-3761
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)
SS1A	0.5	05/24/2018	<0.00197	<0.00197	<0.00197	<0.00197	<0.00197	<15.0	87.9	<15.0	87.9	87.9	239
SS4A	0.5	05/24/2018	<0.00197	<0.00197	<0.00197	<0.00197	<0.00197	<15.0	1,810	53.0	**1,810**	1,860	491
FS02	1.5	12/04/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	2,390	85.1	**2,390**	2,480	397
SW05	0 - 1.5	12/04/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	990	78.6	990	1,070	717
SW06	0 - 1.5	12/04/2018	<0.00201	0.00368	0.0173	0.0475	0.0685	124	12,000	390	**12,100**	**12,500**	1,490
SS06	0.5	12/04/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	3,240	109	**3,240**	**3,350**	18.7
SS07	0.5	12/04/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	153	28.9	153	182	327
FS02A	2	12/14/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	28.0
SS04B	2	12/14/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	531	181	531	712	36.3
SS06	2	12/14/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	46.6	632	208	679	887	29.8
SS07	1	12/14/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	<4.98
SS08	1	12/14/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	<4.98
SS08	3	12/14/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<4.97
BH01	1	02/02/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<14.9	<14.9	<14.9	<14.9	<14.9	37.8
BH01A	2	02/02/2019	<0.00200	<0.00200	<0.00200	0.00866	0.00866	<15.0	<15.0	<15.0	<15.0	<15.0	<5.00
BH02	1	02/02/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	<5.03
BH02A	2	02/02/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<5.03
BH03	1	02/02/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	<4.98
BH03A	2	02/02/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	<5.00
BH04	1	02/02/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	142
BH04A	2	02/02/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	183
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
Table 1 - closure criteria for soils impacted by a release per NMAC 19.15.29 August 2018

ATTACHMENT 1: INITIAL/FINAL NMOCD FORM C-141 (2RP-3761)

NM OIL CONSERVATION
ARTESIA DISTRICT
JUL 01 2016
RECEIVED

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

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.

Release Notification and Corrective Action

nAB1601883L105 260737

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: BOPCO, L.P.	Contact: Amy Ruth
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 575-887-7329
Facility Name: JRU #55 Battery	Facility Type: Exploration and Production

Surface Owner: Federal	Mineral Owner: Federal	API No. 30-015-27589

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
F	17	23S	31E	2060	North	1850	West	Eddy

Latitude 32.306040° **Longitude** -103.802369°

NATURE OF RELEASE

Type of Release: Produced Water and Crude Oil		Volume of Release: 7 bbls PW, 3 bbls oil	Volume Recovered: 2 bbls PW, 1 bbl oil
Source of Release: Oil circulating line		Date and Hour of Occurrence: *6/22/2016 time unknown*	Date and Hour of Discovery: *6/22/2016 1 pm*
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required		If YES, To Whom? N/A	
By Whom? N/A		Date and Hour N/A	
Was a Watercourse Reached? ☐ Yes ☒ No		If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*
N/A

Describe Cause of Problem and Remedial Action Taken.*
Leak occurred on the oil circulating steel line in the portion buried in the tank earthen berm. Leak was due to a hole developing in the line due to external corrosion. Line was clamped until section can be repaired.

Describe Area Affected and Cleanup Action Taken.*
Leak affected 347 ft² of caliche within the tank earthen berm. Standing fluids were recovered.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 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:

Printed Name: Amy C. Ruth

Title: EHS Remediation Specialist

E-mail Address: ACRuth@basspet.com

Date: 7/1/2016 Phone: 432-661-0571

OIL CONSERVATION DIVISION

Approved by Environmental Specialist:

Approval Date: 7/6/16 Expiration Date: N/A

Conditions of Approval: Attached ☐

Remediation per O.C.D. Rules & Guidelines
SUBMIT REMEDIATION PROPOSAL NO LATER THAN: 8/7/16

2RP-3761

* Attach Additional Sheets If Necessary

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	
District RP	2RP-3761
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 32.306040 Longitude -103.802369
(NAD 83 in decimal degrees to 5 decimal places)

Site Name JRU #55 Battery	Site Type Exploration and Production
Date Release Discovered 6/22/2016	API# *(if applicable)* 30-015-27589

Unit Letter	Section	Township	Range	County
F	17	23S	31E	Eddy

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ Private (*Name:* BLM)

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) 3	Volume Recovered (bbls) 1
☒ Produced Water	Volume Released (bbls) 7	Volume Recovered (bbls) 2
	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

A leak occurred on the oil circulating steel line in the portion buried in the tank earthen berm. Leak was due to a hole developing in the line due to external corrosion. Line was clamped until section can be repaired. The leak affected 347 sq. ft. of caliche within the tank earthen berm. Standing fluids were recovered.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-3761
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice 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

☒ 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: SH&E Coordinator

Signature: _____ Date: 2/11/2019

email: Kyle_Littrell@xtoenergy.com Telephone: 432-221-7331

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-3761
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?	>100 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **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.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-3761
Facility ID	
Application ID	

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

Printed Name: Kyle Littrell Title: SH&E Coordinator

Signature: _____ Date: 2/11/2019

email: Kyle_Littrell@xtoenergy.com Telephone: 432-221-7331

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-3761
Facility ID	
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 19.15.29.12(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: Kyle Littrell Title: SH&E Coordinator

Signature: _____ Date: 2/11/2019

email: Kyle_Littrell@xtoenergy.com Telephone: 432-221-7331

OCD Only

Received by: _____ Date: _____

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

Signature: _____ Date: _____

ATTACHMENT 2: LABORATORY ANALYTICAL REPORTS

Analytical Report 587377

for

LT Environmental, Inc.

Project Manager: Adrian Baker

JRU 55 Battery/012978027 (2RP-3761)

012918027

03-JUN-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-26), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab Code: TX00158): Texas (T104704400-18-14)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
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)

03-JUN-18

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

Reference: XENCO Report No(s): **587377**
JRU 55 Battery/012978027 (2RP-3761)
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) 587377. 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. 587377 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 587377

LT Environmental, Inc., Arvada, CO

JRU 55 Battery/012978027 (2RP-3761)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS 1 A	S	05-24-18 11:00	- 6 In	587377-001
SS 4 A	S	05-24-18 11:00	- 6 In	587377-002
FS1	S	05-24-18 11:00	- 2 In	587377-003
SW 1	S	05-24-18 11:00	- 1 In	587377-004
SW 2	S	05-24-18 11:00	- 1 In	587377-005
SW 3	S	05-24-18 11:00	- 1 In	587377-006
SW 4	S	05-24-18 11:00	- 1 In	587377-007

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: JRU 55 Battery/012978027 (2RP-3761)

Project ID: *012918027*
Work Order Number(s): *587377*

Report Date: *03-JUN-18*
Date Received: *05/29/2018*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3052093 BTEX by EPA 8021B

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

Certificate of Analysis Summary 587377

LT Environmental, Inc., Arvada, CO

Project Name: JRU 55 Battery/012978027 (2RP-3761)

Project Id: 012918027
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Tue May-29-18 09:29 am
Report Date: 03-JUN-18
Project Manager: Jessica Kramer

Analysis Requested		587377-001		587377-002		587377-003		587377-004		587377-005		587377-006	
	Field Id:	SS 1 A		SS 4 A		FS1		SW 1		SW 2		SW 3	
	Depth:	6 In		6 In		2 In		1 In		1 In		1 In	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	May-24-18 11:00		May-24-18 11:00		May-24-18 11:00		May-24-18 11:00		May-24-18 11:00		May-24-18 11:00	
BTEX by EPA 8021B	*Extracted:*	May-30-18 11:00		May-30-18 11:00		May-30-18 11:00		May-30-18 11:00		May-30-18 11:00		May-30-18 11:00	
	Analyzed:	May-31-18 02:00		May-31-18 02:18		May-31-18 02:36		May-31-18 15:20		May-31-18 03:13		May-31-18 03:31	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00197	0.00197	<0.00197	0.00197	<0.00197	0.00197	<0.00198	0.00198	<0.00198	0.00198	<0.00200	0.00200
Toluene		<0.00197	0.00197	<0.00197	0.00197	<0.00197	0.00197	<0.00198	0.00198	<0.00198	0.00198	<0.00200	0.00200
Ethylbenzene		<0.00197	0.00197	<0.00197	0.00197	<0.00197	0.00197	<0.00198	0.00198	<0.00198	0.00198	<0.00200	0.00200
m,p-Xylenes		<0.00394	0.00394	<0.00394	0.00394	<0.00394	0.00394	<0.00397	0.00397	<0.00397	0.00397	<0.00399	0.00399
o-Xylene		<0.00197	0.00197	<0.00197	0.00197	<0.00197	0.00197	<0.00198	0.00198	<0.00198	0.00198	<0.00200	0.00200
Total Xylenes		<0.00197	0.00197	<0.00197	0.00197	<0.00197	0.00197	<0.00198	0.00198	<0.00198	0.00198	<0.00200	0.00200
Total BTEX		<0.00197	0.00197	<0.00197	0.00197	<0.00197	0.00197	<0.00198	0.00198	<0.00198	0.00198	<0.00200	0.00200
Inorganic Anions by EPA 300	*Extracted:*	May-30-18 15:00		May-30-18 15:00		May-30-18 15:00		May-30-18 15:00		May-31-18 08:30		May-31-18 08:30	
	Analyzed:	May-30-18 16:34		May-30-18 17:26		May-30-18 17:32		May-30-18 17:37		May-31-18 09:33		May-31-18 10:20	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		239	5.00	491	4.95	119	4.95	<4.95	4.95	5.25	4.99	<5.00	5.00
TPH by SW8015 Mod	*Extracted:*	May-30-18 15:00		May-30-18 15:00		May-30-18 15:00		May-30-18 15:00		May-30-18 15:00		May-30-18 15:00	
	Analyzed:	May-30-18 23:22		May-31-18 00:25		May-31-18 00:46		May-31-18 01:07		May-31-18 01:28		May-31-18 01:49	
	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	<14.9	14.9
Diesel Range Organics (DRO)		87.9	15.0	1810	15.0	174	15.0	327	14.9	<15.0	15.0	<14.9	14.9
Oil Range Hydrocarbons (ORO)		<15.0	15.0	53.0	15.0	<15.0	15.0	18.7	14.9	<15.0	15.0	<14.9	14.9
Total TPH		87.9	15.0	1860	15.0	174	15.0	346	14.9	<15.0	15.0	<14.9	14.9

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analysis Summary 587377

LT Environmental, Inc., Arvada, CO

Project Name: JRU 55 Battery/012978027 (2RP-3761)

Project Id: 012918027
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Tue May-29-18 09:29 am
Report Date: 03-JUN-18
Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	587377-007					
	Field Id:	SW 4					
	Depth:	1 In					
	Matrix:	SOIL					
	Sampled:	May-24-18 11:00					
BTEX by EPA 8021B	***Extracted:***	May-30-18 11:00					
	Analyzed:	May-31-18 15:01					
	Units/RL:	mg/kg	RL				
Benzene		<0.00199	0.00199				
Toluene		<0.00199	0.00199				
Ethylbenzene		<0.00199	0.00199				
m,p-Xylenes		<0.00398	0.00398				
o-Xylene		<0.00199	0.00199				
Total Xylenes		<0.00199	0.00199				
Total BTEX		<0.00199	0.00199				
Inorganic Anions by EPA 300	***Extracted:***	May-31-18 08:30					
	Analyzed:	May-31-18 10:26					
	Units/RL:	mg/kg	RL				
Chloride		45.5	5.00				
TPH by SW8015 Mod	***Extracted:***	May-30-18 15:00					
	Analyzed:	May-31-18 02:10					
	Units/RL:	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0				
Diesel Range Organics (DRO)		<15.0	15.0				
Oil Range Hydrocarbons (ORO)		<15.0	15.0				
Total TPH		<15.0	15.0				

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Jessica Kramer
Project Assistant

Certificate of Analytical Results 587377

LT Environmental, Inc., Arvada, CO

JRU 55 Battery/012978027 (2RP-3761)

Sample Id:	**SS 1 A**	Matrix:	Soil	Date Received:	05.29.18 09.29
Lab Sample Id:	587377-001	Date Collected:	05.24.18 11.00	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.30.18 15.00	Basis:	Wet Weight
Seq Number:	3051853				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**239**	5.00	mg/kg	05.30.18 16.34		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.30.18 15.00	Basis:	Wet Weight
Seq Number:	3051895				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.30.18 23.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	**87.9**	15.0	mg/kg	05.30.18 23.22		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	05.30.18 23.22	U	1
Total TPH	PHC635	**87.9**	15.0	mg/kg	05.30.18 23.22		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	05.30.18 23.22	
o-Terphenyl	84-15-1	119	%	70-135	05.30.18 23.22	

Certificate of Analytical Results 587377

LT Environmental, Inc., Arvada, CO

JRU 55 Battery/012978027 (2RP-3761)

Sample Id:	**SS 1 A**	Matrix:	Soil	Date Received:	05.29.18 09.29
Lab Sample Id:	587377-001	Date Collected:	05.24.18 11.00	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	JUM			% Moisture:	
Analyst:	JUM	Date Prep:	05.30.18 11.00	Basis:	Wet Weight
Seq Number:	3052093				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00197	0.00197	mg/kg	05.31.18 02.00	U	1
Toluene	108-88-3	<0.00197	0.00197	mg/kg	05.31.18 02.00	U	1
Ethylbenzene	100-41-4	<0.00197	0.00197	mg/kg	05.31.18 02.00	U	1
m,p-Xylenes	179601-23-1	<0.00394	0.00394	mg/kg	05.31.18 02.00	U	1
o-Xylene	95-47-6	<0.00197	0.00197	mg/kg	05.31.18 02.00	U	1
Total Xylenes	1330-20-7	<0.00197	0.00197	mg/kg	05.31.18 02.00	U	1
Total BTEX		<0.00197	0.00197	mg/kg	05.31.18 02.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	05.31.18 02.00	
4-Bromofluorobenzene	460-00-4	95	%	70-130	05.31.18 02.00	

Certificate of Analytical Results 587377

LT Environmental, Inc., Arvada, CO

JRU 55 Battery/012978027 (2RP-3761)

Sample Id:	**SS 4 A**	Matrix:	Soil	Date Received:	05.29.18 09.29
Lab Sample Id:	587377-002	Date Collected:	05.24.18 11.00	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.30.18 15.00	Basis:	Wet Weight
Seq Number:	3051853				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**491**	4.95	mg/kg	05.30.18 17.26		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.30.18 15.00	Basis:	Wet Weight
Seq Number:	3051895				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.31.18 00.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	**1810**	15.0	mg/kg	05.31.18 00.25		1
Oil Range Hydrocarbons (ORO)	PHCG2835	**53.0**	15.0	mg/kg	05.31.18 00.25		1
Total TPH	PHC635	**1860**	15.0	mg/kg	05.31.18 00.25		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	05.31.18 00.25	
o-Terphenyl	84-15-1	116	%	70-135	05.31.18 00.25	

Certificate of Analytical Results 587377

LT Environmental, Inc., Arvada, CO

JRU 55 Battery/012978027 (2RP-3761)

Sample Id:	**SS 4 A**	Matrix:	Soil	Date Received:	05.29.18 09.29
Lab Sample Id:	587377-002	Date Collected:	05.24.18 11.00	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	JUM			% Moisture:	
Analyst:	JUM	Date Prep:	05.30.18 11.00	Basis:	Wet Weight
Seq Number:	3052093				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00197	0.00197	mg/kg	05.31.18 02.18	U	1
Toluene	108-88-3	<0.00197	0.00197	mg/kg	05.31.18 02.18	U	1
Ethylbenzene	100-41-4	<0.00197	0.00197	mg/kg	05.31.18 02.18	U	1
m,p-Xylenes	179601-23-1	<0.00394	0.00394	mg/kg	05.31.18 02.18	U	1
o-Xylene	95-47-6	<0.00197	0.00197	mg/kg	05.31.18 02.18	U	1
Total Xylenes	1330-20-7	<0.00197	0.00197	mg/kg	05.31.18 02.18	U	1
Total BTEX		<0.00197	0.00197	mg/kg	05.31.18 02.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	05.31.18 02.18	
4-Bromofluorobenzene	460-00-4	92	%	70-130	05.31.18 02.18	

Certificate of Analytical Results 587377

LT Environmental, Inc., Arvada, CO

JRU 55 Battery/012978027 (2RP-3761)

Sample Id:	**FS1**	Matrix:	Soil	Date Received:	05.29.18 09.29
Lab Sample Id:	587377-003	Date Collected:	05.24.18 11.00	Sample Depth:	2 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.30.18 15.00	Basis:	Wet Weight
Seq Number:	3051853				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**119**	4.95	mg/kg	05.30.18 17.32		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.30.18 15.00	Basis:	Wet Weight
Seq Number:	3051895				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.31.18 00.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	**174**	15.0	mg/kg	05.31.18 00.46		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	05.31.18 00.46	U	1
Total TPH	PHC635	**174**	15.0	mg/kg	05.31.18 00.46		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	05.31.18 00.46	
o-Terphenyl	84-15-1	118	%	70-135	05.31.18 00.46	

Certificate of Analytical Results 587377

LT Environmental, Inc., Arvada, CO

JRU 55 Battery/012978027 (2RP-3761)

Sample Id:	**FS1**	Matrix:	Soil	Date Received:	05.29.18 09.29
Lab Sample Id:	587377-003	Date Collected:	05.24.18 11.00	Sample Depth:	2 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	JUM			% Moisture:	
Analyst:	JUM	Date Prep:	05.30.18 11.00	Basis:	Wet Weight
Seq Number:	3052093				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00197	0.00197	mg/kg	05.31.18 02.36	U	1
Toluene	108-88-3	<0.00197	0.00197	mg/kg	05.31.18 02.36	U	1
Ethylbenzene	100-41-4	<0.00197	0.00197	mg/kg	05.31.18 02.36	U	1
m,p-Xylenes	179601-23-1	<0.00394	0.00394	mg/kg	05.31.18 02.36	U	1
o-Xylene	95-47-6	<0.00197	0.00197	mg/kg	05.31.18 02.36	U	1
Total Xylenes	1330-20-7	<0.00197	0.00197	mg/kg	05.31.18 02.36	U	1
Total BTEX		<0.00197	0.00197	mg/kg	05.31.18 02.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	93	%	70-130	05.31.18 02.36	
4-Bromofluorobenzene	460-00-4	108	%	70-130	05.31.18 02.36	

Certificate of Analytical Results 587377

LT Environmental, Inc., Arvada, CO

JRU 55 Battery/012978027 (2RP-3761)

Sample Id:	**SW 1**	Matrix:	Soil	Date Received:	05.29.18 09.29
Lab Sample Id:	587377-004	Date Collected:	05.24.18 11.00	Sample Depth:	1 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.30.18 15.00	Basis:	Wet Weight
Seq Number:	3051853				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	05.30.18 17.37	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.30.18 15.00	Basis:	Wet Weight
Seq Number:	3051895				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	05.31.18 01.07	U	1
Diesel Range Organics (DRO)	C10C28DRO	**327**	14.9	mg/kg	05.31.18 01.07		1
Oil Range Hydrocarbons (ORO)	PHCG2835	**18.7**	14.9	mg/kg	05.31.18 01.07		1
Total TPH	PHC635	**346**	14.9	mg/kg	05.31.18 01.07		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	05.31.18 01.07	
o-Terphenyl	84-15-1	114	%	70-135	05.31.18 01.07	

Certificate of Analytical Results 587377

LT Environmental, Inc., Arvada, CO

JRU 55 Battery/012978027 (2RP-3761)

Sample Id:	**SW 1**	Matrix:	Soil	Date Received:	05.29.18 09.29
Lab Sample Id:	587377-004	Date Collected:	05.24.18 11.00	Sample Depth:	1 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	JUM			% Moisture:	
Analyst:	JUM	Date Prep:	05.30.18 11.00	Basis:	Wet Weight
Seq Number:	3052093				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	05.31.18 15.20	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	05.31.18 15.20	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	05.31.18 15.20	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	05.31.18 15.20	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	05.31.18 15.20	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	05.31.18 15.20	U	1
Total BTEX		<0.00198	0.00198	mg/kg	05.31.18 15.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	117	%	70-130	05.31.18 15.20	
1,4-Difluorobenzene	540-36-3	100	%	70-130	05.31.18 15.20	

Certificate of Analytical Results 587377

LT Environmental, Inc., Arvada, CO

JRU 55 Battery/012978027 (2RP-3761)

Sample Id:	**SW 2**	Matrix:	Soil	Date Received:	05.29.18 09.29
Lab Sample Id:	587377-005	Date Collected:	05.24.18 11.00	Sample Depth:	1 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.31.18 08.30	Basis:	Wet Weight
Seq Number:	3051902				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**5.25**	4.99	mg/kg	05.31.18 09.33		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.30.18 15.00	Basis:	Wet Weight
Seq Number:	3051895				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.31.18 01.28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.31.18 01.28	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	05.31.18 01.28	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.31.18 01.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	05.31.18 01.28	
o-Terphenyl	84-15-1	105	%	70-135	05.31.18 01.28	

Certificate of Analytical Results 587377

LT Environmental, Inc., Arvada, CO

JRU 55 Battery/012978027 (2RP-3761)

Sample Id:	**SW 2**	Matrix:	Soil	Date Received:	05.29.18 09.29
Lab Sample Id:	587377-005	Date Collected:	05.24.18 11.00	Sample Depth:	1 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	JUM			% Moisture:	
Analyst:	JUM	Date Prep:	05.30.18 11.00	Basis:	Wet Weight
Seq Number:	3052093				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	05.31.18 03.13	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	05.31.18 03.13	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	05.31.18 03.13	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	05.31.18 03.13	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	05.31.18 03.13	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	05.31.18 03.13	U	1
Total BTEX		<0.00198	0.00198	mg/kg	05.31.18 03.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	117	%	70-130	05.31.18 03.13	
1,4-Difluorobenzene	540-36-3	99	%	70-130	05.31.18 03.13	

Certificate of Analytical Results 587377

LT Environmental, Inc., Arvada, CO

JRU 55 Battery/012978027 (2RP-3761)

Sample Id:	**SW 3**	Matrix:	Soil	Date Received:	05.29.18 09.29
Lab Sample Id:	587377-006	Date Collected:	05.24.18 11.00	Sample Depth:	1 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.31.18 08.30	Basis:	Wet Weight
Seq Number:	3051902				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	05.31.18 10.20	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.30.18 15.00	Basis:	Wet Weight
Seq Number:	3051895				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	05.31.18 01.49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	05.31.18 01.49	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	05.31.18 01.49	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	05.31.18 01.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	05.31.18 01.49	
o-Terphenyl	84-15-1	108	%	70-135	05.31.18 01.49	

Certificate of Analytical Results 587377

LT Environmental, Inc., Arvada, CO

JRU 55 Battery/012978027 (2RP-3761)

Sample Id:	**SW 3**	Matrix:	Soil	Date Received:	05.29.18 09.29
Lab Sample Id:	587377-006	Date Collected:	05.24.18 11.00	Sample Depth:	1 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	JUM			% Moisture:	
Analyst:	JUM	Date Prep:	05.30.18 11.00	Basis:	Wet Weight
Seq Number:	3052093				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.31.18 03.31	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.31.18 03.31	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.31.18 03.31	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	05.31.18 03.31	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.31.18 03.31	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.31.18 03.31	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.31.18 03.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	05.31.18 03.31	
1,4-Difluorobenzene	540-36-3	92	%	70-130	05.31.18 03.31	

Certificate of Analytical Results 587377

LT Environmental, Inc., Arvada, CO

JRU 55 Battery/012978027 (2RP-3761)

Sample Id:	**SW 4**	Matrix:	Soil	Date Received:	05.29.18 09.29
Lab Sample Id:	587377-007	Date Collected:	05.24.18 11.00	Sample Depth:	1 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.31.18 08.30	Basis:	Wet Weight
Seq Number:	3051902				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**45.5**	5.00	mg/kg	05.31.18 10.26		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.30.18 15.00	Basis:	Wet Weight
Seq Number:	3051895				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.31.18 02.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.31.18 02.10	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	05.31.18 02.10	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.31.18 02.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	05.31.18 02.10	
o-Terphenyl	84-15-1	109	%	70-135	05.31.18 02.10	

Certificate of Analytical Results 587377

LT Environmental, Inc., Arvada, CO

JRU 55 Battery/012978027 (2RP-3761)

Sample Id:	**SW 4**	Matrix:	Soil	Date Received:	05.29.18 09.29
Lab Sample Id:	587377-007	Date Collected:	05.24.18 11.00	Sample Depth:	1 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	JUM			% Moisture:	
Analyst:	JUM	Date Prep:	05.30.18 11.00	Basis:	Wet Weight
Seq Number:	3052093				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	05.31.18 15.01	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	05.31.18 15.01	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	05.31.18 15.01	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	05.31.18 15.01	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	05.31.18 15.01	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	05.31.18 15.01	U	1
Total BTEX		<0.00199	0.00199	mg/kg	05.31.18 15.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	119	%	70-130	05.31.18 15.01	
1,4-Difluorobenzene	540-36-3	99	%	70-130	05.31.18 15.01	

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 587377

LT Environmental, Inc.

JRU 55 Battery/012978027 (2RP-3761)

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3051853 — Matrix: Solid — Date Prep: 05.30.18
MB Sample Id: 7655696-1-BLK — LCS Sample Id: 7655696-1-BKS — LCSD Sample Id: 7655696-1-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	274	110	268	107	90-110	2	20	mg/kg	05.30.18 16:24	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3051902 — Matrix: Solid — Date Prep: 05.31.18
MB Sample Id: 7655767-1-BLK — LCS Sample Id: 7655767-1-BKS — LCSD Sample Id: 7655767-1-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	269	108	269	108	90-110	0	20	mg/kg	05.31.18 09:22	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3051853 — Matrix: Soil — Date Prep: 05.30.18
Parent Sample Id: 587377-001 — MS Sample Id: 587377-001 S — MSD Sample Id: 587377-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	239	250	499	104	499	104	90-110	0	20	mg/kg	05.30.18 16:39	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3051853 — Matrix: Soil — Date Prep: 05.30.18
Parent Sample Id: 587525-003 — MS Sample Id: 587525-003 S — MSD Sample Id: 587525-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.96	248	270	109	278	112	90-110	3	20	mg/kg	05.30.18 17:58	X

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3051902 — Matrix: Soil — Date Prep: 05.31.18
Parent Sample Id: 587377-005 — MS Sample Id: 587377-005 S — MSD Sample Id: 587377-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	5.25	250	277	109	278	109	90-110	0	20	mg/kg	05.31.18 09:38	

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

QC Summary 587377

LT Environmental, Inc.

JRU 55 Battery/012978027 (2RP-3761)

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3051902 Matrix: Soil Date Prep: 05.31.18
Parent Sample Id: 587528-001 MS Sample Id: 587528-001 S MSD Sample Id: 587528-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.92	246	271	110	271	110	90-110	0	20	mg/kg	05.31.18 10:52	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3051895 Matrix: Solid Date Prep: 05.30.18
MB Sample Id: 7655762-1-BLK LCS Sample Id: 7655762-1-BKS LCSD Sample Id: 7655762-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	936	94	927	93	70-135	1	20	mg/kg	05.30.18 22:40	
Diesel Range Organics (DRO)	<15.0	1000	1020	102	1000	100	70-135	2	20	mg/kg	05.30.18 22:40	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	89		126		129		70-135	%	05.30.18 22:40
o-Terphenyl	95		121		121		70-135	%	05.30.18 22:40

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3051895 Matrix: Soil Date Prep: 05.30.18
Parent Sample Id: 587377-001 MS Sample Id: 587377-001 S MSD Sample Id: 587377-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	998	962	96	964	96	70-135	0	20	mg/kg	05.30.18 23:43	
Diesel Range Organics (DRO)	87.9	998	1070	98	1070	98	70-135	0	20	mg/kg	05.30.18 23:43	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	129		129		70-135	%	05.30.18 23:43
o-Terphenyl	125		123		70-135	%	05.30.18 23:43

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

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

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

QC Summary 587377

LT Environmental, Inc.

JRU 55 Battery/012978027 (2RP-3761)

Analytical Method: BTEX by EPA 8021B
Prep Method: SW5030B
Seq Number: 3052093
Matrix: Solid
Date Prep: 05.30.18
MB Sample Id: 7655893-1-BLK
LCS Sample Id: 7655893-1-BKS
LCSD Sample Id: 7655893-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00197	0.0984	0.0991	101	0.105	106	70-130	6	35	mg/kg	05.30.18 20:39	
Toluene	<0.00197	0.0984	0.104	106	0.108	110	70-130	4	35	mg/kg	05.30.18 20:39	
Ethylbenzene	<0.00197	0.0984	0.102	104	0.111	113	70-130	8	35	mg/kg	05.30.18 20:39	
m,p-Xylenes	<0.00394	0.197	0.222	113	0.233	118	70-130	5	35	mg/kg	05.30.18 20:39	
o-Xylene	<0.00197	0.0984	0.110	112	0.118	120	70-130	7	35	mg/kg	05.30.18 20:39	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		104		98		70-130	%	05.30.18 20:39
4-Bromofluorobenzene	95		92		97		70-130	%	05.30.18 20:39

Analytical Method: BTEX by EPA 8021B
Prep Method: SW5030B
Seq Number: 3052093
Matrix: Soil
Date Prep: 05.30.18
Parent Sample Id: 587229-001
MS Sample Id: 587229-001 S
MSD Sample Id: 587229-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00196	0.0982	0.0684	70	0.0769	78	70-130	12	35	mg/kg	05.30.18 21:14	
Toluene	<0.00196	0.0982	0.0664	68	0.0689	69	70-130	4	35	mg/kg	05.30.18 21:14	X
Ethylbenzene	<0.00196	0.0982	0.0579	59	0.0635	64	70-130	9	35	mg/kg	05.30.18 21:14	X
m,p-Xylenes	<0.00393	0.196	0.118	60	0.128	65	70-130	8	35	mg/kg	05.30.18 21:14	X
o-Xylene	<0.00196	0.0982	0.0651	66	0.0642	65	70-130	1	35	mg/kg	05.30.18 21:14	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	95		110		70-130	%	05.30.18 21:14
4-Bromofluorobenzene	111		124		70-130	%	05.30.18 21:14

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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Stafford, Texas (281-240-4200)
Dallas Texas (214-902-0300)
San Antonio, Texas (210-509-3334)
Midland, Texas (432-704-5251)
Phoenix, Arizona (480-355-0900)
www.xenco.com

CHAIN OF CUSTODY

Page 1 Of 1

Xenco Quote #

Xenco Job # 577377

Client / Reporting Information

Company Name / Branch: LT Environmental, Inc.
Company Address: 4600 W 60th Ave Arvada, CO 80003
Email: abaker@ltenv.com Phone No: 432-894-5641
Project Contact: Adrian Baker
Samplers's Name Daniel Thomas

Project Information

Project Name/Number: JRU 55 Battery/012918027 (2RP-3761)
Project Location:
Invoice To:
PO Number:

Analytical Information

Matrix Codes

W = Water
S = Soil/Sed/Solid
GW = Ground Water
DW = Drinking Water
P = Product
SW = Surface water
SL = Sludge
OW = Ocean/Sea Water
WI = Wipe
O = Oil
WW = Waste Water
A = Air

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	BTEX E 8021	TPH	Chloride	Field Comments
1	SS1A	6"	5-24-18	1100	Soil	1								X	X	X	X	
2	SS4A	6"		1105														
3	FS1	2'		1110														
4	SW1	1'		1115														
5	SW2	1'		1120														
6	SW3	1'		1125														
7	SW4	1'		1130														
8																		
9																		
10																		

Turnaround Time (Business days)

- [ ] Same Day TAT
- [ ] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT
- [ ] 3 Day EMERGENCY (Standart TAT)

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] TRRP Checklist

Notes:

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		5-24-18 1720		2	5/25 1530	2 Received 5/29/18
3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice / Cooler Temp. / Thermo. Corr. Factor

Notice: 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 loses are due to circumstances beyond the control of Xenco. A minimum charge of $75 will be applied to each project. Xenco's liability will be limited to the cost of samples. Any samples received by Xenco but not analyzed will be invoiced at $5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.

Analytical Report 607737

for

LT Environmental, Inc.

Project Manager: Adrian Baker

JRU 55

07-FEB-19

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

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

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

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

07-FEB-19

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

Reference: XENCO Report No(s): **607737**
JRU 55
Project Address: 12918027

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) 607737. 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. 607737 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 607737

LT Environmental, Inc., Arvada, CO

JRU 55

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS06	S	12-04-18 11:40	0.5 ft	607737-001
SW05	S	12-04-18 11:45	0 - 1.5 ft	607737-002
SW06	S	12-04-18 11:50	0 - 1.5 ft	607737-003
FS02	S	12-04-18 12:00	1.5 ft	607737-004
SS07	S	12-04-18 12:45	0.5 ft	607737-005

Version: 1.%

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: JRU 55

Project ID:
Work Order Number(s): *607737*

Report Date: *07-FEB-19*
Date Received: *12/06/2018*

Sample receipt non conformances and comments:

PER CLIENTS EMAIL, CORRECTED SAMPLE NAMES. SS04 TO SS06, SS06 TO SS07. JK 02/07/19

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3072194 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3072258 TPH by SW8015 Mod
Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 607737-003.

Certificate of Analysis Summary 607737

LT Environmental, Inc., Arvada, CO

Project Name: JRU 55

Project Id:
Contact: Adrian Baker
Project Location: 12918027

Date Received in Lab: Thu Dec-06-18 11:15 am
Report Date: 07-FEB-19
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	607737-001		607737-002		607737-003		607737-004		607737-005	
	Field Id:	SS06		SW05		SW06		FS02		SS07	
	Depth:	0.5- ft		0-1.5 ft		0-1.5 ft		1.5- ft		0.5- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-04-18 11:40		Dec-04-18 11:45		Dec-04-18 11:50		Dec-04-18 12:00		Dec-04-18 12:45	
BTEX by EPA 8021B	*Extracted:*	Dec-07-18 15:30		Dec-07-18 15:30		Dec-07-18 15:30		Dec-07-18 15:30		Dec-07-18 15:30	
	Analyzed:	Dec-07-18 21:28		Dec-07-18 21:49		Dec-07-18 22:11		Dec-07-18 22:32		Dec-08-18 00:18	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200
Toluene		<0.00200	0.00200	<0.00199	0.00199	0.00368	0.00201	<0.00200	0.00200	<0.00200	0.00200
Ethylbenzene		<0.00200	0.00200	<0.00199	0.00199	0.0173	0.00201	<0.00200	0.00200	<0.00200	0.00200
m,p-Xylenes		<0.00400	0.00400	<0.00398	0.00398	0.0319	0.00402	<0.00400	0.00400	<0.00399	0.00399
o-Xylene		<0.00200	0.00200	<0.00199	0.00199	0.0156	0.00201	<0.00200	0.00200	<0.00200	0.00200
Total Xylenes		<0.00200	0.00200	<0.00199	0.00199	0.0475	0.00201	<0.00200	0.00200	<0.00200	0.00200
Total BTEX		<0.00200	0.00200	<0.00199	0.00199	0.0685	0.00201	<0.00200	0.00200	<0.00200	0.00200
Inorganic Anions by EPA 300	*Extracted:*	Dec-07-18 09:00		Dec-07-18 09:00		Dec-07-18 09:00		Dec-07-18 09:00		Dec-07-18 09:00	
	Analyzed:	Dec-07-18 22:16		Dec-07-18 22:35		Dec-07-18 22:41		Dec-07-18 22:59		Dec-07-18 23:06	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		18.7	4.96	717	4.96	1490	4.96	397	4.99	327	5.00
TPH by SW8015 Mod	*Extracted:*	Dec-07-18 17:00		Dec-07-18 17:00		Dec-07-18 17:00		Dec-07-18 17:00		Dec-07-18 17:00	
	Analyzed:	Dec-09-18 08:02		Dec-08-18 19:12		Dec-08-18 19:32		Dec-09-18 08:21		Dec-08-18 20:12	
	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	124	74.8	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		3240	15.0	990	15.0	12000	74.8	2390	15.0	153	15.0
Motor Oil Range Hydrocarbons (MRO)		109	15.0	78.6	15.0	390	74.8	85.1	15.0	28.9	15.0
Total TPH		3350	15.0	1070	15.0	12500	74.8	2480	15.0	182	15.0

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

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analytical Results 607737

LT Environmental, Inc., Arvada, CO

JRU 55

Sample Id:	**SS06**	Matrix:	Soil	Date Received:	12.06.18 11.15
Lab Sample Id:	607737-001	Date Collected:	12.04.18 11.40	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.07.18 09.00	Basis:	Wet Weight
Seq Number:	3072201				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**18.7**	4.96	mg/kg	12.07.18 22.16		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	12.07.18 17.00	Basis:	Wet Weight
Seq Number:	3072258				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.09.18 08.02	U	1
Diesel Range Organics (DRO)	C10C28DRO	**3240**	15.0	mg/kg	12.09.18 08.02		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**109**	15.0	mg/kg	12.09.18 08.02		1
Total TPH	PHC635	**3350**	15.0	mg/kg	12.09.18 08.02		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	12.09.18 08.02	
o-Terphenyl	84-15-1	128	%	70-135	12.09.18 08.02	

Certificate of Analytical Results 607737

LT Environmental, Inc., Arvada, CO

JRU 55

Sample Id:	**SS06**	Matrix:	Soil	Date Received:	12.06.18 11.15
Lab Sample Id:	607737-001	Date Collected:	12.04.18 11.40	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	12.07.18 15.30	Basis:	Wet Weight
Seq Number:	3072194				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.07.18 21.28	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.07.18 21.28	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.07.18 21.28	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.07.18 21.28	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.07.18 21.28	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.07.18 21.28	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.07.18 21.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	93	%	70-130	12.07.18 21.28	
1,4-Difluorobenzene	540-36-3	97	%	70-130	12.07.18 21.28	

Certificate of Analytical Results 607737

LT Environmental, Inc., Arvada, CO

JRU 55

Sample Id:	**SW05**	Matrix:	Soil	Date Received:	12.06.18 11.15
Lab Sample Id:	607737-002	Date Collected:	12.04.18 11.45	Sample Depth:	0 - 1.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.07.18 09.00	Basis:	Wet Weight
Seq Number:	3072201				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**717**	4.96	mg/kg	12.07.18 22.35		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	12.07.18 17.00	Basis:	Wet Weight
Seq Number:	3072258				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.08.18 19.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	**990**	15.0	mg/kg	12.08.18 19.12		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**78.6**	15.0	mg/kg	12.08.18 19.12		1
Total TPH	PHC635	**1070**	15.0	mg/kg	12.08.18 19.12		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	12.08.18 19.12	
o-Terphenyl	84-15-1	106	%	70-135	12.08.18 19.12	

Certificate of Analytical Results 607737

LT Environmental, Inc., Arvada, CO

JRU 55

Sample Id:	**SW05**	Matrix:	Soil	Date Received:	12.06.18 11.15
Lab Sample Id:	607737-002	Date Collected:	12.04.18 11.45	Sample Depth:	0 - 1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	12.07.18 15.30	Basis:	Wet Weight
Seq Number:	3072194				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.07.18 21.49	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.07.18 21.49	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	12.07.18 21.49	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	12.07.18 21.49	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	12.07.18 21.49	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	12.07.18 21.49	U	1
Total BTEX		<0.00199	0.00199	mg/kg	12.07.18 21.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	70-130	12.07.18 21.49	
1,4-Difluorobenzene	540-36-3	105	%	70-130	12.07.18 21.49	

Certificate of Analytical Results 607737

LT Environmental, Inc., Arvada, CO

JRU 55

Sample Id:	**SW06**	Matrix:	Soil	Date Received:	12.06.18 11.15
Lab Sample Id:	607737-003	Date Collected:	12.04.18 11.50	Sample Depth:	0 - 1.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.07.18 09.00	Basis:	Wet Weight
Seq Number:	3072201				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1490**	4.96	mg/kg	12.07.18 22.41		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	12.07.18 17.00	Basis:	Wet Weight
Seq Number:	3072258				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**124**	74.8	mg/kg	12.08.18 19.32		5
Diesel Range Organics (DRO)	C10C28DRO	**12000**	74.8	mg/kg	12.08.18 19.32		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**390**	74.8	mg/kg	12.08.18 19.32		5
Total TPH	PHC635	**12500**	74.8	mg/kg	12.08.18 19.32		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	12.08.18 19.32	
o-Terphenyl	84-15-1	248	%	70-135	12.08.18 19.32	**

Certificate of Analytical Results 607737

LT Environmental, Inc., Arvada, CO

JRU 55

Sample Id:	**SW06**	Matrix:	Soil	Date Received:	12.06.18 11.15
Lab Sample Id:	607737-003	Date Collected:	12.04.18 11.50	Sample Depth:	0 - 1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	12.07.18 15.30	Basis:	Wet Weight
Seq Number:	3072194				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	12.07.18 22.11	U	1
Toluene	108-88-3	**0.00368**	0.00201	mg/kg	12.07.18 22.11		1
Ethylbenzene	100-41-4	**0.0173**	0.00201	mg/kg	12.07.18 22.11		1
m,p-Xylenes	179601-23-1	**0.0319**	0.00402	mg/kg	12.07.18 22.11		1
o-Xylene	95-47-6	**0.0156**	0.00201	mg/kg	12.07.18 22.11		1
Total Xylenes	1330-20-7	**0.0475**	0.00201	mg/kg	12.07.18 22.11		1
Total BTEX		**0.0685**	0.00201	mg/kg	12.07.18 22.11		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	109	%	70-130	12.07.18 22.11	
4-Bromofluorobenzene	460-00-4	127	%	70-130	12.07.18 22.11	

Certificate of Analytical Results 607737

LT Environmental, Inc., Arvada, CO

JRU 55

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	12.06.18 11.15
Lab Sample Id:	607737-004	Date Collected:	12.04.18 12.00	Sample Depth:	1.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.07.18 09.00	Basis:	Wet Weight
Seq Number:	3072201				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**397**	4.99	mg/kg	12.07.18 22.59		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	12.07.18 17.00	Basis:	Wet Weight
Seq Number:	3072258				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.09.18 08.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	**2390**	15.0	mg/kg	12.09.18 08.21		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**85.1**	15.0	mg/kg	12.09.18 08.21		1
Total TPH	PHC635	**2480**	15.0	mg/kg	12.09.18 08.21		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	12.09.18 08.21	
o-Terphenyl	84-15-1	113	%	70-135	12.09.18 08.21	

Certificate of Analytical Results 607737

LT Environmental, Inc., Arvada, CO

JRU 55

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	12.06.18 11.15
Lab Sample Id:	607737-004	Date Collected:	12.04.18 12.00	Sample Depth:	1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	12.07.18 15.30	Basis:	Wet Weight
Seq Number:	3072194				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.07.18 22.32	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.07.18 22.32	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.07.18 22.32	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.07.18 22.32	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.07.18 22.32	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.07.18 22.32	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.07.18 22.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	112	%	70-130	12.07.18 22.32	
1,4-Difluorobenzene	540-36-3	110	%	70-130	12.07.18 22.32	

Certificate of Analytical Results 607737

LT Environmental, Inc., Arvada, CO

JRU 55

Sample Id:	**SS07**	Matrix:	Soil	Date Received:	12.06.18 11.15
Lab Sample Id:	607737-005	Date Collected:	12.04.18 12.45	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.07.18 09.00	Basis:	Wet Weight
Seq Number:	3072201				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**327**	5.00	mg/kg	12.07.18 23.06		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	12.07.18 17.00	Basis:	Wet Weight
Seq Number:	3072258				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.08.18 20.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	**153**	15.0	mg/kg	12.08.18 20.12		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**28.9**	15.0	mg/kg	12.08.18 20.12		1
Total TPH	PHC635	**182**	15.0	mg/kg	12.08.18 20.12		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	12.08.18 20.12	
o-Terphenyl	84-15-1	101	%	70-135	12.08.18 20.12	

Certificate of Analytical Results 607737

LT Environmental, Inc., Arvada, CO

JRU 55

Sample Id:	**SS07**	Matrix:	Soil	Date Received:	12.06.18 11.15
Lab Sample Id:	607737-005	Date Collected:	12.04.18 12.45	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	12.07.18 15.30	Basis:	Wet Weight
Seq Number:	3072194				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.08.18 00.18	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.08.18 00.18	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.08.18 00.18	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	12.08.18 00.18	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.08.18 00.18	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.08.18 00.18	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.08.18 00.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	76	%	70-130	12.08.18 00.18	
1,4-Difluorobenzene	540-36-3	109	%	70-130	12.08.18 00.18	

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 607737

LT Environmental, Inc.

JRU 55

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3072201 Matrix: Solid Date Prep: 12.07.18
MB Sample Id: 7667553-1-BLK LCS Sample Id: 7667553-1-BKS LCSD Sample Id: 7667553-1-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	270	108	259	104	90-110	4	20	mg/kg	12.07.18 20:37	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3072201 Matrix: Soil Date Prep: 12.07.18
Parent Sample Id: 607687-003 MS Sample Id: 607687-003 S MSD Sample Id: 607687-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	292	250	505	85	478	74	90-110	5	20	mg/kg	12.07.18 20:56	X

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3072201 Matrix: Soil Date Prep: 12.07.18
Parent Sample Id: 607737-001 MS Sample Id: 607737-001 S MSD Sample Id: 607737-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	18.7	248	270	101	270	101	90-110	0	20	mg/kg	12.07.18 22:22	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3072258 Matrix: Solid Date Prep: 12.07.18
MB Sample Id: 7667653-1-BLK LCS Sample Id: 7667653-1-BKS LCSD Sample Id: 7667653-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	997	100	964	96	70-135	3	20	mg/kg	12.08.18 12:18	
Diesel Range Organics (DRO)	<8.13	1000	994	99	954	95	70-135	4	20	mg/kg	12.08.18 12:18	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	97		120		114		70-135	%	12.08.18 12:18
o-Terphenyl	97		107		99		70-135	%	12.08.18 12:18

MS/MSD Percent Recovery [D] = 100*(C-A) / B LCS = Laboratory Control Sample MS = Matrix Spike
Relative Percent Difference RPD = 200* | (C-E) / (C+E) | A = Parent Result B = Spike Added
LCS/LCSD Recovery [D] = 100 * (C) / [B] C = MS/LCS Result D = MSD/LCSD % Rec
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample) E = MSD/LCSD Result

QC Summary 607737

LT Environmental, Inc.

JRU 55

Analytical Method: TPH by SW8015 Mod | Prep Method: TX1005P
Seq Number: 3072258 | Matrix: Soil | Date Prep: 12.07.18
Parent Sample Id: 607739-001 | MS Sample Id: 607739-001 S | MSD Sample Id: 607739-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<7.98	997	1010	101	901	90	70-135	11	20	mg/kg	12.08.18 13:16	
Diesel Range Organics (DRO)	27.9	997	1030	101	920	89	70-135	11	20	mg/kg	12.08.18 13:16	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	124		105		70-135	%	12.08.18 13:16
o-Terphenyl	105		92		70-135	%	12.08.18 13:16

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3072194 | Matrix: Solid | Date Prep: 12.07.18
MB Sample Id: 7667688-1-BLK | LCS Sample Id: 7667688-1-BKS | LCSD Sample Id: 7667688-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.0861	86	0.101	101	70-130	16	35	mg/kg	12.07.18 17:32	
Toluene	<0.00200	0.0998	0.0763	76	0.0894	89	70-130	16	35	mg/kg	12.07.18 17:32	
Ethylbenzene	<0.00200	0.0998	0.0883	88	0.111	111	70-130	23	35	mg/kg	12.07.18 17:32	
m,p-Xylenes	<0.00399	0.200	0.177	89	0.232	116	70-130	27	35	mg/kg	12.07.18 17:32	
o-Xylene	<0.00200	0.0998	0.0847	85	0.108	108	70-130	24	35	mg/kg	12.07.18 17:32	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	88		128		119		70-130	%	12.07.18 17:32
4-Bromofluorobenzene	85		103		107		70-130	%	12.07.18 17:32

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3072194 | Matrix: Soil | Date Prep: 12.07.18
Parent Sample Id: 607375-009 | MS Sample Id: 607375-009 S | MSD Sample Id: 607375-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00198	0.0992	0.0894	90	0.0963	95	70-130	7	35	mg/kg	12.07.18 18:15	
Toluene	<0.00198	0.0992	0.0773	78	0.0819	81	70-130	6	35	mg/kg	12.07.18 18:15	
Ethylbenzene	<0.00198	0.0992	0.0820	83	0.0829	82	70-130	1	35	mg/kg	12.07.18 18:15	
m,p-Xylenes	<0.00397	0.198	0.159	80	0.157	78	70-130	1	35	mg/kg	12.07.18 18:15	
o-Xylene	<0.00198	0.0992	0.0778	78	0.0772	76	70-130	1	35	mg/kg	12.07.18 18:15	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	112		122		70-130	%	12.07.18 18:15
4-Bromofluorobenzene	101		100		70-130	%	12.07.18 18:15

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

XENCO LABORATORIES

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 (813-620-2000)

Work Order No: 607737

www.xenco.com Page 1 of 1

Project Manager:	Adrian Baker	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	
Phone:	432.704.5178	Email:	a.baker@ltenv.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	JRU SS	Turn Around	
Project Number:	012918027	Routine	☒
P.O. Number:		Rush:	
Sampler's Name:	Lynda Laumbach	Due Date:	12/12

SAMPLE RECEIPT

Temp Blank: Yes (No)		Wet Ice: (Yes) No	
Temperature (°C):	3.2/3.1	Thermometer ID	R8
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.1
Sample Custody Seals:	Yes No N/A	Total Containers:	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)	Sample Comments
SS04	S	12/4	11:40	0.5'	1	X	X	X	2RP 3761
SW05	S	↓	11:45	0-1.5'	1	X	X	X	composites
SW06	S	↓	11:50	0-1.5'	1	X	X	X	↓
FS02	S	↓	12:00	1.5'	1	X	X	X	↓
SS06	S	↓	12:45	0.5'	1	X	X	X	↓

Work Order Notes

TAT starts the day recevied by the lab, if received by 4:30pm

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U **1631 / 245.1 / 7470 / 7471** : Hg

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.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 [signature]	Timothy P. Elliott	12/04/2018 17:10	2 [signature] 12/5/18 1104	Timothy P. Elliott	12/5/18 - 11:05
3 [signature]	[signature] 12/4 1115		4		
5			6		

Revised Date 051418 Rev. 2018.1

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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.

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XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 12/06/2018 11:15:00 AM

Work Order #: 607737

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	3.1
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**N/A**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 12/06/2018

Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 12/06/2018

Jessica Kramer

Analytical Report 609032

for

LT Environmental, Inc.

Project Manager: Adrian Baker

JRU 55

26-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)

26-DEC-18

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

Reference: XENCO Report No(s): **609032**
JRU 55
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) 609032. 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. 609032 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 609032

LT Environmental, Inc., Arvada, CO

JRU 55

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS03	S	12-14-18 10:00	1.5 ft	609032-001
SW07	S	12-14-18 10:10	0 - 1.5 ft	609032-002
SW08	S	12-14-18 10:15	0 - 1.5 ft	609032-003
SS06	S	12-14-18 11:45	2 ft	609032-004
SS08	S	12-14-18 11:50	1 ft	609032-005
SS08	S	12-14-18 12:00	3 ft	609032-006
SS07	S	12-14-18 12:05	1 ft	609032-007
SS04B	S	12-14-18 12:30	2 ft	609032-008
FS02A	S	12-14-18 14:10	2 ft	609032-009

Version: 1.%

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: JRU 55

Project ID:
Work Order Number(s): *609032*

Report Date: *26-DEC-18*
Date Received: *12/18/2018*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3073519 Inorganic Anions by EPA 300
Chloride recovered above QC limits in the laboratory control sample. Samples in the analytical batch are: 609032-005, -006, -007, -008, -009.

Compound(s) reported above QC limits for the Blank Spike and Blank Spike Duplicate. Batch passes in accordance to Marginal Exceedence (NELAC Quality Systems, Appendix D). Daily CCV and ICV are within QC Limits. Sample data reported as valid.

Batch: LBA-3073531 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 609032

LT Environmental, Inc., Arvada, CO

Project Name: JRU 55

Project Id:
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Tue Dec-18-18 12:15 pm
Report Date: 26-DEC-18
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	609032-001		609032-002		609032-003		609032-004		609032-005		609032-006	
	Field Id:	FS03		SW07		SW08		SS06		SS08		SS08	
	Depth:	1.5- ft		0-1.5 ft		0-1.5 ft		2- ft		1- ft		3- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-14-18 10:00		Dec-14-18 10:10		Dec-14-18 10:15		Dec-14-18 11:45		Dec-14-18 11:50		Dec-14-18 12:00	
BTEX by EPA 8021B	*Extracted:*	Dec-19-18 12:00		Dec-19-18 12:00		Dec-19-18 12:00		Dec-19-18 12:00		Dec-19-18 12:00		Dec-19-18 12:00	
	Analyzed:	Dec-19-18 17:05		Dec-19-18 17:24		Dec-19-18 17:43		Dec-19-18 18:02		Dec-19-18 18:21		Dec-19-18 18:40	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00199	0.00199	<0.00202	0.00202	<0.00201	0.00201	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200
Toluene		<0.00199	0.00199	<0.00202	0.00202	<0.00201	0.00201	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200
Ethylbenzene		<0.00199	0.00199	<0.00202	0.00202	<0.00201	0.00201	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200
m,p-Xylenes		<0.00398	0.00398	<0.00403	0.00403	<0.00402	0.00402	<0.00402	0.00402	<0.00400	0.00400	<0.00399	0.00399
o-Xylene		<0.00199	0.00199	<0.00202	0.00202	<0.00201	0.00201	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200
Total Xylenes		<0.00199	0.00199	<0.00202	0.00202	<0.00201	0.00201	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200
Total BTEX		<0.00199	0.00199	<0.00202	0.00202	<0.00201	0.00201	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200
Inorganic Anions by EPA 300	*Extracted:*	Dec-19-18 15:30		Dec-19-18 15:30		Dec-19-18 15:30		Dec-19-18 15:30		Dec-19-18 16:30		Dec-19-18 16:30	
	Analyzed:	Dec-20-18 00:39		Dec-20-18 00:46		Dec-20-18 00:52		Dec-20-18 00:58		Dec-20-18 01:40		Dec-20-18 01:59	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		62.6	5.00	2540	25.0	41.9	5.00	29.8	4.95	<4.98	4.98	<4.97	4.97
TPH by SW8015 Mod	*Extracted:*	Dec-23-18 15:00		Dec-23-18 15:00		Dec-23-18 15:00		Dec-23-18 15:00		Dec-23-18 15:00		Dec-23-18 15:00	
	Analyzed:	Dec-24-18 22:26		Dec-24-18 23:28		Dec-24-18 23:49		Dec-25-18 00:10		Dec-25-18 00:31		Dec-25-18 00:52	
	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	46.6	15.0	<14.9	14.9	<15.0	15.0
Diesel Range Organics (DRO)		36.0	15.0	1400	15.0	268	15.0	632	15.0	<14.9	14.9	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	305	15.0	89.1	15.0	208	15.0	<14.9	14.9	<15.0	15.0
Total TPH		36.0	15.0	1710	15.0	357	15.0	887	15.0	<14.9	14.9	<15.0	15.0

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Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 609032

LT Environmental, Inc., Arvada, CO

Project Name: JRU 55

Project Id:
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Tue Dec-18-18 12:15 pm
Report Date: 26-DEC-18
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	609032-007		609032-008		609032-009					
	Field Id:	SS07		SS04B		FS02A					
	Depth:	1- ft		2- ft		2- ft					
	Matrix:	SOIL		SOIL		SOIL					
	Sampled:	Dec-14-18 12:05		Dec-14-18 12:30		Dec-14-18 14:10					
BTEX by EPA 8021B	***Extracted:***	Dec-19-18 12:00		Dec-19-18 12:00		Dec-19-18 12:00					
	Analyzed:	Dec-19-18 18:59		Dec-19-18 20:13		Dec-19-18 20:32					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199				
Toluene		<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199				
Ethylbenzene		<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199				
m,p-Xylenes		<0.00400	0.00400	<0.00403	0.00403	<0.00398	0.00398				
o-Xylene		<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199				
Total Xylenes		<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199				
Total BTEX		<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199				
Inorganic Anions by EPA 300	***Extracted:***	Dec-19-18 16:30		Dec-19-18 16:30		Dec-19-18 16:30					
	Analyzed:	Dec-20-18 02:05		Dec-20-18 02:11		Dec-20-18 02:17					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		<4.98	4.98	36.3	5.00	28.0	4.96				
TPH by SW8015 Mod	***Extracted:***	Dec-23-18 15:00		Dec-23-18 15:00		Dec-23-18 15:00					
	Analyzed:	Dec-25-18 01:13		Dec-25-18 01:34		Dec-25-18 01:55					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<14.9	14.9	<15.0	15.0	<15.0	15.0				
Diesel Range Organics (DRO)		<14.9	14.9	531	15.0	<15.0	15.0				
Motor Oil Range Hydrocarbons (MRO)		<14.9	14.9	181	15.0	<15.0	15.0				
Total TPH		<14.9	14.9	712	15.0	<15.0	15.0				

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Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analytical Results 609032

LT Environmental, Inc., Arvada, CO

JRU 55

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	12.18.18 12.15
Lab Sample Id:	609032-001	Date Collected:	12.14.18 10.00	Sample Depth:	1.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.19.18 15.30	Basis:	Wet Weight
Seq Number:	3073517				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**62.6**	5.00	mg/kg	12.20.18 00.39		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	12.23.18 15.00	Basis:	Wet Weight
Seq Number:	3073959				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.24.18 22.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	**36.0**	15.0	mg/kg	12.24.18 22.26		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.24.18 22.26	U	1
Total TPH	PHC635	**36.0**	15.0	mg/kg	12.24.18 22.26		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	12.24.18 22.26	
o-Terphenyl	84-15-1	86	%	70-135	12.24.18 22.26	

Certificate of Analytical Results 609032

LT Environmental, Inc., Arvada, CO

JRU 55

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	12.18.18 12.15
Lab Sample Id:	609032-001	Date Collected:	12.14.18 10.00	Sample Depth:	1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	12.19.18 12.00	Basis:	Wet Weight
Seq Number:	3073531				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.19.18 17.05	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.19.18 17.05	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	12.19.18 17.05	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	12.19.18 17.05	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	12.19.18 17.05	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	12.19.18 17.05	U	1
Total BTEX		<0.00199	0.00199	mg/kg	12.19.18 17.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	109	%	70-130	12.19.18 17.05	
4-Bromofluorobenzene	460-00-4	93	%	70-130	12.19.18 17.05	

Certificate of Analytical Results 609032

LT Environmental, Inc., Arvada, CO

JRU 55

Sample Id:	**SW07**	Matrix:	Soil	Date Received:	12.18.18 12.15
Lab Sample Id:	609032-002	Date Collected:	12.14.18 10.10	Sample Depth:	0 - 1.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.19.18 15.30	Basis:	Wet Weight
Seq Number:	3073517				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2540**	25.0	mg/kg	12.20.18 00.46		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	12.23.18 15.00	Basis:	Wet Weight
Seq Number:	3073959				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.24.18 23.28	U	1
Diesel Range Organics (DRO)	C10C28DRO	**1400**	15.0	mg/kg	12.24.18 23.28		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**305**	15.0	mg/kg	12.24.18 23.28		1
Total TPH	PHC635	**1710**	15.0	mg/kg	12.24.18 23.28		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	12.24.18 23.28	
o-Terphenyl	84-15-1	94	%	70-135	12.24.18 23.28	

Certificate of Analytical Results 609032

LT Environmental, Inc., Arvada, CO

JRU 55

Sample Id:	**SW07**	Matrix:	Soil	Date Received:	12.18.18 12.15
Lab Sample Id:	609032-002	Date Collected:	12.14.18 10.10	Sample Depth:	0 - 1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	12.19.18 12.00	Basis:	Wet Weight
Seq Number:	3073531				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	12.19.18 17.24	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	12.19.18 17.24	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	12.19.18 17.24	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	12.19.18 17.24	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	12.19.18 17.24	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	12.19.18 17.24	U	1
Total BTEX		<0.00202	0.00202	mg/kg	12.19.18 17.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	109	%	70-130	12.19.18 17.24	
4-Bromofluorobenzene	460-00-4	91	%	70-130	12.19.18 17.24	

Certificate of Analytical Results 609032

LT Environmental, Inc., Arvada, CO

JRU 55

Sample Id:	**SW08**	Matrix:	Soil	Date Received:	12.18.18 12.15
Lab Sample Id:	609032-003	Date Collected:	12.14.18 10.15	Sample Depth:	0 - 1.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.19.18 15.30	Basis:	Wet Weight
Seq Number:	3073517				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**41.9**	5.00	mg/kg	12.20.18 00.52		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	12.23.18 15.00	Basis:	Wet Weight
Seq Number:	3073959				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.24.18 23.49	U	1
Diesel Range Organics (DRO)	C10C28DRO	**268**	15.0	mg/kg	12.24.18 23.49		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**89.1**	15.0	mg/kg	12.24.18 23.49		1
Total TPH	PHC635	**357**	15.0	mg/kg	12.24.18 23.49		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	80	%	70-135	12.24.18 23.49	
o-Terphenyl	84-15-1	81	%	70-135	12.24.18 23.49	

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LT Environmental, Inc., Arvada, CO

JRU 55

Sample Id:	**SW08**	Matrix:	Soil	Date Received:	12.18.18 12.15
Lab Sample Id:	609032-003	Date Collected:	12.14.18 10.15	Sample Depth:	0 - 1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	12.19.18 12.00	Basis:	Wet Weight
Seq Number:	3073531				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	12.19.18 17.43	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	12.19.18 17.43	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	12.19.18 17.43	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	12.19.18 17.43	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	12.19.18 17.43	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	12.19.18 17.43	U	1
Total BTEX		<0.00201	0.00201	mg/kg	12.19.18 17.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	92	%	70-130	12.19.18 17.43	
1,4-Difluorobenzene	540-36-3	109	%	70-130	12.19.18 17.43	

Certificate of Analytical Results 609032

LT Environmental, Inc., Arvada, CO

JRU 55

Sample Id:	**SS06**	Matrix:	Soil	Date Received:	12.18.18 12.15
Lab Sample Id:	609032-004	Date Collected:	12.14.18 11.45	Sample Depth:	2 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.19.18 15.30	Basis:	Wet Weight
Seq Number:	3073517				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**29.8**	4.95	mg/kg	12.20.18 00.58		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	12.23.18 15.00	Basis:	Wet Weight
Seq Number:	3073959				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**46.6**	15.0	mg/kg	12.25.18 00.10		1
Diesel Range Organics (DRO)	C10C28DRO	**632**	15.0	mg/kg	12.25.18 00.10		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**208**	15.0	mg/kg	12.25.18 00.10		1
Total TPH	PHC635	**887**	15.0	mg/kg	12.25.18 00.10		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	12.25.18 00.10	
o-Terphenyl	84-15-1	95	%	70-135	12.25.18 00.10	

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LT Environmental, Inc., Arvada, CO

JRU 55

Sample Id:	**SS06**	Matrix:	Soil	Date Received:	12.18.18 12.15
Lab Sample Id:	609032-004	Date Collected:	12.14.18 11.45	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	12.19.18 12.00	Basis:	Wet Weight
Seq Number:	3073531				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	12.19.18 18.02	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	12.19.18 18.02	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	12.19.18 18.02	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	12.19.18 18.02	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	12.19.18 18.02	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	12.19.18 18.02	U	1
Total BTEX		<0.00201	0.00201	mg/kg	12.19.18 18.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	91	%	70-130	12.19.18 18.02	
1,4-Difluorobenzene	540-36-3	108	%	70-130	12.19.18 18.02	

Certificate of Analytical Results 609032

LT Environmental, Inc., Arvada, CO

JRU 55

Sample Id:	**SS08**	Matrix:	Soil	Date Received:	12.18.18 12.15
Lab Sample Id:	609032-005	Date Collected:	12.14.18 11.50	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.19.18 16.30	Basis:	Wet Weight
Seq Number:	3073519				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.98	4.98	mg/kg	12.20.18 01.40	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	12.23.18 15.00	Basis:	Wet Weight
Seq Number:	3073959				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	12.25.18 00.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	12.25.18 00.31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	12.25.18 00.31	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	12.25.18 00.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	12.25.18 00.31	
o-Terphenyl	84-15-1	83	%	70-135	12.25.18 00.31	

Certificate of Analytical Results 609032

LT Environmental, Inc., Arvada, CO

JRU 55

Sample Id:	**SS08**	Matrix:	Soil	Date Received:	12.18.18 12.15
Lab Sample Id:	609032-005	Date Collected:	12.14.18 11.50	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	12.19.18 12.00	Basis:	Wet Weight
Seq Number:	3073531				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.19.18 18.21	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.19.18 18.21	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.19.18 18.21	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.19.18 18.21	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.19.18 18.21	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.19.18 18.21	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.19.18 18.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	109	%	70-130	12.19.18 18.21	
4-Bromofluorobenzene	460-00-4	93	%	70-130	12.19.18 18.21	

Certificate of Analytical Results 609032

LT Environmental, Inc., Arvada, CO

JRU 55

Sample Id:	**SS08**	Matrix:	Soil	Date Received:	12.18.18 12.15
Lab Sample Id:	609032-006	Date Collected:	12.14.18 12.00	Sample Depth:	3 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.19.18 16.30	Basis:	Wet Weight
Seq Number:	3073519				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.97	4.97	mg/kg	12.20.18 01.59	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	12.23.18 15.00	Basis:	Wet Weight
Seq Number:	3073959				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.25.18 00.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	12.25.18 00.52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.25.18 00.52	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	12.25.18 00.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	12.25.18 00.52	
o-Terphenyl	84-15-1	91	%	70-135	12.25.18 00.52	

Certificate of Analytical Results 609032

LT Environmental, Inc., Arvada, CO

JRU 55

Sample Id:	**SS08**	Matrix:	Soil	Date Received:	12.18.18 12.15
Lab Sample Id:	609032-006	Date Collected:	12.14.18 12.00	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	12.19.18 12.00	Basis:	Wet Weight
Seq Number:	3073531				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.19.18 18.40	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.19.18 18.40	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.19.18 18.40	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	12.19.18 18.40	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.19.18 18.40	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.19.18 18.40	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.19.18 18.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	110	%	70-130	12.19.18 18.40	
4-Bromofluorobenzene	460-00-4	93	%	70-130	12.19.18 18.40	

Certificate of Analytical Results 609032

LT Environmental, Inc., Arvada, CO

JRU 55

Sample Id:	**SS07**	Matrix:	Soil	Date Received:	12.18.18 12.15
Lab Sample Id:	609032-007	Date Collected:	12.14.18 12.05	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.19.18 16.30	Basis:	Wet Weight
Seq Number:	3073519				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.98	4.98	mg/kg	12.20.18 02.05	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	12.23.18 15.00	Basis:	Wet Weight
Seq Number:	3073959				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	12.25.18 01.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	12.25.18 01.13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	12.25.18 01.13	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	12.25.18 01.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	12.25.18 01.13	
o-Terphenyl	84-15-1	87	%	70-135	12.25.18 01.13	

Certificate of Analytical Results 609032

LT Environmental, Inc., Arvada, CO

JRU 55

Sample Id:	**SS07**	Matrix:	Soil	Date Received:	12.18.18 12.15
Lab Sample Id:	609032-007	Date Collected:	12.14.18 12.05	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	12.19.18 12.00	Basis:	Wet Weight
Seq Number:	3073531				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.19.18 18.59	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.19.18 18.59	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.19.18 18.59	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.19.18 18.59	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.19.18 18.59	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.19.18 18.59	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.19.18 18.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	81	%	70-130	12.19.18 18.59	
1,4-Difluorobenzene	540-36-3	108	%	70-130	12.19.18 18.59	

Certificate of Analytical Results 609032

LT Environmental, Inc., Arvada, CO

JRU 55

Sample Id:	**SS04B**	Matrix:	Soil	Date Received:	12.18.18 12.15
Lab Sample Id:	609032-008	Date Collected:	12.14.18 12.30	Sample Depth:	2 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.19.18 16.30	Basis:	Wet Weight
Seq Number:	3073519				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**36.3**	5.00	mg/kg	12.20.18 02.11		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	12.23.18 15.00	Basis:	Wet Weight
Seq Number:	3073959				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.25.18 01.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	**531**	15.0	mg/kg	12.25.18 01.34		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**181**	15.0	mg/kg	12.25.18 01.34		1
Total TPH	PHC635	**712**	15.0	mg/kg	12.25.18 01.34		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	12.25.18 01.34	
o-Terphenyl	84-15-1	88	%	70-135	12.25.18 01.34	

Certificate of Analytical Results 609032

LT Environmental, Inc., Arvada, CO

JRU 55

Sample Id:	**SS04B**	Matrix:	Soil	Date Received:	12.18.18 12.15
Lab Sample Id:	609032-008	Date Collected:	12.14.18 12.30	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	12.19.18 12.00	Basis:	Wet Weight
Seq Number:	3073531				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	12.19.18 20.13	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	12.19.18 20.13	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	12.19.18 20.13	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	12.19.18 20.13	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	12.19.18 20.13	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	12.19.18 20.13	U	1
Total BTEX		<0.00202	0.00202	mg/kg	12.19.18 20.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	83	%	70-130	12.19.18 20.13	
1,4-Difluorobenzene	540-36-3	107	%	70-130	12.19.18 20.13	

Certificate of Analytical Results 609032

LT Environmental, Inc., Arvada, CO

JRU 55

Sample Id:	**FS02A**	Matrix:	Soil	Date Received:	12.18.18 12.15
Lab Sample Id:	609032-009	Date Collected:	12.14.18 14.10	Sample Depth:	2 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.19.18 16.30	Basis:	Wet Weight
Seq Number:	3073519				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**28.0**	4.96	mg/kg	12.20.18 02.17		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	12.23.18 15.00	Basis:	Wet Weight
Seq Number:	3073959				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.25.18 01.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	12.25.18 01.55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.25.18 01.55	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	12.25.18 01.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	12.25.18 01.55	
o-Terphenyl	84-15-1	93	%	70-135	12.25.18 01.55	

Certificate of Analytical Results 609032

LT Environmental, Inc., Arvada, CO

JRU 55

Sample Id:	**FS02A**	Matrix:	Soil	Date Received:	12.18.18 12.15
Lab Sample Id:	609032-009	Date Collected:	12.14.18 14.10	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	12.19.18 12.00	Basis:	Wet Weight
Seq Number:	3073531				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.19.18 20.32	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.19.18 20.32	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	12.19.18 20.32	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	12.19.18 20.32	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	12.19.18 20.32	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	12.19.18 20.32	U	1
Total BTEX		<0.00199	0.00199	mg/kg	12.19.18 20.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	12.19.18 20.32	
4-Bromofluorobenzene	460-00-4	91	%	70-130	12.19.18 20.32	

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 609032

LT Environmental, Inc.

JRU 55

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3073517 — Matrix: Solid — Date Prep: 12.19.18
MB Sample Id: 7668398-1-BLK — LCS Sample Id: 7668398-1-BKS — LCSD Sample Id: 7668398-1-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	258	103	257	103	90-110	0	20	mg/kg	12.19.18 21:49	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3073519 — Matrix: Solid — Date Prep: 12.19.18
MB Sample Id: 7668399-1-BLK — LCS Sample Id: 7668399-1-BKS — LCSD Sample Id: 7668399-1-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	312	125	273	109	90-110	13	20	mg/kg	12.20.18 01:28	H

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3073517 — Matrix: Soil — Date Prep: 12.19.18
Parent Sample Id: 609020-009 — MS Sample Id: 609020-009 S — MSD Sample Id: 609020-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	64.1	248	321	104	314	101	90-110	2	20	mg/kg	12.19.18 23:39	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3073517 — Matrix: Soil — Date Prep: 12.19.18
Parent Sample Id: 609149-001 — MS Sample Id: 609149-001 S — MSD Sample Id: 609149-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	400	250	638	95	630	92	90-110	1	20	mg/kg	12.19.18 22:07	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3073519 — Matrix: Soil — Date Prep: 12.19.18
Parent Sample Id: 609032-005 — MS Sample Id: 609032-005 S — MSD Sample Id: 609032-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.855	249	268	108	273	110	90-110	2	20	mg/kg	12.20.18 01:46	

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

QC Summary 609032

LT Environmental, Inc.

JRU 55

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3073519 Matrix: Soil Date Prep: 12.19.18
Parent Sample Id: 609033-006 MS Sample Id: 609033-006 S MSD Sample Id: 609033-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2.27	250	274	109	274	109	90-110	0	20	mg/kg	12.20.18 03:18	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3073959 Matrix: Solid Date Prep: 12.23.18
MB Sample Id: 7668692-1-BLK LCS Sample Id: 7668692-1-BKS LCSD Sample Id: 7668692-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	1020	102	949	95	70-135	7	20	mg/kg	12.24.18 21:44	
Diesel Range Organics (DRO)	<8.13	1000	1070	107	952	95	70-135	12	20	mg/kg	12.24.18 21:44	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	107		126		120		70-135	%	12.24.18 21:44
o-Terphenyl	111		127		109		70-135	%	12.24.18 21:44

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3073959 Matrix: Soil Date Prep: 12.23.18
Parent Sample Id: 609032-001 MS Sample Id: 609032-001 S MSD Sample Id: 609032-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	998	830	83	816	82	70-135	2	20	mg/kg	12.24.18 22:47	
Diesel Range Organics (DRO)	36.0	998	844	81	839	80	70-135	1	20	mg/kg	12.24.18 22:47	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	92		89		70-135	%	12.24.18 22:47
o-Terphenyl	85		79		70-135	%	12.24.18 22:47

MS/MSD Percent Recovery [D] = 100*(C-A) / B LCS = Laboratory Control Sample MS = Matrix Spike
Relative Percent Difference RPD = 200* | (C-E) / (C+E) | A = Parent Result B = Spike Added
LCS/LCSD Recovery [D] = 100 * (C) / [B] C = MS/LCS Result D = MSD/LCSD % Rec
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample) E = MSD/LCSD Result

QC Summary 609032

LT Environmental, Inc.

JRU 55

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

Seq Number: 3073531 Matrix: Solid Date Prep: 12.19.18

MB Sample Id: 7668412-1-BLK LCS Sample Id: 7668412-1-BKS LCSD Sample Id: 7668412-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000383	0.0996	0.0912	92	0.0956	96	70-130	5	35	mg/kg	12.19.18 14:16	
Toluene	<0.000454	0.0996	0.0867	87	0.0902	90	70-130	4	35	mg/kg	12.19.18 14:16	
Ethylbenzene	<0.000563	0.0996	0.0927	93	0.0966	97	70-130	4	35	mg/kg	12.19.18 14:16	
m,p-Xylenes	<0.00101	0.199	0.169	85	0.175	88	70-130	3	35	mg/kg	12.19.18 14:16	
o-Xylene	<0.000343	0.0996	0.0816	82	0.0854	85	70-130	5	35	mg/kg	12.19.18 14:16	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		101		102		70-130	%	12.19.18 14:16
4-Bromofluorobenzene	76		84		86		70-130	%	12.19.18 14:16

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

Seq Number: 3073531 Matrix: Soil Date Prep: 12.19.18

Parent Sample Id: 609022-001 MS Sample Id: 609022-001 S MSD Sample Id: 609022-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000384	0.0998	0.0624	63	0.0734	73	70-130	16	35	mg/kg	12.19.18 14:54	X
Toluene	<0.000455	0.0998	0.0518	52	0.0600	59	70-130	15	35	mg/kg	12.19.18 14:54	X
Ethylbenzene	<0.000564	0.0998	0.0456	46	0.0527	52	70-130	14	35	mg/kg	12.19.18 14:54	X
m,p-Xylenes	<0.00101	0.200	0.0809	40	0.0926	46	70-130	13	35	mg/kg	12.19.18 14:54	X
o-Xylene	<0.000344	0.0998	0.0407	41	0.0466	46	70-130	14	35	mg/kg	12.19.18 14:54	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		105		70-130	%	12.19.18 14:54
4-Bromofluorobenzene	91		91		70-130	%	12.19.18 14:54

MS/MSD Percent Recovery	[D] = 100*(C-A) / B	LCS = Laboratory Control Sample	MS = Matrix Spike
Relative Percent Difference	RPD = 200* | (C-E) / (C+E) |	A = Parent Result	B = Spike Added
LCS/LCSD Recovery	[D] = 100 * (C) / [B]	C = MS/LCS Result	D = MSD/LCSD % Rec
Log Difference	Log Diff. = Log(Sample Duplicate) - Log(Original Sample)	E = MSD/LCSD Result	

Chain of Custody

Work Order No: 609032

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296
Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)
www.xenco.com Page 1 of 1

Project Manager:	Adrian Baker	Bill to: (if different)	XTO Energy - Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	
Phone:	432.704.5178	Email:	abaker@ltenv.com

Work Order Comments

Program: UST/PST ☐ RP ☐ Brownfields ☐ RC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ ST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	JRU 55	Turn Around	
Project Number:		Routine	☒
P.O. Number:		Rush:	
Sampler's Name:	Lynda Lambach	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	1.6/1.5	Thermometer ID		
Received Intact:	(Yes) No	R8		
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.1	
Sample Custody Seals:	Yes No (N/A)	Total Containers:		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
FS03	S	12/14/2018	10:00	1.5'	1	X	X	X
SW07	S		10:10	0-1.5'	1	X	X	X
SW08	S		10:15	0-1.5'	1	X	X	X
SS06	S		11:45	2'	1	X	X	X
SS08	S		11:50	1'	1	X	X	X
SS-8	S		12:00	3'	1	X	X	X
SS07	S		12:05	1'	1	X	X	X
SS04B	S		12:30	2'	1	X	X	X
FS02A	S	↓	14:10	2'	1	X	X	X

ANALYSIS REQUEST

Work Order Notes

TAT starts the day recevied by the lab, if received by 4:30pm

Sample Comments

average depth

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

Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U **1631 / 245.1 / 7470 / 7471** : Hg

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			12/17/18 7:55	2		12/17/18 0935
3			12/17/18 15:30	4		12/18/18 1215
5				6		

Revised Date 051418 Rev. 2018.1

773998680930

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. Written claims must be filed within strict time limits, see current FedEx Service Guide.

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 12/18/2018 12:15:00 PM

Work Order #: 609032

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.5
#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)?	**Yes**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Katie Lowe Date: 12/18/2018

Checklist reviewed by: Jessica Kramer Date: 12/18/2018

Analytical Report 613478

for

LT Environmental, Inc.

Project Manager: Adrian Baker

JRU 55

012918027 2RP3761

06-FEB-19

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

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

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

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

06-FEB-19

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

Reference: XENCO Report No(s): **613478**
JRU 55
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) 613478. 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. 613478 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 613478

LT Environmental, Inc., Arvada, CO

JRU 55

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH01	S	02-02-19 13:25	1 ft	613478-001
BH01A	S	02-02-19 13:35	2 ft	613478-002
BH02	S	02-02-19 13:30	1 ft	613478-003
BH02A	S	02-02-19 13:45	2 ft	613478-004
BH03	S	02-02-19 13:55	1 ft	613478-005
BH03A	S	02-02-19 14:15	2 ft	613478-006
BH04	S	02-02-19 14:15	1 ft	613478-007
BH04A	S	02-02-19 14:25	2 ft	613478-008

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: JRU 55

Project ID: *012918027 2RP3761*
Work Order Number(s): *613478*

Report Date: *06-FEB-19*
Date Received: *02/05/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3078191 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3078196 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 613478

LT Environmental, Inc., Arvada, CO

Project Name: JRU 55

Project Id: 012918027 2RP3761
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Tue Feb-05-19 12:43 pm
Report Date: 06-FEB-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	613478-001		613478-002		613478-003		613478-004		613478-005		613478-006	
	Field Id:	BH01		BH01A		BH02		BH02A		BH03		BH03A	
	Depth:	1- ft		2- ft		1- ft		2- ft		1- ft		2- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Feb-02-19 13:25		Feb-02-19 13:35		Feb-02-19 13:30		Feb-02-19 13:45		Feb-02-19 13:55		Feb-02-19 14:15	
BTEX by EPA 8021B	*Extracted:*	Feb-05-19 14:30		Feb-05-19 14:30		Feb-05-19 13:00		Feb-05-19 13:00		Feb-05-19 13:00		Feb-05-19 13:00	
	Analyzed:	Feb-06-19 02:23		Feb-06-19 02:44		Feb-05-19 18:24		Feb-05-19 18:43		Feb-05-19 19:02		Feb-05-19 19:21	
	Units/RL:	mg/kg	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	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201
Toluene		<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201
Ethylbenzene		<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201
m,p-Xylenes		<0.00398	0.00398	0.00662	0.00400	<0.00398	0.00398	<0.00399	0.00399	<0.00398	0.00398	<0.00402	0.00402
o-Xylene		<0.00199	0.00199	0.00204	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201
Total Xylenes		<0.00199	0.00199	0.00866	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201
Total BTEX		<0.00199	0.00199	0.00866	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201
Inorganic Anions by EPA 300	*Extracted:*	Feb-05-19 13:00		Feb-05-19 13:00		Feb-05-19 13:00		Feb-05-19 13:00		Feb-05-19 16:30		Feb-05-19 16:30	
	Analyzed:	Feb-06-19 00:11		Feb-06-19 00:17		Feb-06-19 00:24		Feb-06-19 00:30		Feb-06-19 01:10		Feb-06-19 01:29	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		37.8	5.00	<5.00	5.00	<5.03	5.03	<5.03	5.03	<4.98	4.98	<5.00	5.00
TPH by SW8015 Mod	*Extracted:*	Feb-05-19 17:00		Feb-05-19 17:00		Feb-05-19 17:00		Feb-05-19 17:00		Feb-05-19 17:00		Feb-05-19 17:00	
	Analyzed:	Feb-05-19 19:37		Feb-05-19 19:57		Feb-05-19 20:17		Feb-06-19 07:05		Feb-06-19 07:44		Feb-05-19 21:17	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0

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

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analysis Summary 613478

LT Environmental, Inc., Arvada, CO

Project Name: JRU 55

Project Id: 012918027 2RP3761
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Tue Feb-05-19 12:43 pm
Report Date: 06-FEB-19
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	613478-007		613478-008					
	Field Id:	BH04		BH04A					
	Depth:	1- ft		2- ft					
	Matrix:	SOIL		SOIL					
	Sampled:	Feb-02-19 14:15		Feb-02-19 14:25					
BTEX by EPA 8021B	***Extracted:***	Feb-05-19 13:00		Feb-05-19 13:00					
	Analyzed:	Feb-05-19 19:40		Feb-05-19 19:59					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00200	0.00200	<0.00200	0.00200				
Toluene		<0.00200	0.00200	<0.00200	0.00200				
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200				
m,p-Xylenes		<0.00400	0.00400	<0.00400	0.00400				
o-Xylene		<0.00200	0.00200	<0.00200	0.00200				
Total Xylenes		<0.00200	0.00200	<0.00200	0.00200				
Total BTEX		<0.00200	0.00200	<0.00200	0.00200				
Inorganic Anions by EPA 300	***Extracted:***	Feb-05-19 16:30		Feb-05-19 16:30					
	Analyzed:	Feb-06-19 01:35		Feb-06-19 01:41					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		142	5.03	183	4.95				
TPH by SW8015 Mod	***Extracted:***	Feb-05-19 17:00		Feb-05-19 17:00					
	Analyzed:	Feb-05-19 21:36		Feb-06-19 05:46					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0				
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0				
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0				
Total TPH		<15.0	15.0	<15.0	15.0				

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

Jessica Kramer
Project Assistant

Certificate of Analytical Results 613478

LT Environmental, Inc., Arvada, CO

JRU 55

Sample Id:	**BH01**	Matrix:	Soil	Date Received:	02.05.19 12.43
Lab Sample Id:	613478-001	Date Collected:	02.02.19 13.25	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.05.19 13.00	Basis:	Wet Weight
Seq Number:	3078192				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**37.8**	5.00	mg/kg	02.06.19 00.11		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.05.19 17.00	Basis:	Wet Weight
Seq Number:	3078222				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	02.05.19 19.37	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	02.05.19 19.37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	02.05.19 19.37	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	02.05.19 19.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	02.05.19 19.37	
o-Terphenyl	84-15-1	96	%	70-135	02.05.19 19.37	

Certificate of Analytical Results 613478

LT Environmental, Inc., Arvada, CO

JRU 55

Sample Id:	**BH01**	Matrix:	Soil	Date Received:	02.05.19 12.43
Lab Sample Id:	613478-001	Date Collected:	02.02.19 13.25	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.05.19 14.30	Basis:	Wet Weight
Seq Number:	3078196				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.06.19 02.23	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.06.19 02.23	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.06.19 02.23	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.06.19 02.23	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.06.19 02.23	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	02.06.19 02.23	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.06.19 02.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	92	%	70-130	02.06.19 02.23	
4-Bromofluorobenzene	460-00-4	88	%	70-130	02.06.19 02.23	

Certificate of Analytical Results 613478

LT Environmental, Inc., Arvada, CO

JRU 55

Sample Id:	**BH01A**	Matrix:	Soil	Date Received:	02.05.19 12.43
Lab Sample Id:	613478-002	Date Collected:	02.02.19 13.35	Sample Depth:	2 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.05.19 13.00	Basis:	Wet Weight
Seq Number:	3078192				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	02.06.19 00.17	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.05.19 17.00	Basis:	Wet Weight
Seq Number:	3078222				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.05.19 19.57	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.05.19 19.57	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	02.05.19 19.57	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.05.19 19.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	02.05.19 19.57	
o-Terphenyl	84-15-1	91	%	70-135	02.05.19 19.57	

Certificate of Analytical Results 613478

LT Environmental, Inc., Arvada, CO

JRU 55

Sample Id:	**BH01A**	Matrix:	Soil	Date Received:	02.05.19 12.43
Lab Sample Id:	613478-002	Date Collected:	02.02.19 13.35	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.05.19 14.30	Basis:	Wet Weight
Seq Number:	3078196				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.06.19 02.44	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.06.19 02.44	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.06.19 02.44	U	1
m,p-Xylenes	179601-23-1	**0.00662**	0.00400	mg/kg	02.06.19 02.44		1
o-Xylene	95-47-6	**0.00204**	0.00200	mg/kg	02.06.19 02.44		1
Total Xylenes	1330-20-7	**0.00866**	0.00200	mg/kg	02.06.19 02.44		1
Total BTEX		**0.00866**	0.00200	mg/kg	02.06.19 02.44		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	82	%	70-130	02.06.19 02.44	
4-Bromofluorobenzene	460-00-4	82	%	70-130	02.06.19 02.44	

Certificate of Analytical Results 613478

LT Environmental, Inc., Arvada, CO

JRU 55

Sample Id:	**BH02**	Matrix:	Soil	Date Received:	02.05.19 12.43
Lab Sample Id:	613478-003	Date Collected:	02.02.19 13.30	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.05.19 13.00	Basis:	Wet Weight
Seq Number:	3078192				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.03	5.03	mg/kg	02.06.19 00.24	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.05.19 17.00	Basis:	Wet Weight
Seq Number:	3078222				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.05.19 20.17	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.05.19 20.17	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	02.05.19 20.17	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.05.19 20.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	02.05.19 20.17	
o-Terphenyl	84-15-1	88	%	70-135	02.05.19 20.17	

Certificate of Analytical Results 613478

LT Environmental, Inc., Arvada, CO

JRU 55

Sample Id:	**BH02**	Matrix:	Soil	Date Received:	02.05.19 12.43
Lab Sample Id:	613478-003	Date Collected:	02.02.19 13.30	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.05.19 13.00	Basis:	Wet Weight
Seq Number:	3078191				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.05.19 18.24	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.05.19 18.24	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.05.19 18.24	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.05.19 18.24	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.05.19 18.24	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	02.05.19 18.24	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.05.19 18.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	110	%	70-130	02.05.19 18.24	
4-Bromofluorobenzene	460-00-4	108	%	70-130	02.05.19 18.24	

Certificate of Analytical Results 613478

LT Environmental, Inc., Arvada, CO

JRU 55

Sample Id:	**BH02A**	Matrix:	Soil	Date Received:	02.05.19 12.43
Lab Sample Id:	613478-004	Date Collected:	02.02.19 13.45	Sample Depth:	2 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.05.19 13.00	Basis:	Wet Weight
Seq Number:	3078192				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.03	5.03	mg/kg	02.06.19 00.30	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.05.19 17.00	Basis:	Wet Weight
Seq Number:	3078222				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.06.19 07.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.06.19 07.05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	02.06.19 07.05	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.06.19 07.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	02.06.19 07.05	
o-Terphenyl	84-15-1	95	%	70-135	02.06.19 07.05	

Certificate of Analytical Results 613478

LT Environmental, Inc., Arvada, CO

JRU 55

Sample Id:	**BH02A**	Matrix:	Soil	Date Received:	02.05.19 12.43
Lab Sample Id:	613478-004	Date Collected:	02.02.19 13.45	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.05.19 13.00	Basis:	Wet Weight
Seq Number:	3078191				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.05.19 18.43	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.05.19 18.43	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.05.19 18.43	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.05.19 18.43	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.05.19 18.43	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.05.19 18.43	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.05.19 18.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	111	%	70-130	02.05.19 18.43	
4-Bromofluorobenzene	460-00-4	111	%	70-130	02.05.19 18.43	

Certificate of Analytical Results 613478

LT Environmental, Inc., Arvada, CO

JRU 55

Sample Id:	**BH03**	Matrix:	Soil	Date Received:	02.05.19 12.43
Lab Sample Id:	613478-005	Date Collected:	02.02.19 13.55	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.05.19 16.30	Basis:	Wet Weight
Seq Number:	3078193				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.98	4.98	mg/kg	02.06.19 01.10	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.05.19 17.00	Basis:	Wet Weight
Seq Number:	3078222				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.06.19 07.44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.06.19 07.44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	02.06.19 07.44	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.06.19 07.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	02.06.19 07.44	
o-Terphenyl	84-15-1	96	%	70-135	02.06.19 07.44	

Certificate of Analytical Results 613478

LT Environmental, Inc., Arvada, CO

JRU 55

Sample Id:	**BH03**	Matrix:	Soil	Date Received:	02.05.19 12.43
Lab Sample Id:	613478-005	Date Collected:	02.02.19 13.55	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.05.19 13.00	Basis:	Wet Weight
Seq Number:	3078191				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.05.19 19.02	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.05.19 19.02	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.05.19 19.02	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.05.19 19.02	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.05.19 19.02	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	02.05.19 19.02	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.05.19 19.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	110	%	70-130	02.05.19 19.02	
4-Bromofluorobenzene	460-00-4	109	%	70-130	02.05.19 19.02	

Certificate of Analytical Results 613478

LT Environmental, Inc., Arvada, CO

JRU 55

Sample Id:	**BH03A**	Matrix:	Soil	Date Received:	02.05.19 12.43
Lab Sample Id:	613478-006	Date Collected:	02.02.19 14.15	Sample Depth:	2 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.05.19 16.30	Basis:	Wet Weight
Seq Number:	3078193				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	02.06.19 01.29	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.05.19 17.00	Basis:	Wet Weight
Seq Number:	3078222				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.05.19 21.17	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.05.19 21.17	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	02.05.19 21.17	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.05.19 21.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	02.05.19 21.17	
o-Terphenyl	84-15-1	105	%	70-135	02.05.19 21.17	

Certificate of Analytical Results 613478

LT Environmental, Inc., Arvada, CO

JRU 55

Sample Id:	**BH03A**	Matrix:	Soil	Date Received:	02.05.19 12.43
Lab Sample Id:	613478-006	Date Collected:	02.02.19 14.15	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.05.19 13.00	Basis:	Wet Weight
Seq Number:	3078191				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	02.05.19 19.21	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	02.05.19 19.21	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	02.05.19 19.21	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	02.05.19 19.21	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	02.05.19 19.21	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	02.05.19 19.21	U	1
Total BTEX		<0.00201	0.00201	mg/kg	02.05.19 19.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	112	%	70-130	02.05.19 19.21	
1,4-Difluorobenzene	540-36-3	110	%	70-130	02.05.19 19.21	

Certificate of Analytical Results 613478

LT Environmental, Inc., Arvada, CO

JRU 55

Sample Id:	**BH04**	Matrix:	Soil	Date Received:	02.05.19 12.43
Lab Sample Id:	613478-007	Date Collected:	02.02.19 14.15	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.05.19 16.30	Basis:	Wet Weight
Seq Number:	3078193				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**142**	5.03	mg/kg	02.06.19 01.35		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.05.19 17.00	Basis:	Wet Weight
Seq Number:	3078222				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.05.19 21.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.05.19 21.36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	02.05.19 21.36	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.05.19 21.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	02.05.19 21.36	
o-Terphenyl	84-15-1	87	%	70-135	02.05.19 21.36	

Certificate of Analytical Results 613478

LT Environmental, Inc., Arvada, CO

JRU 55

Sample Id:	**BH04**	Matrix:	Soil	Date Received:	02.05.19 12.43
Lab Sample Id:	613478-007	Date Collected:	02.02.19 14.15	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.05.19 13.00	Basis:	Wet Weight
Seq Number:	3078191				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.05.19 19.40	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.05.19 19.40	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.05.19 19.40	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	02.05.19 19.40	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.05.19 19.40	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.05.19 19.40	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.05.19 19.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	111	%	70-130	02.05.19 19.40	
4-Bromofluorobenzene	460-00-4	110	%	70-130	02.05.19 19.40	

Certificate of Analytical Results 613478

LT Environmental, Inc., Arvada, CO

JRU 55

Sample Id:	**BH04A**	Matrix:	Soil	Date Received:	02.05.19 12.43
Lab Sample Id:	613478-008	Date Collected:	02.02.19 14.25	Sample Depth:	2 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.05.19 16.30	Basis:	Wet Weight
Seq Number:	3078193				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**183**	4.95	mg/kg	02.06.19 01.41		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.05.19 17.00	Basis:	Wet Weight
Seq Number:	3078223				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.06.19 05.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.06.19 05.46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	02.06.19 05.46	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.06.19 05.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	02.06.19 05.46	
o-Terphenyl	84-15-1	96	%	70-135	02.06.19 05.46	

Certificate of Analytical Results 613478

LT Environmental, Inc., Arvada, CO

JRU 55

Sample Id:	**BH04A**	Matrix:	Soil	Date Received:	02.05.19 12.43
Lab Sample Id:	613478-008	Date Collected:	02.02.19 14.25	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.05.19 13.00	Basis:	Wet Weight
Seq Number:	3078191				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.05.19 19.59	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.05.19 19.59	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.05.19 19.59	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	02.05.19 19.59	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.05.19 19.59	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.05.19 19.59	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.05.19 19.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	110	%	70-130	02.05.19 19.59	
1,4-Difluorobenzene	540-36-3	111	%	70-130	02.05.19 19.59	

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 613478

LT Environmental, Inc.

JRU 55

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3078192 — Matrix: Solid — Date Prep: 02.05.19
MB Sample Id: 7671127-1-BLK — LCS Sample Id: 7671127-1-BKS — LCSD Sample Id: 7671127-1-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	239	96	90-110	4	20	mg/kg	02.05.19 21:24	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3078193 — Matrix: Solid — Date Prep: 02.05.19
MB Sample Id: 7671129-1-BLK — LCS Sample Id: 7671129-1-BKS — LCSD Sample Id: 7671129-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	250	100	249	100	90-110	0	20	mg/kg	02.06.19 00:58	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3078192 — Matrix: Soil — Date Prep: 02.05.19
Parent Sample Id: 613477-001 — MS Sample Id: 613477-001 S — MSD Sample Id: 613477-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.852	248	240	97	249	100	90-110	4	20	mg/kg	02.05.19 21:43	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3078192 — Matrix: Soil — Date Prep: 02.05.19
Parent Sample Id: 613477-011 — MS Sample Id: 613477-011 S — MSD Sample Id: 613477-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1.26	250	230	91	239	95	90-110	4	20	mg/kg	02.05.19 23:13	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3078193 — Matrix: Soil — Date Prep: 02.05.19
Parent Sample Id: 613478-005 — MS Sample Id: 613478-005 S — MSD Sample Id: 613478-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.855	249	259	104	251	101	90-110	3	20	mg/kg	02.06.19 01:16	

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

QC Summary 613478

LT Environmental, Inc.

JRU 55

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3078222 — Matrix: Solid — Date Prep: 02.05.19
MB Sample Id: 7671160-1-BLK — LCS Sample Id: 7671160-1-BKS — LCSD Sample Id: 7671160-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	851	85	878	88	70-135	3	20	mg/kg	02.05.19 12:29	
Diesel Range Organics (DRO)	<8.13	1000	953	95	978	98	70-135	3	20	mg/kg	02.05.19 12:29	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	91		123		127		70-135	%	02.05.19 12:29
o-Terphenyl	93		119		122		70-135	%	02.05.19 12:29

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3078223 — Matrix: Solid — Date Prep: 02.05.19
MB Sample Id: 7671161-1-BLK — LCS Sample Id: 7671161-1-BKS — LCSD Sample Id: 7671161-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	895	90	908	91	70-135	1	20	mg/kg	02.05.19 22:36	
Diesel Range Organics (DRO)	<8.13	1000	1010	101	1020	102	70-135	1	20	mg/kg	02.05.19 22:36	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	93		125		126		70-135	%	02.05.19 22:36
o-Terphenyl	95		105		127		70-135	%	02.05.19 22:36

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3078222 — Matrix: Soil — Date Prep: 02.05.19
Parent Sample Id: 613229-021 — MS Sample Id: 613229-021 S — MSD Sample Id: 613229-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	999	927	93	923	92	70-135	0	20	mg/kg	02.05.19 13:54	
Diesel Range Organics (DRO)	<8.12	999	1070	107	1060	106	70-135	1	20	mg/kg	02.05.19 13:54	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	121		130		70-135	%	02.05.19 13:54
o-Terphenyl	124		127		70-135	%	02.05.19 13:54

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

QC Summary 613478

LT Environmental, Inc.

JRU 55

Analytical Method: TPH by SW8015 Mod | Prep Method: TX1005P
Seq Number: 3078223 | Matrix: Soil | Date Prep: 02.05.19
Parent Sample Id: 613477-001 | MS Sample Id: 613477-001 S | MSD Sample Id: 613477-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	998	813	81	789	79	70-135	3	20	mg/kg	02.05.19 23:34	
Diesel Range Organics (DRO)	<8.11	998	907	91	879	88	70-135	3	20	mg/kg	02.05.19 23:34	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	119		116		70-135	%	02.05.19 23:34
o-Terphenyl	111		104		70-135	%	02.05.19 23:34

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3078191 | Matrix: Solid | Date Prep: 02.05.19
MB Sample Id: 7671150-1-BLK | LCS Sample Id: 7671150-1-BKS | LCSD Sample Id: 7671150-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000386	0.100	0.124	124	0.126	126	70-130	2	35	mg/kg	02.05.19 10:55	
Toluene	<0.000457	0.100	0.110	110	0.110	110	70-130	0	35	mg/kg	02.05.19 10:55	
Ethylbenzene	<0.000567	0.100	0.104	104	0.104	104	70-130	0	35	mg/kg	02.05.19 10:55	
m,p-Xylenes	<0.00102	0.201	0.207	103	0.207	104	70-130	0	35	mg/kg	02.05.19 10:55	
o-Xylene	<0.000346	0.100	0.102	102	0.102	102	70-130	0	35	mg/kg	02.05.19 10:55	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		106		106		70-130	%	02.05.19 10:55
4-Bromofluorobenzene	95		103		103		70-130	%	02.05.19 10:55

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3078196 | Matrix: Solid | Date Prep: 02.05.19
MB Sample Id: 7671157-1-BLK | LCS Sample Id: 7671157-1-BKS | LCSD Sample Id: 7671157-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.101	0.111	110	0.118	118	70-130	6	35	mg/kg	02.05.19 16:45	
Toluene	<0.00201	0.101	0.0873	86	0.0950	95	70-130	8	35	mg/kg	02.05.19 16:45	
Ethylbenzene	<0.00201	0.101	0.106	105	0.106	106	70-130	0	35	mg/kg	02.05.19 16:45	
m,p-Xylenes	<0.00402	0.201	0.228	113	0.221	111	70-130	3	35	mg/kg	02.05.19 16:45	
o-Xylene	<0.00201	0.101	0.102	101	0.0997	100	70-130	2	35	mg/kg	02.05.19 16:45	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	85		88		99		70-130	%	02.05.19 16:45
4-Bromofluorobenzene	86		103		87		70-130	%	02.05.19 16:45

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

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

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

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

Final 1.000

QC Summary 613478

LT Environmental, Inc.

JRU 55

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3078191 | Matrix: Soil | Date Prep: 02.05.19
Parent Sample Id: 612979-001 | MS Sample Id: 612979-001 S | MSD Sample Id: 612979-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000770	0.200	0.127	64	0.0925	93	70-130	31	35	mg/kg	02.05.19 11:33	X
Toluene	<0.000911	0.200	0.112	56	0.0797	80	70-130	34	35	mg/kg	02.05.19 11:33	X
Ethylbenzene	<0.00113	0.200	0.103	52	0.0742	74	70-130	33	35	mg/kg	02.05.19 11:33	X
m,p-Xylenes	<0.00203	0.400	0.207	52	0.148	74	70-130	33	35	mg/kg	02.05.19 11:33	X
o-Xylene	<0.000689	0.200	0.103	52	0.0733	73	70-130	34	35	mg/kg	02.05.19 11:33	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		107		70-130	%	02.05.19 11:33
4-Bromofluorobenzene	108		106		70-130	%	02.05.19 11:33

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3078196 | Matrix: Soil | Date Prep: 02.05.19
Parent Sample Id: 613477-001 | MS Sample Id: 613477-001 S | MSD Sample Id: 613477-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0737	74	0.0791	78	70-130	7	35	mg/kg	02.05.19 17:28	
Toluene	<0.00200	0.100	0.0626	63	0.0645	64	70-130	3	35	mg/kg	02.05.19 17:28	X
Ethylbenzene	<0.00200	0.100	0.0749	75	0.0820	81	70-130	9	35	mg/kg	02.05.19 17:28	
m,p-Xylenes	0.00169	0.200	0.141	70	0.159	78	70-130	12	35	mg/kg	02.05.19 17:28	
o-Xylene	<0.00200	0.100	0.0676	68	0.0734	73	70-130	8	35	mg/kg	02.05.19 17:28	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	112		109		70-130	%	02.05.19 17:28
4-Bromofluorobenzene	102		100		70-130	%	02.05.19 17:28

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

Chain of Custody

Work Order No: 613478

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296
Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)
www.xenco.com Page 1 of 1

Project Manager:	Adrian Baker	Bill to: (if different)	Kyle Littrell XTO Energy
Company Name:	LT Environmental, Inc., Permian office	Company Name:	
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.704.5178	Email:	abaker@ltenviro.com

Work Order Comments

Program: UST/PST ☐ RP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting:Level II ☐ Level III ☐ ST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	JRU SS	Turn Around	
Project Number:	012918027 2RP-3761	Routine ☐	
P.O. Number:		Rush: 1	
Sampler's Name:	L Lambdin, G. Green	Due Date: 2/4/06	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	0.3/0.2	Thermometer ID:	100	
Received Intact:	(Yes) No			
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.1	
Sample Custody Seals:	Yes (No) N/A	Total Containers:	8	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
BH01	S	02/02/19	13:25	1'	1	X	X	X
BH01A	S		13:35	2'	1	X	X	X
BH02	S		14:30	1'	1	X	X	X
BH02A	S		14:45	2'	1	X	X	X
BH03	S		13:55	1'	1	X	X	X
BH03A	S		14:15	2'	1	X	X	X
BH04	S		14:15	1'	1	X	X	X
BH04A	S		14:25	2'	1	X	X	X

ANALYSIS REQUEST

Work Order Notes

TAT starts the day recevied by the lab, if received by 4:30pm

Sample Comments

discrete

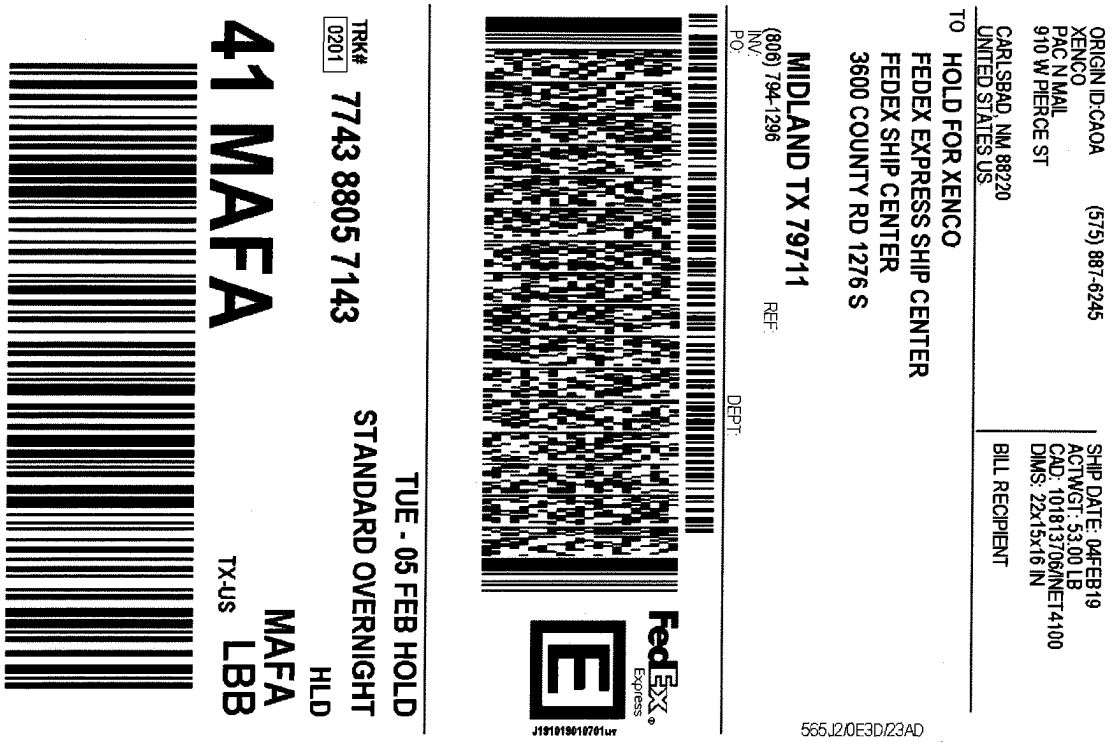
Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U **1631 / 245.1 / 7470 / 7471** : Hg

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.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		02/04/19 7:0	2		
3		2/5/19 1239	4		
5			6		

Revised Date 051418 Rev. 2018.1



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. Written claims must be filed within strict time limits, see current FedEx Service Guide.

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 02/05/2019 12:43:45 PM

Work Order #: 613478

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 02/05/2019

Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 02/05/2019

Jessica Kramer

ATTACHMENT 3: PHOTOGRAPHIC LOG

View to the north of the west side of the tank battery prior to excavation.

Project: 012918027	XTO Energy, Inc. JRU #55 Battery	LTE Advancing Opportunity
May 24, 2018	Photographic Log	

View north of the excavation.

Project: 012918027	XTO Energy, Inc. JRU #55 Battery	LTE Advancing Opportunity
October 4, 2018	Photographic Log	

ATTACHMENT 4: SOIL SAMPLE LOG

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

Identifier:	Date:
BH01	2/2/2019
Project Name: JRU-55	RP Number: 2RP-3761
Logged By: GG	Method: Hand Auger
Lat/Long:	Field Screening: PID / chloride
Hole Diameter: 3"	Total Depth: 2'

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	1.0	4.9		~~BH01~~ BH01	1			clay loam, Low plasticity, brown
M	0.4	8.0		~~BH01a~~ BH01A	2			clay loam, med plasticity, brown

0 3 4 5 6 7 8 9 10 11 12

1325
1335

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

Identifier:	Date:
BH02	2/2/2019
Project Name: JRU-55	RP Number: 2RP-3761
Logged By: GG	Method: Hand auger
Hole Diameter: 3"	Total Depth: 2'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:
Field Screening: PID / Chlorides
Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1430 D	0.6	2.9		~~BH01~~ BH02	1			sandy loam, Low plasticity
1445 D	0.4	2.9		~~BH02~~ BH02A	2			sandy loam, Low Plasticity

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

Identifier:	Date:
BH03	2/2/2019
Project Name:	RP Number:
JRU-55	2RP-3761
Logged By: GG	Method: Hand Auger
Hole Diameter: 3"	Total Depth: 2'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:
Field Screening: PID/chloride
Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1355 D	0.2	15.6		~~BH03~~ BH03	0–1			Sandy loam, low plasticity, brown
1415 D	0.2	3.6		~~BH03A~~ BH03A	1–2			Sandy loam, low plasticity brown
					2–3			
					3–4			
					4–5			
					5–6			
					6–7			
					7–8			
					8–9			
					9–10			
					10–11			
					11–12			

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

Identifier:	Date:
BH-4	2/2/2019
Project Name: JRU-55 2RP 3761	**RP Number:** 2RP-3761
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: LL / Method: Hand Auger
Lat/Long: / Field Screening: PID, Chlorides (Hach	Hole Diameter: 3" / Total Depth: 2'
Comments:	

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
D	1.6	12.2	N	BH04	1	1'		Sandy loam, dry, brown. 70/30
D	2.5	7.2	N	BH04	2	2'		clumps together, low plasticity, brown sandy loam, 60/40
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

14:15

14:25

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 429845
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAB1618836105**
Incident Name	**NAB1618836105 JAMES RANCH UNIT #055 @ 30-015-27589**
Incident Type	**Produced Water Release**
Incident Status	**Reclamation Report Received**
Incident Well	**[30-015-27589] JAMES RANCH UNIT #055**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	JAMES RANCH UNIT #055
Date Release Discovered	06/22/2016
Surface Owner	Federal

Incident Details	
Please answer all the questions in this group.	
Incident Type	Produced Water Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	Cause: Corrosion | Tank (Any) | Crude Oil | Released: 3 BBL | Recovered: 1 BBL | Lost: 2 BBL.
Produced Water Released (bbls) Details	Cause: Corrosion | Tank (Any) | Produced Water | Released: 7 BBL | Recovered: 2 BBL | Lost: 5 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	No
Condensate Released (bbls) Details	*Not answered.*
Natural Gas Vented (Mcf) Details	*Not answered.*
Natural Gas Flared (Mcf) Details	*Not answered.*
Other Released Details	*Not answered.*
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	*Not answered.*

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 429845
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	**No, according to supplied volumes this does not appear to be a "gas only" report.**
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	**No**
Reasons why this would be considered a submission for a notification of a major release	*Unavailable.*

With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.

Initial Response	
The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury.	
The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	*Not answered.*

Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.

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.

I hereby agree and sign off to the above statement	Name: Colton Brown Title: Environmental Advisor Email: colton.s.brown@exxonmobil.com Date: 02/10/2025

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QUESTIONS (continued)

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QUESTIONS

Site Characterization	
Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). 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 in feet below ground surface (ft bgs)	Between 100 and 500 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Between 1 and 5 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Greater than 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between 1 and 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 1000 (ft.) and ½ (mi.)
Any other fresh water well or spring	Between 1 and 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between 1 and 5 (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Between 1 and 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Greater than 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

Remediation Plan	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
Requesting a remediation plan approval with this submission	Yes
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)	
Chloride (EPA 300.0 or SM4500 Cl B)	592
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	519
GRO+DRO (EPA SW-846 Method 8015M)	519
BTEX (EPA SW-846 Method 8021B or 8260B)	0
Benzene (EPA SW-846 Method 8021B or 8260B)	0
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
On what estimated date will the remediation commence	05/24/2018
On what date will (or did) the final sampling or liner inspection occur	12/10/2024
On what date will (or was) the remediation complete(d)	12/10/2024
What is the estimated surface area (in square feet) that will be reclaimed	775
What is the estimated volume (in cubic yards) that will be reclaimed	130
What is the estimated surface area (in square feet) that will be remediated	775
What is the estimated volume (in cubic yards) that will be remediated	130
These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.	
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

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QUESTIONS

Remediation Plan (continued)	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
(Select all answers below that apply.)	
(Ex Situ) Excavation and **off-site** disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for **off-site** disposal	HALFWAY DISPOSAL AND LANDFILL [fEEM0112334510]
OR which OCD approved well (API) will be used for **off-site** disposal	*Not answered.*
OR is the **off-site** disposal site, to be used, out-of-state	*Not answered.*
OR is the **off-site** disposal site, to be used, an NMED facility	*Not answered.*
(Ex Situ) Excavation and **on-site** remediation (i.e. On-Site Land Farms)	*Not answered.*
(In Situ) Soil Vapor Extraction	*Not answered.*
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	*Not answered.*
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	*Not answered.*
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	*Not answered.*
Ground Water Abatement pursuant to 19.15.30 NMAC	*Not answered.*
OTHER (Non-listed remedial process)	*Not answered.*
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
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.	
I hereby agree and sign off to the above statement	Name: Colton Brown Title: Environmental Advisor Email: colton.s.brown@exxonmobil.com Date: 02/10/2025
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

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QUESTIONS

Deferral Requests Only *Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.*	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

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QUESTIONS (continued)

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QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	**407108**
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	**12/04/2024**
What was the (estimated) number of samples that were to be gathered	**4**
What was the sampling surface area in square feet	**600**

Remediation Closure Request	
Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.	
Requesting a remediation closure approval with this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	**Yes**
Was this release entirely contained within a lined containment area	**No**
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	Yes
What was the total surface area (in square feet) remediated	775
What was the total volume (cubic yards) remediated	130
All areas not reasonably needed for production or subsequent drilling operations have been reclaimed to contain a minimum of four feet of non-waste contain earthen material with concentrations less than 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene	Yes
What was the total surface area (in square feet) reclaimed	775
What was the total volume (in cubic yards) reclaimed	130
Summarize any additional remediation activities not included by answers (above)	Excavation activities were conducted at the Site to address the impacted soil resulting from the June 22, 2016, crude oil and produced water release. Laboratory analytical results for the excavation soil samples, collected from the final excavation extent, indicated all COCs were compliant with the Site Closure Criteria and reclamation requirements. Based on the soil sample analytical results, no further remediation is required

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

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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

I hereby agree and sign off to the above statement	Name: Colton Brown Title: Environmental Advisor Email: colton.s.brown@exxonmobil.com Date: 02/10/2025

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QUESTIONS

Reclamation Report	
Only answer the questions in this group if all reclamation steps have been completed.	
Requesting a reclamation approval with this submission	Yes
What was the total reclamation surface area (in square feet) for this site	775
What was the total volume of replacement material (in cubic yards) for this site	130
Per Paragraph (1) of Subsection D of 19.15.29.13 NMAC the reclamation must contain a minimum of four feet of non-waste containing, uncontaminated, earthen material with chloride concentrations less than 600 mg/kg as analyzed by EPA Method 300.0, or other test methods approved by the division. The soil cover must include a top layer, which is either the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater.	
Is the soil top layer complete and is it suitable material to establish vegetation	Yes
On what (estimated) date will (or was) the reseeding commence(d)	03/01/2025
Summarize any additional reclamation activities not included by answers (above)	Following backfill activities, the disturbed area was contoured to match the surrounding topography and the surface was prepared for seeding. Upon confirmation that the excavation was backfilled with non-waste containing material, the disturbed pasture area will be seeded with a certified weed-free seed mix. The NMSLO Sandy Site Seed Mixture will be used to seed the Site. The seed mix will be applied via drill seeding. The Site will be monitored for vegetation growth to ensure that reclamation activities were successful.
The responsible party must attach information demonstrating they have complied with all applicable reclamation requirements and any conditions or directives of the OCD. This demonstration should be in the form of attachments (in .pdf format) including a scaled site map, any proposed reseeding plans or relevant field notes, photographs of reclaimed area, and a narrative of the reclamation activities. Refer to 19.15.29.13 NMAC.	
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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.	
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QUESTIONS

Revegetation Report	
Only answer the questions in this group if all surface restoration, reclamation and re-vegetation obligations have been satisfied.	
Requesting a restoration complete approval with this submission	No
Per Paragraph (4) of Subsection (D) of 19.15.29.13 NMAC for any major or minor release containing liquids, the responsible party must notify the division when reclamation and re-vegetation are complete.	

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CONDITIONS

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CONDITIONS

Created By	Condition	Condition Date
amaxwell	The reclamation report has been approved pursuant to 19.15.29.13 E. NMAC. The acceptance of this 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; or if the location fails to revegetate properly. In addition, the OCD approval does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.	2/12/2025
amaxwell	A revegetation report will not be accepted until revegetation of the release area, including areas reasonably needed for production or drilling activities, is complete and meet the requirements of 19.15.29.13 NMAC. Areas not reasonably needed for production or drilling activities will still need to be reclaimed and revegetated as early as practicable.	2/12/2025
amaxwell	All revegetation activities will need to be documented and included in the revegetation report. The revegetation report will need to include: An executive summary of the revegetation activities including: Seed mix, Method of seeding, dates of when the release area was reseeded, information pertinent to inspections, information about any amendments added to the soil, information on how the vegetative cover established meets the life-form ratio of plus or minus fifty percent of pre-disturbance levels and a total percent plant cover of at least seventy percent of pre-disturbance levels, excluding noxious weeds per 19.15.29.13 D.(3) NMAC, and any additional information; a scaled Site Map including area that was revegetated in square feet; and pictures of the revegetated areas during reseeding activities, inspections, and final pictures when revegetation is achieved.	2/12/2025